

Connors Research Trading Strategy Series

An Introduction to ConnorsRSI

By

Connors Research, LLC

Laurence Connors

Cesar Alvarez

Matt Radtke

Copyright © 2012, Laurence A. Connors and Cesar Alvarez.

ALL RIGHTS RESERVED. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher and the author.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the author and the publisher are not engaged in rendering legal, accounting, or other professional service.

Authorization to photocopy items for internal or personal use, or in the internal or personal use of specific clients, is granted by Connors Research, LLC, provided that the U.S. \$7.00 per page fee is paid directly to Connors Research, LLC, 1-973-494-7333.

ISBN 978-0-9853072-9-5

Printed in the United States of America.

Disclaimer

By distributing this publication, Connors Research, LLC, Laurence A. Connors and Cesar Alvarez (collectively referred to as "Company") are neither providing investment advisory services nor acting as registered investment advisors or broker-dealers; they also do 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 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 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.

Connors Research
10 Exchange Place
Suite 1800
Jersey City, NJ 07302

Table of Contents

Section 1 The ConnorsRSI Indicator	5
Section 2 ConnorsRSI Pullback Strategy Rules	11
Section 3 The Role of Exits	18
Section 4 Test Results	21
Section 5 Trading Options Using the ConnorsRSI Pullback Strategy.....	30
Section 6 Additional Thoughts	34

Section 1

The ConnorsRSI Indicator

Connors Research has been developing, testing, and publishing quantified trading strategies since the mid-1990s. During that time, we have had the opportunity to evaluate a great number of different technical indicators and to assess their effectiveness in predicting future price action. Now we've taken the next step and created an indicator of our own: *ConnorsRSI*. The purpose of this guidebook is to describe the indicator itself and also to provide a well-defined, quantified trading strategy that utilizes this new indicator.

ConnorsRSI is a composite indicator consisting of three components. Two of the three components utilize the Relative Strength Index (RSI) calculations developed by Welles Wilder in the 1970's, and the third component ranks the most recent price change on a scale of 0 to 100. Taken together, these three factors form a *momentum oscillator*, i.e. an indicator that fluctuates between 0 and 100 to indicate the level to which a security is overbought (high values) or oversold (low values).

Before we discuss how to calculate ConnorsRSI, let's review Wilder's RSI. RSI is a very useful and popular momentum oscillator that compares the magnitude of a stock's gains to the magnitude of its losses over some look-back period. Wilder himself believed that 14 periods was the ideal look-back. We often use the shorthand notation RSI(14) for the 14-period RSI. The formula below computes RSI(14) for a series of price changes:

$$RSI = 100 - \frac{100}{1 + RS}$$

RS = Average Gain / Average Loss

Average Gain = [(previous Average Gain) x 13 + current Gain] / 14
 First Average Gain = Total of Gains during past 14 periods / 14

Average Loss = [(previous Average Loss) x 13 + current Loss] / 14
 First Average Loss = Total of Losses during past 14 periods / 14

Note: "Losses" are noted as positive values.

RS = Average of x days up closes / Average of x days down closes

If we wanted to compute RSI for a different number of periods (N), then we would replace 14 in the formula above with N, and replace 13 with N-1. Regardless of the number of periods used in the calculation, the result will always be a number between 0 and 100. Traders who use RSI(14) typically look for values greater than 70 to identify overbought conditions, and values less than 30 to indicate oversold conditions.

Our previous research has shown that using shorter look-back periods makes RSI more effective in predicting short-term price movements. We have published many strategies that utilize RSI(2), as well

as several that use RSI(3) and RSI(4). Changing the number of periods also has an effect on the RSI levels that best identify overbought and oversold conditions. For example, an RSI(2) value of less than 10 is usually a reliable indicator of an oversold condition, while an RSI(2) value over 90 is a good benchmark for an overbought condition.

Now let's turn our attention back to ConnorsRSI. As mentioned previously, ConnorsRSI combines three components, and as you might guess, they are all elements that our research has repeatedly shown to have significant predictive ability:

Price Momentum: As we just discussed, RSI is an excellent way to measure price momentum, i.e. overbought and oversold conditions. By default, ConnorsRSI applies a 3-period RSI calculation to the daily closing prices of a security. We will refer to this value as RSI(Close,3).

Duration of Up/Down Trend: When the closing price of a security is lower today than it was yesterday, we say that it has "closed down". If yesterday's closing price was lower than the previous day's close, then we have a "streak" of two down close days. Our research has shown that the longer the duration of a down streak, the more the stock price is likely to bounce when it reverts to the mean. Likewise, longer duration up streaks result in larger moves down when the stock mean reverts. In effect, the streak duration is another type of overbought/oversold indicator.

The problem is, the number of days in a streak is theoretically unbounded, though we could probably place some practical limits on it based on past experience. For example, we might observe that there have been very few instances of either an up streak or a down streak lasting for more than 20 days, but that still doesn't get us to a typical oscillator-type value that varies between 0 and 100.

The solution is two-fold. First, when we count the number of days in a streak, we will use positive numbers for an up streak, and negative numbers for a down streak. A quick example will help to illustrate this:

Day	Closing Price	Streak Duration
1	\$20.00	
2	\$20.50	1
3	\$20.75	2
4	\$19.75	-1
5	\$19.50	-2
6	\$19.35	-3
7	\$19.35	0
8	\$19.40	1

The closing price on Day 2 is higher than on Day 1, so we have a one-day up streak. On Day 3, the price closes higher again, so we have a two-day up streak, i.e. the Streak Duration value is 2. On Day 4, the closing price falls, giving us a one-day down streak. The Streak Duration value is

negative (-1) because the price movement is down, not up. The downward trend continues on Days 5 and 6, which our Streak Duration reflects with values of -2 and -3. On Day 7 the closing price is unchanged, so the Streak Duration is set to 0 indicating neither an up close nor a down close. Finally, on Day 8 the closing price rises again, bringing the Streak Duration value back to 1.

The second aspect of the solution is to apply the RSI calculation to the set of Streak Duration values. By default, ConnorsRSI uses a 2-period RSI for this part of the calculation, which we denote as $RSI(Streak,2)$. The result is that the longer an up-streak continues, the closer the $RSI(Streak,2)$ value will be to 100. Conversely, the longer that a down-streak continues, the closer the $RSI(Streak,2)$ value will be to 0. Thus, we now have two components -- $RSI(Close,3)$ and $RSI(Streak,2)$ -- that both use the same 0-100 scale to provide a perspective on the overbought/oversold status of the security we're evaluating.

Relative Magnitude of Price Change: The final component of ConnorsRSI looks at the size of today's price change in relation to previous price changes. We do this by using a Percent Rank calculation, which may also be referred to as a "percentile". Basically, the Percent Rank value tells us the percentage of values in the look-back period that are less than the current value.

For this calculation, we measure price change not in dollars and cents, but as a percentage of the previous day's price. This percentage gain or loss is typically referred to as the one-day return. So if yesterday's closing price was \$80.00, and today's price is \$81.60, the one-day return is $(\$81.60 - \$80.00) / \$80.00 = 0.02 = 2.0\%$.

To determine the Percent Rank, we need to establish a look-back period. The Percent Rank value is then the number of values in the look-back period that are less than the current value, divided by the total number of values. For example, if the look-back period is 20 days, then we would compare today's 2.0% return to the one-day returns from each of the previous 20 days. Let's assume that three of those values are less than 2.0%. We would calculate Percent Rank as:

$$\text{Percent Rank} = 3 / 20 = 0.15 = 15\%$$

The default Percent Rank look-back period used for ConnorsRSI is 100, or $\text{PercentRank}(100)$. We are comparing today's return to the previous 100 returns, or about 5 months of price history. To reiterate, large positive returns will have a Percent Rank closer to 100. Large negative returns will have a Percent Rank closer to 0.

The final ConnorsRSI calculation simply determines the average of the three component values. Thus, using the default input parameters would give us the equation:

$$\text{ConnorsRSI}(3,2,100) = [RSI(Close,3) + RSI(Streak,2) + \text{PercentRank}(100)] / 3$$

The result is a very robust indicator that is more effective than any of the three components used individually. In fact, ConnorsRSI also offers some advantages over using all three components together. When we use multiple indicators to generate an entry or exit signal, we typically set a target value for

each one. The signal will only be considered valid when all the indicators exceed the target value. However, by using an average of the three component indicators, ConnorsRSI produces a blending effect that allows a strong value from one indicator to compensate for a slightly weaker value from another component. A simple example will help to clarify this.

