

Chapter 18

STAYING WITH A TREND

While we are on the subject of the possibility of a day trader holding overnight, let's also see a way to stay with the trend allowing price volatility to dictate an exit point. To do that, we first have to review some material we presented in Trading The Ross Hook.

USING THE COMMODITY CHANNEL (CCI) INDEX TO STAY WITH THE TREND

We will see together how you can use the CCI study in a way that few have seen before. We'll take it a step at a time. Pay close attention to what is being taught here. (The CCI study is available in most charting software packages.)

The CCI measures the mean deviation of a bar's Typical Price relative to a moving average of N bars' Typical Price. Typical Price may be computed as the high plus the low plus the close, divided by three. This gives a close-weighted Typical Price.

The CCI study is generally displayed with three horizontal lines: +100, 0, and -100. However, CCI is theoretically, if not practically, infinitely expandable.

There is one great advantage to the scale. It is increasingly difficult for CCI to make ever greater extremes in its readings. It takes increasingly more momentum to push the CCI plot increasingly further out on its scale.

Experience has shown that a 30-bar CCI works best. We tested it all the way to 50 bars, and agreed that 30 bars was best. However, it may work better at other values in other markets, as we didn't test every market available.

Any software which will allow you to insert a fictitious price bar can be used to emulate the manner in which we use the CCI. To insert a

price, you need to be able to