Let's assume that Trader A and Trader B have agreed that each of the following indicator values identify an oversold condition:

- $RSI(\text{Close},3) < 15$
- $RSI(\text{Streak},2) < 10$
- $\text{PercentRank}(100) < 20$

Trader A decides to take trades only when all three conditions are true. Trader B decides to use ConnorsRSI to generate her entry signal, and uses a value of $(15 + 10 + 20) / 3 = 15$ as the limit. Now assume we have a stock that displays the following values today:

- $RSI(\text{Close},3) = 10$
- $RSI(\text{Streak},2) = 8$
- $\text{PercentRank}(100) = 21$
- $\text{ConnorsRSI} = (10 + 8 + 21) / 3 = 13$

Trader A will not take the trade, because one of the indicators does not meet his entry criteria. However, Trader B will take this trade, because the two low RSI values make up for the slightly high PercentRank value. Since all three indicators are attempting to measure the same thing (overbought/oversold condition of the stock) by different mechanisms, it makes intuitive sense to take this "majority rules" approach. More importantly, our research has shown the superiority of the ConnorsRSI indicator over a simple RSI calculation on price, or even a combination of the three indicators together. We'll talk a bit more about this in the Test Results section of the guidebook.

Pullback trading is one of the most popular forms of trading. The good news is that when it's done correctly it can be very lucrative. The not so good news is that over the past two decades there has been a proliferation of published pullback strategies which have little or no edge at all.

In this Strategy Guide, we will present a strategy which utilizes ConnorsRSI in combination with other indicators to identify when a pullback has occurred. Each of these indicators and their contribution to the strategy will be described in the next chapter. Multiple exit triggers were also tested, allowing you to select a variation of the strategy that complements your overall trading plan.

Before we go on, let's look at exactly what a pullback is and why it's important.

What Is A Pullback?

A pullback occurs when a security whose price has been moving higher sells off, i.e. the price of the security drops. Most people trade pullbacks based on daily bars, although some traders seek out intraday pullbacks while others use longer time frames. The common theme is that traders are attempting to identify stocks that they feel have pulled back too far and will likely regain their upward trend. This movement back toward the longer-term trend is known as *mean reversion*.

There are numerous ways to identify pullbacks, ranging from simply “eye-balling” a chart all the way up to using indicators such as Fibonacci numbers. Although these techniques work for some traders, we prefer a more precise, quantified approach. With exact entry and exit rules in place, we want to see robust test results for the majority of the many combinations of parameters that we’re testing, and for those results to be consistent across the entire testing period (2001 through mid-2012). Such solid results indicate that we are not simply *curve fitting* or *cherry picking*.

When trading short-term pullbacks, the best results occur when you hold the position for at least a few days. Often stocks pull back sharply and snap back strongly. There is no way of knowing ahead of time how far that upward move will be, so it is crucial to have well-defined exit rules in place which allow for the rally to play out.

Now let’s move on to the ConnorsRSI Pullback Strategy rules.

Section 2

ConnorsRSI Pullback Strategy Rules

As with all of our strategies, in this guidebook we will present you with quantified rules for entering and exiting trades. In addition, we will show you how different variations of the rules have performed over time, so that you can select the variations that best complement your own trading plan.

Here are the entry rules for the ConnorsRSI Pullback Strategy:

1. The stock price must be above \$5 per share.
2. The stock's average daily volume over the past 21 days (one trading month) must be at least 250,000 shares per day.
3. The stock's 10-day Average Directional Index (ADX) is above 30.
4. Today the stock's lowest price is at least W% (W = 2, 4, 6, or 8) below the previous day's close.
5. Today's close is in the bottom X% (X = 10 or 25) of the day's range.
6. The ConnorsRSI(3,2,100) value of the stock is below Y, where Y = 5, 6, 7... 15.
7. If the above rules are met today, buy the stock tomorrow on a further intraday limit Z% below today's closing price (Z = 4, 6, 8, 10).
8. Exit the position when the stock closes with a ConnorsRSI(3,2,100) value above N (N = 50, 60 70 or 80), exiting at the closing price.

Let's look at each rule in a little more depth, and explain why it's included in the strategy.

Rule 1 helps us steer clear of "penny stocks" and other highly volatile, unpredictable companies. Though price is never a guarantee, we have found that \$5/share is a good price floor for selecting more stable stocks.

Rule 2 assures that we're in highly liquid stocks which can be readily bought and sold, with tight bid/ask spreads.

Rule 3 confirms the strength of the recent trend. ADX is non-directional, so it will quantify a trend's strength regardless of whether it is up or down.

Rule 4 identifies a basic pullback: a significant sell-off, measured as a percentage of the previous closing price. Since this rule uses the low price for the day rather than the closing price, we don't yet know what today's overall price action looks like, but we do know that the stock faltered in a meaningful way.

Rule 5 gives us more visibility into today's price action. Closing range is calculated as:

$$\text{Closing Range} = (\text{Close} - \text{Low}) / (\text{High} - \text{Low})$$

For example, if today's Low price was \$12.00, the High price was \$12.50, and the Closing price was \$12.05, then the closing range would be:

$$\text{Closing Range} = (12.05 - 12.00) / (12.50 - 12.00) = .05 / .50 = .10 = 10\%$$

While **Rule 4** tells us that the stock stumbled, **Rule 5** lets us know that it did not recover significantly before the end of the trading day, which in turn is a good indicator that the price is likely to fall further tomorrow.

Rule 6 is the key to determining the quality of the pullback. Our research has shown that the lower the ConnorsRSI value is, the larger the bounce is likely to be when the stock recovers.

Rule 7 allows us to enter the trade at an optimal price. We're taking an already oversold stock as measured by ConnorsRSI (3,2,100), and then waiting for it to become even more oversold on an intraday basis. Because the intraday price drop is occurring for a second consecutive day, it's often accompanied by a great deal of fear. Money managers get especially nervous and often tell their head traders to "just get me out" after they have made the decision to sell. This panic helps create the opportunity.

Rule 8 provides a well-defined exit method. Few strategies have quantified, structured, and disciplined exit rules. **Rule 8** gives you the exact parameters to exit the trade, backed by over a decade of historical test results.

Let's see how a typical trade looks on a chart. For this example, we'll use a value of 4% for the sell-off (W), 25% for the closing range (X), A ConnorsRSI (Y) value of 10, and an entry limit (Z) of 8%. We will exit when ConnorsRSI closes above 70.

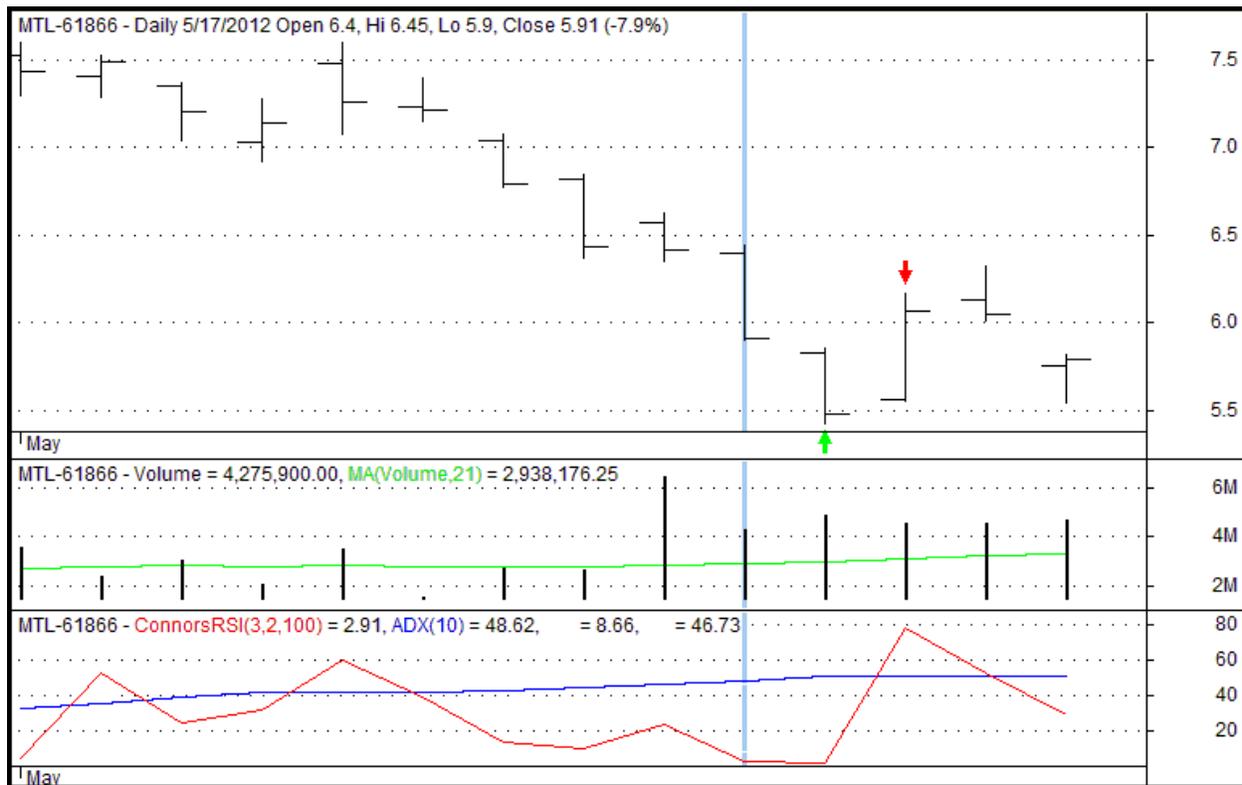


Chart created in Amibroker. Reprinted courtesy of AmiBroker.com.

Figure 1: Setup, Entry and Exit signals for MTL

On the chart above, the top pane shows the price bars in black, the vertical gray line marks the currently selected day which is also the setup day, the green up arrow indicates the entry day, and the red down arrow indicates the exit day. The middle pane displays the volume as vertical black histogram bars, and shows the 21-day moving average of volume as a green line. The bottom pane shows ConnorsRSI as a red line, and ADX as a blue line. Now we'll confirm that each of our entry and exit conditions were correctly met.

Rule 1 requires the price of the stock to be above \$5 per share. For the days shown on the chart, we can see that the price has ranged from just over \$7.50/share to just under \$5.50/share, thus meeting our condition.

Rule 2 requires that the 21-day moving average of the volume be greater than 250,000 shares/day. The average volume has been between 2 and 4 million shares lately, and on the setup day it was 2.9 million, so we've far exceeded this requirement.

Rule 3 states that ADX(10) must be above 30. On the setup day the ADX(10) value is 48.62.

With our selected input parameters, **Rule 4** tells us to look for a low price that's at least 4% below yesterday's close. On 5/16/2012 (the day before the setup), MTL closed at \$6.42. Therefore, today's low must be below:

$$\$6.42 \times (100\% - 4\%) = \$6.42 \times 0.96 = \$6.16$$

The actual low price on the setup day was \$5.90, so we have met the criteria for this rule.

Rule 5 requires that the closing price be in the bottom X% of the day's range. We selected 25% for this exercise, so our calculation goes as follows:

$$\text{Closing Range} = (\text{Close} - \text{Low}) / (\text{High} - \text{Low}) < 25\%$$

$$(\$5.91 - \$5.90) / (\$6.45 - \$5.90) < 0.25$$

$$\$0.01 / \$0.55 < 0.25$$

$$0.018 < 0.25 \rightarrow \text{TRUE}$$

In this case, we could have simply looked at the chart and easily seen that the closing price was extremely close to the day's low, and therefore almost certainly in the bottom 25% of the day's range. In other cases, the chart may not make this so obvious, and you'll have to do the math

Based on our strategy parameters, **Rule 6** requires the ConnorsRSI(3,2,100) value to be below 10, which it is (the value shown on the chart is 2.91).

Rule 7 tells us that now that our setup conditions have been met, we should set a limit order to enter on the next trading day. Our strategy parameters specify that we will use 8% for this limit order. That means that our limit price will be set at:

$$\$5.91 \times (100\% - 8\%) = \$5.91 \times 0.92 = \$5.44$$

The actual low price on 5/18/2012 was \$5.42, which meets our criteria with two cents to spare. We would enter this trade when our buy order gets filled at the limit price of \$5.44.

Rule 8 specifies that we will exit the trade when ConnorsRSI(3,2,100) closes above 70. For this trade, that occurs on the very next trading day, which is on Monday, 5/21/2012. We exit at or near the closing price of \$6.07, giving us a profit of over 11.6% (excluding commissions).

As you review the explanation above, notice that Rules 1 through 5 were true for most or all of the days leading up to the setup day. Price, volume, and ADX were all at acceptable levels. There were a couple of decent sell-off days, as well as closing prices in the bottom 25% of the day's range. However, 5/17/2012 is the first day that all of these conditions were met and ConnorsRSI dropped below 10. That's why this indicator is the centerpiece of the entire strategy.

Let's quickly go through one more example. Since we'll be focusing on exits in a later section, we'll continue to use an exit of ConnorsRSI(3,2,100) > 70. However, we'll change the other strategy parameters as follows:

- Sell-off (W) = 2%
- Closing Range (X) = 10%
- ConnorsRSI(3,2,100) = 5
- Entry Limit (Z) = 6%

Here is the chart, which uses the same conventions as Figure 1:

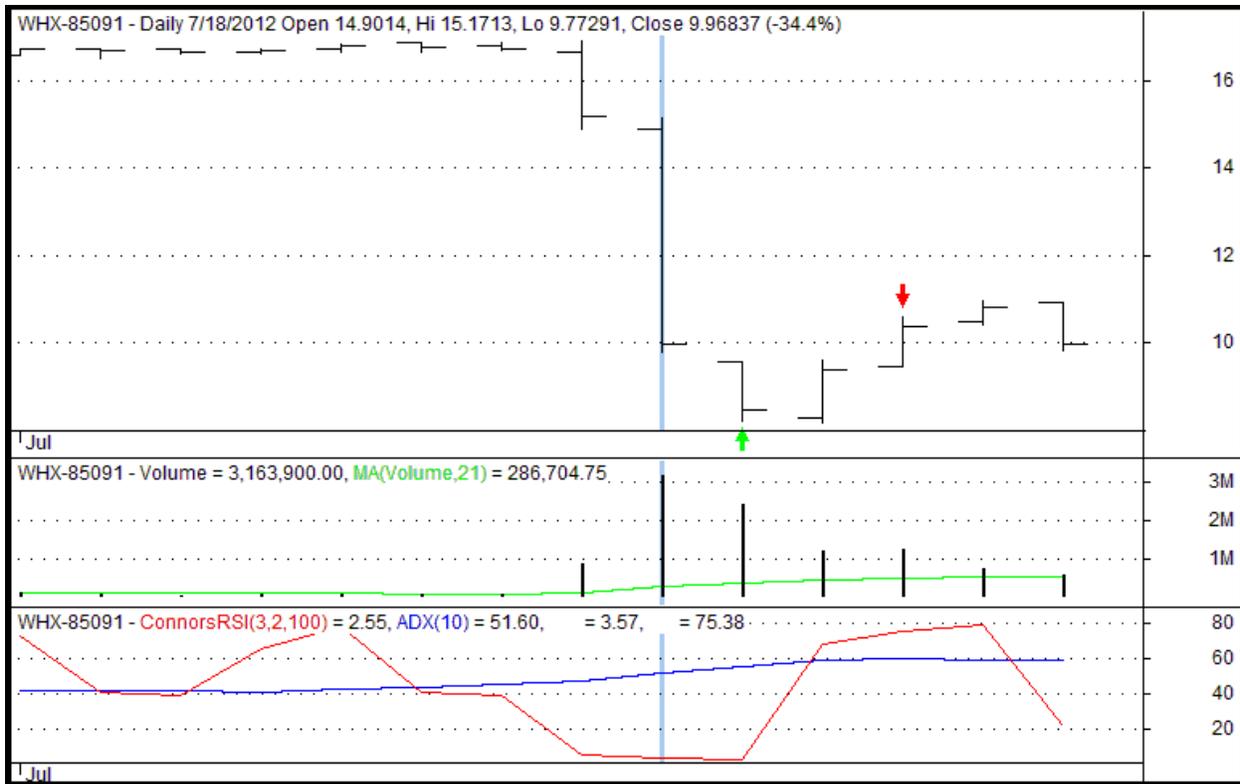


Chart created in AmiBroker. Reprinted courtesy of AmiBroker.com.

Figure 2: Trade signals for WHX

The closing price of \$9.97 fulfills the **Rule 1** requirement of \$5/share or greater.

The 2-day average volume of 286,704 meets the **Rule 2** criteria of 250,000.

The ADX(10) value is 51.60, far above the **Rule 3** requirement of 30.

We can see that on 7/17/2012 (the day prior to the setup day shown by the gray vertical line) the price of WHX closed a bit above \$15, while the low on 5/18/2012 was below \$10. A little mental arithmetic tells us that the sell-off was over 30%, so there's really no need to do the exact math to verify that we've exceeded the 2% sell-off target, thus meeting the **Rule 4** requirement.

Likewise, it's obvious from the chart that the closing price on 7/18/2012 was in the bottom 10% of the day's range, satisfying **Rule 5**.

The chart shows us that the ConnorsRSI(3,2,100) value was 2.55 on the setup day, which means that the criteria for **Rule 6** has been met.

Rule 7 tells us to enter a limit order 6% below the setup day's closing price of \$9.97. That means our limit price for 7/19/2012 will be:

$$\$9.97 \times (100\% - 6\%) = \$9.97 \times 0.94 = \$9.37$$

The actual price on 7/19/2012 falls all the way to \$8.20, but we will enter the trade at the limit price which we determined in advance: \$9.37.

Finally, as per **Rule 8**, we exit the trade when ConnorsRSI(3,2,100) closes above 70. This occurs two trading days later, on Monday, 7/23/2012.

In the next section we'll take a closer look at exit methods, and then we'll dive into the test results so that you can determine which strategy variation(s) are the best fit for your own trading.

Section 3

The Role of Exits

Up to this point, we have been focused mainly on the entry rules for the ConnorsRSI Pullback Strategy. But entries are only half the story. You don't make (or lose) money until you exit the trade, so having a precise, quantified exit method is crucial to generating predictable returns. Unfortunately, many published strategies either gloss over the exit rules completely, or they rely on vague directives such as "exit when you reach your profit target". Since they don't specify how to calculate a reasonable profit target, this is basically equivalent to saying "exit when you feel like you've made enough money", which is not very helpful at all.

Let's talk conceptually about entries and exits for a moment. Both entry and exit rules can be thought of in terms of how strict they are, i.e. how easy or difficult they are to achieve. You might also say that strictness is a measure of how frequently or infrequently the rule conditions occur. For oscillators such as ConnorsRSI, values that are closer to the extremes (0 and 100) are more strict (less likely to occur) than values that are in the middle of the range.

Stricter entry rules will be satisfied less frequently than more lenient entry rules, and thus a strategy that relies on the stricter rules will generally generate fewer trades than a strategy whose entry rules are more easily satisfied. With a robust strategy, the reward for fewer trades is generally a higher gain per trade, on average. We'll quantify this in the next section when we look at test results. For now, allow us to simply state that if you buy a slightly oversold stock, it's most likely to have a moderate rebound. But if you wait for a stock that's extremely oversold, the chances are much higher that it will have a significant bounce and create a bigger profit.

The strictness of exit rules has little effect on the number of trades generated by the strategy. However, just like the entry rules, stricter exit rules typically result in higher average profits. Why? Because stricter exit rules tend to keep you in your trades for a longer time, giving the stock more time to experience the mean reversion behavior that we're attempting to exploit with a strategy like the ConnorsRSI Pullback Strategy. Thus, for entries the tradeoff is between more trades and higher gains per trade, while for exits the tradeoff is between shorter trade durations and higher gains per trade.

For this strategy, we've decided to keep the exit methods very simple. It turns out that ConnorsRSI is not just a great entry indicator; it's also a very reliable method for measuring the degree to which we've captured the mean-reverting price bounce. Therefore, our exit methods simply wait for ConnorsRSI(3,2,100) to reach a predetermined level. We've found that values in the 50 to 80 range are the most effective exit indicators, and we will present test results for ConnorsRSI = 50, 60, 70 and 80.

With these different exit methods in mind, we can revisit a previous example to see the trade duration/profit tradeoff in action. Here's the chart for WHX that we dissected previously:

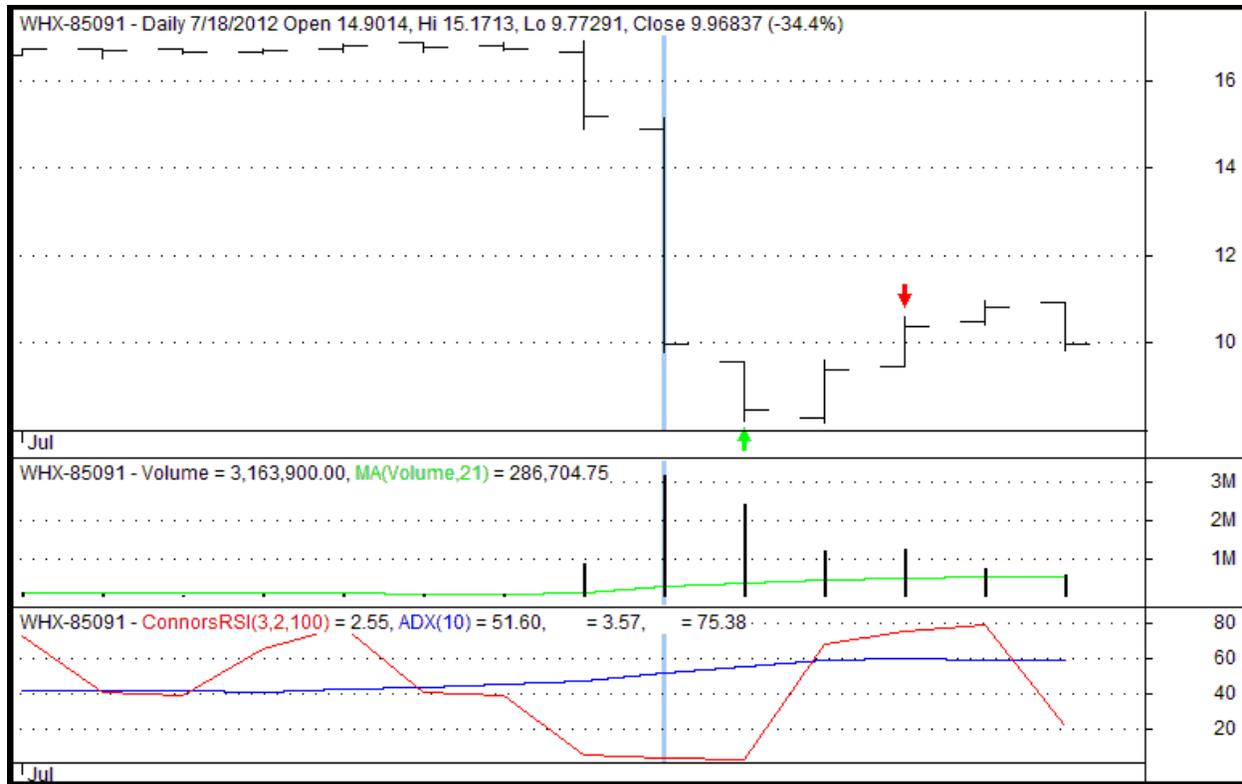


Chart created in AmiBroker. Reprinted courtesy of AmiBroker.com.

Figure 3: The Effect of Exits

Notice that on the day following the trade entry, the ConnorsRSI(3,2,100) value rose to around 68. If our exit criteria had been a ConnorsRSI value of 65, then we would have exited the trade after one day, at a price around that day's close of \$9.39.

Our actual exit occurred two days after entering the trade. The ConnorsRSI(3,2,100) value on this day was 75.48, so if our criteria had been a value of 70 or 75, we would have exited on this day near the closing price of \$10.37. We would have achieved a higher profit, but our trade duration would have been double what it was with the more lenient exit.

Three days after the entry, ConnorsRSI(3,2,100) closed at 79.16, and the price closed at \$10.82. Thus, if our exit criteria had been between 76 and 79, we would have stayed in this particular trade for a total of three days, but would have achieved the maximum potential profit.

Finally, it's worth noting that ConnorsRSI(3,2,100) never went above 80 before the price started to decline again. In other words, if we make our exit criteria too strict, there's a danger that we won't exit the trade before the profits start to evaporate. Our research has shown that using a ConnorsRSI value of 85 or higher as an exit indicator is too restrictive to be effective, and will typically cause your overall results to suffer.

Section 4

Test Results

We can never know for sure how a trading strategy will perform in the future. However, for a fully quantified strategy such as the ConnorsRSI Pullback Strategy described in this Guidebook, we can at least evaluate how the strategy has performed in the past. This process is known as “backtesting”.

To execute a backtest, we first select a group of securities (sometimes called a watchlist) that we want to test the strategy on. In our case, the watchlist is comprised of stocks traded on U.S. exchanges. No ETFs, options, futures or other derivative products are included. Next we choose a timeframe over which to test. The longer the timeframe, the more significant and informative the backtesting results will be. The backtests for the ConnorsRSI Pullback Strategy start in January 2001 and go through September 2012, the latest date for which we have data as of this writing. Finally, we apply our entry and exit rules to each stock for the entire test period, recording data for each trade that would have been entered, and aggregating all trade data across a specific strategy variation.

One of the key statistics that we can glean from the backtest results is the Average % Profit/Loss, also known as the Average Gain per Trade. Some traders refer to this as the “edge”. The Average % P/L is the sum of all the gains (expressed as a percentage) and all the losses (also as a percentage) divided by the total number of trades. Consider the following ten trades:

Trade No.	% Gain or Loss
1	1.7%
2	2.1%
3	-4.0%
4	0.6%
5	-1.2%
6	3.8%
7	1.9%
8	-0.4%
9	3.7%
10	2.6%

The Average % P/L would be calculated as:

$$\text{Average \% P/L} = (1.7\% + 2.1\% - 4.0\% + 0.6\% - 1.2\% + 3.8\% + 1.9\% - 0.4\% + 3.7\% + 2.6\%) / 10$$

$$\text{Average \% P/L} = 1.08\%$$

For short-term trades lasting three to ten trading days, most traders look for an Average % P/L of 0.5% to 2.5% across all trades. All other things being equal, the larger the Average % P/L, the more your account will grow over time. Of course, all other things are never equal, which we’ll discuss shortly.

Another important statistic is the Winning Percentage. This is simply the number of profitable trades divided by the total number of trades. In the table above, 7 of the 10 trades were profitable, i.e. had positive returns. For this example, the Winning Percentage is $7 / 10 = 70\%$.

Why do we care about Winning Percentage, as long as we have a sufficiently high Average % P/L? Because higher Winning Percentages generally lead to less volatile portfolio growth. Losing trades have a way of “clumping up”, and when they do that, the value of your portfolio decreases. This is known as *drawdown*. Those decreases, in turn, can make you lose sleep or even consider abandoning your trading altogether. If there are fewer losers, i.e. a higher Winning Percentage, then losses are less likely to clump, and your portfolio value is more likely to grow smoothly upward rather than experiencing violent up and down swings.

Let’s turn our attention to the test results for the different variations of the ConnorsRSI Pullback strategy. First, we’ll look at the 20 variations that produced the highest Average % P/L.

Top 20 Variations Based on Avg % P/L

# Trades	Avg % P/L	Avg Days Held	Win %	Sell Off %	Closing Range	Connors RSI Entry	Entry Limit	Exit Method
472	14.97	7.03	78.81	8	10	5	10	CRSI(3,2,100) > 80
557	14.70	7.16	78.64	8	10	6	10	CRSI(3,2,100) > 80
628	14.66	7.21	78.66	8	10	7	10	CRSI(3,2,100) > 80
706	14.63	7.34	78.33	8	10	8	10	CRSI(3,2,100) > 80
796	14.04	7.41	77.39	8	10	9	10	CRSI(3,2,100) > 80
588	13.87	7.01	78.40	6	10	5	10	CRSI(3,2,100) > 80
869	13.76	7.50	77.33	8	10	10	10	CRSI(3,2,100) > 80
473	13.72	3.21	79.70	8	10	5	10	CRSI(3,2,100) > 70
870	13.72	7.29	77.47	8	25	6	10	CRSI(3,2,100) > 80
473	13.64	2.14	80.55	8	10	5	10	CRSI(3,2,100) > 60
697	13.61	7.11	78.48	6	10	6	10	CRSI(3,2,100) > 80
999	13.56	7.45	76.88	8	25	7	10	CRSI(3,2,100) > 80
734	13.51	7.34	76.57	8	25	5	10	CRSI(3,2,100) > 80
558	13.47	3.23	79.75	8	10	6	10	CRSI(3,2,100) > 70
786	13.47	7.21	78.37	6	10	7	10	CRSI(3,2,100) > 80
655	13.40	7.06	78.17	4	10	5	10	CRSI(3,2,100) > 80
668	13.34	7.08	78.29	2	10	5	10	CRSI(3,2,100) > 80
1120	13.32	7.58	76.70	8	25	8	10	CRSI(3,2,100) > 80
473	13.29	1.84	80.34	8	10	5	10	CRSI(3,2,100) > 50
883	13.19	7.33	77.35	6	10	8	10	CRSI(3,2,100) > 80

Here is an explanation of each column:

Trades is the number of times this variation triggered from January 1, 2001 – September 30, 2012.

Average % P/L is the average profit or loss for all trades, including the losing trades, expressed as a percentage. The top 20 variations have all shown positive gains ranging 13% to nearly 15%.

Average Days Held is the number of days on average the trade was held. In all cases it's eight days or less.

Win % is the percentage of signals which closed out at a profit. The top 20 variations have all been in the 75% - 80% range, an extremely high level in a world where most successful traders hope to be correct 55%-60% of the time.

Sell Off % corresponds to Rule 4 of the strategy. It is the minimum required drop in price on the setup day, expressed as a percentage.

Closing Range is specified by Rule 5 of the strategy. It is the maximum allowed difference between the closing price and the low price of the day, expressed as a percentage of the total daily range (high – low).

ConnorsRSI Entry is the maximum allowed ConnorsRSI(3,2,100) value on the setup day. This value corresponds to Rule 6 of the strategy.

Entry Limit is the intraday pullback used to trigger an entry. This means that the buy trigger occurs the next day Z% below the closing price on the signal day, as described in Rule 7 of the strategy. Therefore if today generates a setup, the signal is executed only if the stock pulls back further tomorrow. In our testing we looked at 4%-10% limits. As you can see, 10% dominates the list above, further reinforcing the fact that the larger the intraday pullback, the greater the edges.

Exit Method is the method used to determine when to exit the trade. Many of the top 20 variations as measured by Average % P/L used an exit method of ConnorsRSI(3,2,100) > 80, meaning that we exit the trade on the first trading day where the ConnorsRSI(3,2,100) value is greater than 80 at the close. This is what we expect based on our previous discussion of how stricter exit criteria generally lead to higher gains but also longer trade durations.

What we see above are 20 different variations of the ConnorsRSI Pullback strategy which show consistent behavior over more than a decade. The key is to choose the variation or variations that best complement your overall trading plan and then apply them in a systematic, structured manner.

Now let's now look at the 20 highest performing variations as measured by percentage correct.

Top 20 Variations Based on Win %

# Trades	Avg % P/L	Avg Days Held	Win %	Sell Off %	Closing Range	Connors RSI Entry	Entry Limit	Exit Method
473	13.64	2.14	80.55	8	10	5	10	CRSI(3,2,100) > 60
473	13.29	1.84	80.34	8	10	5	10	CRSI(3,2,100) > 50
874	12.81	3.24	80.21	8	25	6	10	CRSI(3,2,100) > 70
558	13.17	2.18	80.11	8	10	6	10	CRSI(3,2,100) > 60
1085	11.97	3.22	80.09	6	25	6	10	CRSI(3,2,100) > 70
589	12.48	1.82	79.97	6	10	5	10	CRSI(3,2,100) > 50
1272	11.21	3.17	79.95	2	25	6	10	CRSI(3,2,100) > 70
1041	11.79	3.07	79.92	2	25	5	10	CRSI(3,2,100) > 70
1015	11.89	3.07	79.90	4	25	5	10	CRSI(3,2,100) > 70
1234	11.36	3.17	79.90	4	25	6	10	CRSI(3,2,100) > 70
737	13.00	3.21	79.78	8	25	5	10	CRSI(3,2,100) > 70
1004	12.30	3.34	79.78	8	25	7	10	CRSI(3,2,100) > 70
707	12.74	3.30	79.77	8	10	8	10	CRSI(3,2,100) > 70
909	12.36	3.14	79.76	6	25	5	10	CRSI(3,2,100) > 70
558	13.47	3.23	79.75	8	10	6	10	CRSI(3,2,100) > 70
473	13.72	3.21	79.70	8	10	5	10	CRSI(3,2,100) > 70
670	12.06	1.80	79.70	2	10	5	10	CRSI(3,2,100) > 50
910	12.01	1.77	79.67	6	25	5	10	CRSI(3,2,100) > 50
589	12.66	2.15	79.63	6	10	5	10	CRSI(3,2,100) > 60
657	12.13	1.80	79.60	4	10	5	10	CRSI(3,2,100) > 50

When looking at the variations which have been correct the most often, we see a broader array of strategy parameters. However, the Win Rates are all very close to 80% for the time period from 2001 through September 2012. Such consistent results from a variety of strategy variations over a long period of time confirm the robust nature of the ConnorsRSI Pullback strategy.

For some traders, the most important metrics for evaluating a strategy may revolve around capital management. For these traders, it's acceptable to give up a portion of the gains if they can get their money back more quickly so that it can be deployed elsewhere. So, let's take a look at the strategy variations that have the shortest trade durations as measured by Average Days Held.

Top 20 Variations Based on Average Days Held

# Trades	Avg % P/L	Avg Days Held	Win %	Sell Off %	Closing Range	Connors RSI Entry	Entry Limit	Exit Method
1042	11.47	1.75	79.46	2	25	5	10	CRSI(3,2,100) > 50
1016	11.57	1.75	79.43	4	25	5	10	CRSI(3,2,100) > 50
910	12.01	1.77	79.67	6	25	5	10	CRSI(3,2,100) > 50
1273	10.54	1.78	77.77	2	25	6	10	CRSI(3,2,100) > 50
738	12.61	1.79	79.40	8	25	5	10	CRSI(3,2,100) > 50
1235	10.68	1.79	77.65	4	25	6	10	CRSI(3,2,100) > 50
670	12.06	1.80	79.70	2	10	5	10	CRSI(3,2,100) > 50
657	12.13	1.80	79.60	4	10	5	10	CRSI(3,2,100) > 50
1474	9.62	1.80	76.19	2	25	7	10	CRSI(3,2,100) > 50
1497	9.03	1.80	76.09	2	25	5	8	CRSI(3,2,100) > 50
1451	9.13	1.80	75.88	4	25	5	8	CRSI(3,2,100) > 50
1086	11.27	1.81	77.99	6	25	6	10	CRSI(3,2,100) > 50
1419	9.74	1.81	76.04	4	25	7	10	CRSI(3,2,100) > 50
1619	9.12	1.81	75.36	4	25	8	10	CRSI(3,2,100) > 50
1694	8.95	1.81	75.27	2	25	8	10	CRSI(3,2,100) > 50
589	12.48	1.82	79.97	6	10	5	10	CRSI(3,2,100) > 50
875	12.09	1.82	78.40	8	25	6	10	CRSI(3,2,100) > 50
1242	10.29	1.82	76.25	6	25	7	10	CRSI(3,2,100) > 50
1281	9.54	1.82	75.64	6	25	5	8	CRSI(3,2,100) > 50
1826	8.29	1.82	74.92	2	25	6	8	CRSI(3,2,100) > 50

As you might expect from our earlier discussion, the strategy variations with the shortest trade durations are dominated by the most lenient exit that we tested, which is an exit when ConnorsRSI(3,2,100) is greater than 50. All 20 of these variations have average durations of less than two days. What you might not have expected is to still see average gains per trade of 8% - 12.5%!

Let's look at one final way to filter the results. In this case, we're going to focus on the total profit that would have been generated by a strategy variation using the following assumptions:

- Every trade entry signal was taken, i.e. we always had sufficient capital to enter a trade
- Every trade used the same amount of initial capital, for example \$1,000.
- There were no commissions

Obviously these are not realistic assumptions for estimating actual performance. Some variations generate over 1000 trades per year, and those are often heavily concentrated on a handful of trading days, which means there may be dozens of entry signals generated on a single day. Also, it is impossible to deploy exactly the same amount of capital on every trade, because we cannot purchase fractional shares of stock. And unless you have a close relative

who works at a major brokerage firm, you will always pay commissions. However, this exercise is a useful way to compare the profit potential of different variations of the strategy.

We have already talked about the number of trades generated by a strategy as well as the average gain (% P/L) per trade. To find the (theoretical) total % profit we simply multiply these two values together. In the table below, the Avg Days Held and the Win % have been replaced by the Total % Profit column. Here are the top 20 performers using this metric:

Top 20 Variations Based on Total % Profit

# Trades	Avg % P/L	Total % Profit	Sell Off %	Closing Range	Connors RSI Entry	Entry Limit	Exit Method
15226	3.49	53138.74	2	25	15	4	CRSI(3,2,100) > 80
13718	3.60	49384.80	2	25	14	4	CRSI(3,2,100) > 80
12537	3.90	48894.30	4	25	15	4	CRSI(3,2,100) > 80
12238	3.82	46749.16	2	25	13	4	CRSI(3,2,100) > 80
11364	4.00	45456.00	4	25	14	4	CRSI(3,2,100) > 80
16061	2.71	43525.31	2	25	15	4	CRSI(3,2,100) > 70
10880	3.99	43411.20	2	25	12	4	CRSI(3,2,100) > 80
10243	4.22	43225.46	4	25	13	4	CRSI(3,2,100) > 80
8835	4.82	42584.70	2	25	15	6	CRSI(3,2,100) > 80
14404	2.82	40619.28	2	25	14	4	CRSI(3,2,100) > 70
9563	4.24	40547.12	2	25	11	4	CRSI(3,2,100) > 80
7695	5.26	40475.70	4	25	15	6	CRSI(3,2,100) > 80
8029	5.04	40466.16	2	25	14	6	CRSI(3,2,100) > 80
9195	4.35	39998.25	4	25	12	4	CRSI(3,2,100) > 80
13213	3.02	39903.26	4	25	15	4	CRSI(3,2,100) > 70
9228	4.32	39864.96	6	25	15	4	CRSI(3,2,100) > 80
7213	5.43	39166.59	2	25	13	6	CRSI(3,2,100) > 80
16362	2.34	38287.08	2	25	15	4	CRSI(3,2,100) > 60
7034	5.41	38053.94	4	25	14	6	CRSI(3,2,100) > 80
12788	2.97	37980.36	2	25	13	4	CRSI(3,2,100) > 70

This gives us a very different set of variations than we've seen in the previous tables. As you can see, this list is dominated by the variations that generate a high number of trades, which is primarily the result of using more lenient entry criteria. This is what we meant when we said earlier that generating profits isn't all about finding the strategy variations with the highest Average % P/L. It's important to understand all the factors that affect the strategy, and choose accordingly.

In Section 1, we made the assertion that the ConnorsRSI indicator is superior to a combination of the three component indicators used independently. Let's test that assertion using the same Total % Profit approach that we just discussed.

Look back to our first table of test results, which ranked the variations by highest Average % P/L. About a third of the way down the list, you will see a variation with the following parameters:

- Sell Off = 8%
- Closing Range = 10%
- ConnorsRSI = 10
- Entry Limit = 10%
- Exit = ConnorsRSI > 80

While this variation made the Top 20 list for Average % P/L, it did not appear in any of our other Top 20 lists. From that perspective, it's nothing special; just one moderately well-performing variation among many. The Total % Profit for this strategy would be the number of trades (869) multiplied by the Average % P/L (13.76), which gives a result of 11957.44%.

Now let's see what happens if we replace ConnorsRSI < 10 with different combinations of RSI(Close,3), RSI(Streak,2), and PercentRank(100). For each of these three indicators, we tested values from 5 to 20, in every possible combination. All other parameters were held constant. Here are the Top 20 results ranked by Total % Profit:

Top 20 Alternate Variations Based on Total % Profit

# Trades	Avg % P/L	Total % Profit	RSI(Close,3)	RSI(Streak,2)	PercentRank(100)
913	12.66	11559	20	20	20
911	12.72	11588	20	20	18
907	12.92	11718	20	20	16
903	12.91	11658	20	20	14
896	12.98	11630	20	20	12
896	12.92	11576	18	20	20
894	12.99	11613	18	20	18
891	13.08	11654	18	20	16
887	13.07	11593	18	20	14
880	13.14	11563	18	20	12
879	12.98	11409	16	20	20
878	12.9	11326	20	20	10
877	13.05	11445	16	20	18
875	13.14	11498	16	20	16
871	13.13	11436	16	20	14
870	12.89	11214	20	18	20
869	12.88	11193	20	18	18
865	13.09	11323	20	18	16
864	13.2	11405	16	20	12
863	13.05	11262	18	20	10

Although some of the alternate variations came close, none of them was able to best the total profit of the variation using ConnorsRSI(3,2,100). This is just one more way of showing that the ConnorsRSI indicator is a robust, versatile tool for your trading toolbox.

Section 5

Trading Options Using the ConnorsRSI Pullback Strategy

*Please note that the options section in the majority of the **Connors Research Trading Strategy Series** is the same because the strategy set-ups often involve large moves in brief periods of time. In our opinion, and confirmed from friends who are professional options traders (one with over three decades of experience); there is one best way to trade moves like these.*

Options trading has been a major growth industry over the past 5 years in the markets. This is because spreads have tightened, liquidity has increased, and the ability to easily trade complex options has never been simpler.

We'll now focus on applying options trading to the short-term market moves we have just learned. Like everything else in this Guidebook, there are definitive rules as to how to execute an options trade when a strategy signal triggers.

Here is what we know based upon the data:

1. The majority of the moves from entry to exit have been held a very short period of time (2-7 trading days).
2. The average gains per trade have been large – well beyond the normal distribution of prices over that short period of time.
3. A high percentage of the moves have been correct.

When we look at this type of behavior, it can lead to many strategies but one strategy stands out (and this has been confirmed by professional traders). **The strategy is to buy front month, in-the-money long calls.**

Why front month in-the-money long calls? Because they will move the closest to the stock itself. And the closer an option moves with the stock, the greater the gain will be on a percentage basis when the move is correct.

Here are the rules.

1. A signal triggers.
2. Buy the front month in-the money call. If you were to normally buy 500 shares of stock, buy 5 calls (every 100 shares should equal one call).
3. Exit the options when the signal triggers an exit on the stock.

Let's go further:

1. What does in-the-money exactly mean here?

In this case it's defined as one to two strike prices in the money. If the stock is at 48, buy the 40 or 45 calls.

2. What does front month mean?

Because the holding period is so short, you want to trade the options whose monthly expiration is the closest. If the closest month is 7 trading days or less from the front month's option expiration date (meaning the second Thursday before or closer) use the following month as the one to trade.

3. What happens if I'm in the position and it expires yet the signal for the stock is still valid?

In this case, roll to the next month. You're trading the stock signals so you want to have exposure to that signal.

4. What about liquidity and spreads?

There's some discretion here. There is no hard and fast rule as to what exactly liquidity means in options. For example, compare the liquidity of your stock to SPY, which is extremely liquid compared to a blue chip stock. Both can be considered liquid, but the blue chip's option will be less liquid than SPY.

Assuming there is active volume in the options, look at the spreads. If the option is trading 3.00 bid - 3.30 offer, the spread is 10%. Can you really overcome a 10% spread? Not likely. Now compare this to an option that's trading at 3.25 bid – 3.30 offer. This is far more acceptable and tradable.

5. What are the advantages of buying call options instead of the stock?

Assuming the spreads and liquidity are there, the advantages are large:

1. Greater potential ROI on capital invested.
2. Less money tied up.
3. Less points at risk. This means if a stock signals at 50, it can lose up to 50 points. The options can only lose up to the premium you paid. So, if you bought the 45 calls, the risk is only the premium.
4. There's greater flexibility. For example, let's say the stock triggered a buy signal at 50 and you paid 5.50 for the 45 calls. If the stock immediately moves higher (let's say to 56); you have choices here. You can exit, or you can roll into the 50 calls getting most of your money out and now turning this into a nearly free trade if you believe that prices will continue to run.

There are numerous examples like this and you can find these types of strategy opportunities in most options books. But trading anything exotic or different than simply buying the calls is against the advice of the many professionals we posed this question to.

In conclusion, options provide traders with a good alternative to buying the stock outright. The structured methodology for our strategies is: front-month, in-the-money, with equivalent sizing (1 option per 100 shares), and exiting when the signal exits.

The above options strategy, in many experts' opinion, is the best and most efficient strategy based upon the historical data from these signals.

Section 6

Additional Thoughts

1. As you have seen throughout this Guidebook, the ConnorsRSI Pullback strategy has had large quantified edges when applied in a systematic manner.
2. There are literally hundreds of potential variations for you to use. By adjusting the input variables described in the rules, you can customize how the ConnorsRSI Pullback strategy will perform for you. Want more trades? Look at variations with a smaller Sell Off % or Entry Limit. Bigger average returns? Check out the variations that have the strictest entry criteria (high Sell Off % and Entry Limit % and/or low entry value for ConnorsRSI) and longest durations (ConnorsRSI 80 exit method). Want to get in and out of trades more quickly to reduce overnight risk and free up your capital for other trades? Try the variations that utilize the ConnorsRSI 50 exit method. Once you understand how the strategy variables affect the results, you can identify the variation or variations that best fit your trading style.
3. What about stops (and we include the answer to this in all our Strategy Guidebooks)?

We have published research on stops in other publications including in our book ***Short-Term Trading Strategies That Work***.

What we have found is that stops tend to lessen performance and in many cases they completely remove edges. Yes, it feels good when a stock keeps moving lower and lower and a stop got you out. On the other side, the research which is backed by up to two decades of test results on many short-term trading strategies suggests that stops get hit often and accumulate many, many losses. Few trading strategies can overcome these aggregated losses.

For many traders stops are a must. Psychologically it allows them to take trades, especially difficult trades. Whether you use them or not is a personal choice. On the whole though, the edges you see in this strategy and many other short-term strategies are lower when stops are applied to them. Again this is a personal choice only you can make for yourself. We know successful traders in both camps.

4. Slippage and commission were not used in the testing. Factor them into your trading (the entries are at limit prices so slippage is not an issue) and make sure you are trading at the lowest possible costs. Most firms are now allowing traders to trade for under 1 cent a share, so shop your business, especially if you are an active trader. The online brokerage firms want your business.

5. As you have seen here with the ConnorsRSI Pullbacks Strategy, there are large edges in stocks which sell-off and then sell-off further intraday. These trades are often accompanied by fear and uncertainty and this is when large edges appear. Seek out these trades because, as you have seen, they've been lucrative for many years.

We hope you enjoyed this addition to the **Connors Research Trading Strategy Series**. If you have any questions about this strategy please feel free to email us at info@connorsresearch.com

Receive ConnorsRSI Readings for Free from the TradingMarkets Screener



**TRADING
MARKETS**
COM
Making Great Traders

Step your game up and trade on thinkorswim.
Get \$600 cash + FREE trading for 60 days. ▶



TRADE NOW ▶

SEARCH

Home
Analytics
Screener
The Machine
Power Ratings
Store
Stocks
ETFs
Options
Eminis/Futures
Free Webinars
Blog

TradingMarkets Screener – Beta

Enter As Many Symbols As You Like

Technical
Profile / Price / Volume
Proprietary
All

ConnorsRSI VolatilityRating

View:

Show entries

Ticker	Price	ConnorsRSI	RSI2	RSI4	VR	HV10	HV100	ADX10	U/D	Return2	Return5	StretchMA5	%b
AFSD	\$25.65	24.14	42.20	60.71	--	4.14	0.00	70.66	-1	0.00	0.79	0.02	0.53
AGC	\$6.56	56.38	28.59	34.93	1	10.59	12.02	17.69	1	-0.61	0.00	-0.70	0.01
AGD	\$5.76	78.84	76.23	57.66	1	17.53	16.18	28.56	1	0.88	0.52	0.52	0.98
AVF	\$25.33	22.82	13.13	39.60	1	5.80	7.30	13.09	-1	-0.35	0.32	-0.26	-0.48
AVK	\$16.49	18.50	4.35	15.71	1	11.19	11.21	22.35	-3	-1.96	-1.73	-1.32	-0.17
AWP	\$7.49	61.80	68.59	64.13	1	13.14	14.34	21.98	1	-0.27	2.74	0.62	0.85
BBN	\$22.90	78.79	87.66	67.33	1	8.37	10.38	24.75	3	1.06	0.09	0.74	1.29
BCF	\$10.63	79.09	88.74	69.24	1	11.15	18.72	21.28	2	1.14	1.92	1.01	1.18
BCX	\$14.20	67.88	82.27	64.74	1	19.32	17.15	19.38	1	0.42	1.43	0.30	1.19
BDJ	\$7.48	72.22	62.45	54.40	1	11.98	10.99	19.34	1	0.00	0.27	0.21	0.68
BGB	\$19.93	12.50	0.25	5.02	--	1.28	0.00	81.05	-1	-0.10	-0.35	-0.18	-0.13
BGY	\$7.49	71.25	71.50	63.62	1	13.31	16.00	16.85	1	0.27	2.04	0.38	0.88
BLW	\$18.54	30.80	25.03	47.60	1	13.24	11.65	38.08	-2	-0.86	-1.38	-0.30	0.08

POWER RATINGS

1
2
3
4
5
6
7
8
9
10

AVOID BUYING
CONSIDER BUYING

RATE YOUR NEXT TRADE

ONE NUMBER is ALL YOU NEED ...
Based on quantitative analyses of over 4,000,000 trades.

Our most popular indicator at TradingMarkets ... for over 5 years!

Free 2-Week Trial

Sign Up For A Free Newsletter

<http://analytics.tradingmarkets.com/Screener/>

Alpha Club: Stocks, ETFs, Volatility & Options Strategies -- Annual Membership

When You Get Ready to Trade . . .

Where Do You Look for "Alpha"?

Introducing TradingMarkets "Alpha" Club

As an active trader, you are not content with returns pegged to the market indexes. You demand better. And you continually seek to learn **new ways to generate "alpha"** -- which is what professionals call returns above the benchmark market indices.

Most hedge funds rely on agility to outperform the market. They implement new strategies constantly. And in order for you, as an individual trader, to beat those indices -- to generate your own alpha -- you are most likely also always looking for new trading strategies.

We've just made it easier for you to find new trading strategies that have the potential to generate significant "alpha". It's called the *TradingMarkets Alpha Club*.

Build Your Trading Strategies Arsenal One by One ... Every Month

The *TradingMarkets Alpha Club* is a research-oriented group designed to provide you with quantified, high-probability strategies -- in **Stocks, Options, ETFs, and Volatility** -- strategies that have historically shown significant "alpha" in simulated, back-tested results over several years.

Here's how it works:

- The Club meets once each month, online. The meetings run about 1-2 hours and are **led by Larry Connors and his research team**.
- You will learn **one new strategy each month**. Larry and his research team will cover the background, simulated historical results, quantified performance metrics, and implementation rules for every strategy.
- Every strategy will be distributed **exclusively to Club Members** only. These strategies will not be made available to the general public for 12 months. We do this to ensure that your competitive edge as a club member is protected to the best of our ability.

- Time will be allotted at every meeting to discuss feedback and questions from members about previous strategies and other topics covered in prior sessions.
- Every session will be recorded for your convenience to watch again (or if you can't attend the live event).

There are two Alpha Club tracks for you to choose from:

- **Stocks & ETFs Trading Alpha Club**
- **Volatility & Options Trading Alpha Club**

And more to come. You can join as many clubs as fit your needs and interests.

That's the *TradingMarkets Alpha Club* in a nutshell. We've made it as simple and efficient as possible to give you what you need to be competitive as an individual trader in today's markets.

Best of all, you won't need to go searching for new trading strategies you can trust, we will bring them to you each month -- the most promising strategies to come out of Connors Research. As a *TradingMarkets Alpha Club* member, every month you will receive a new, quantified, rules-based strategy to help you trade scientifically and professionally -- and increase your ability to generate alpha.

About the Strategies & Research You Will Receive Each Month

- The strategies and research will be brand new, based on unpublished research.
- Every strategy will include full disclosure on the back-tested, simulated historical results derived from years of trading data.
- Precise trading rules and the tools to execute the strategies will be provided to you each month.

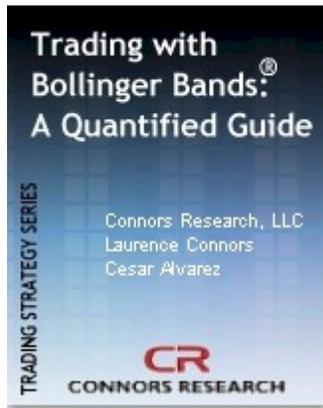
TradingMarkets Alpha Club is a Unique Opportunity

- The internet is filled with people touting personal opinions. **There is very little credible research** available to individual traders, and the goal of the *TradingMarkets Alpha Club* is to provide this for you.
- Our research & strategies have **stood the test of time**. TradingMarkets has been in business since January 1999, and our CEO Larry Connors has been publishing high quality professional trading research and strategies since 1995.

- *TradingMarkets Alpha Club* gives you the opportunity to **work directly with Larry** and his research team every month, as you continuously build out your knowledge.
- If you are serious about your trading, you need the same type of **consistent training** as professional athletes get - 12 months a year. You will receive it as a member of the *TradingMarkets Alpha Club*.

If you would like more information on *The Alpha Club* [click here](#). If you would like to order you can have immediate access to it please [click here](#) or call toll free 888-484-8220 ext. 1 (outside the US please dial 973-494-7311 ext. 1).

-Connors Research Trading Strategy Series-



Trading with Bollinger Bands® - A Quantified Guide

This Systematic Approach to Trading with Bollinger Bands® Brings You Results Quickly

Bollinger Bands are used by hundreds of thousands of traders around the world. In fact, it's considered one of the most powerful trading tools available to traders. Over the past two decades many professional traders at large funds, successful Commodity Advisors, and professional Equity Traders have stated they rely upon Bollinger Bands as one of the main indicators before they take a trade.

When traded correctly, Bollinger Bands can be one of the most consistent strategies available for your trading.

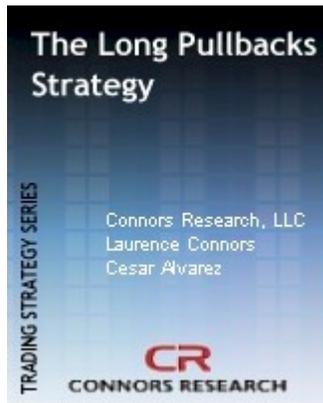
Now for the first time, we are making available to the public a fully systematic, quantified approach to trading with Bollinger Bands.

Consistent Trading Results - What you will learn with this strategy are dozens of Bollinger Bands strategy variations which have been correct from 65.43% up to over 82.74% from January 2001 to May 2012.

The Trading with Bollinger Bands® - A Quantified Guide comes with a 100% Money Back Guarantee (as do all the Guidebooks in our Strategy Series).

If you would like more information on *Trading with Bollinger Bands® - A Quantified Guide* [click here](#). If you would like to order and download it now so you can have immediate access to it please [click here](#) or call toll free 888-484-8220 ext. 627 (outside the US please dial 973-494-7333).

-Connors Research Trading Strategy Series-



The Long Pullbacks Strategy

In 2005 we published what we consider to be our most powerful short-term trading strategy that we originally named the 5x5x5 Strategy. Many hundreds of traders learned the strategy and many still use it today. Since that time we have updated and improved the strategy, added new entry parameters, added new exit strategies, and have updated the trade results beginning from 2001-2011.

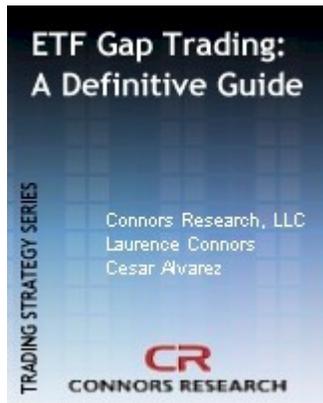
What you will learn with this strategy are many hundreds of variations that have been correct from 72.4% up to over 78% for more than a decade. And the average gain per trade (this includes all winning and losing trades) has averaged over 5.6% a trade on dozens of variations of the strategy.

You will learn how to identify the set-up, select, the entry level, where to place the order and where to exit the order. This is done on all liquid US stocks (and it can be done on global markets as well). And as an added bonus we also added a day trading component to this strategy for those of you who like to exit positions before the close each day.

The Long Pullbacks Strategy comes with a 100% Money Back Guarantee (as do all the Guidebooks in our Strategy Series).

If you would like more information on *The Long Pullbacks Strategy* [click here](#). If you would like to order and download it now so you can have immediate access to it please [click here](#) or call toll free 888-484-8220 ext. 627 (outside the US please dial 973-494-7333).

-Connors Research Trading Strategy Series-



ETF Gap Trading: A Definitive Guide

If you trade ETFs you will soon see that trading Gaps on ETFs, when done correctly, can be the one of the most profitable strategies available to you in ETF Trading.

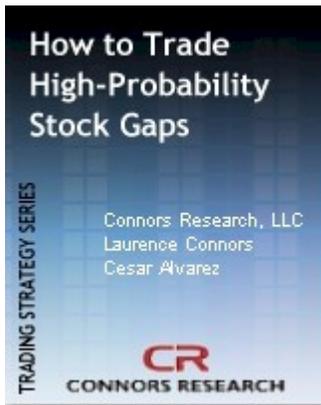
The average gains per trade from trading the gaps as taught in this Series ranges all the way up to over 4% per trade (a substantial number for ETFs). And we added a Leveraged ETF section where the average gains get above 5.5% trade.

Historically the majority of the ETF Gap set-ups have been correct 71-77% of the time. And like the Long Pullback Strategies we've also added a day trading aspect to trading gaps which allow you to day trade ETFs both on the long and the short side.

The ETF Gap Trading Strategy also comes with a 100% Money Back Guarantee.

If you would like more information on the ETF Gap Trading Strategy [click here](#). If you would like to order and download it now so you can have immediate access to it please [click here](#) or call toll free 888-484-8220 ext. 627 (outside the US please dial 973-494-7333).

-Connors Research Trading Strategy Series-



How to Trade High Probability Stock Gaps

Gap Trading Is A "Core Strategy" For Most Successful Traders - Do You Trade Stock Gaps?

For three decades, gap trading has been one of the most popular and successful strategies for traders who have identified when and how to trade stock gaps. The problem is that there are literally thousands of gaps every year. So how does the average trader know which ones to trade, where to enter them and where to properly exit the positions?

Now for the first time, you have the opportunity to learn what many professionals already know about gap trading: when it's done correctly, it can be extremely lucrative.

"If I could only trade one strategy, it would be early morning gaps"

Kevin Haggerty – Former Head of Trading Fidelity Capital Markets

How to Trade High Probability Stock Gaps also comes with a 100% Money Back Guarantee.

If you would like more information on the *How to Trade High Probability Stock Gaps* Guidebook [click here](#). If you would like to order and download it now so you can have immediate access to it please [click here](#) or call toll free 888-484-8220 ext. 627 (outside the US please dial 973-494-7333).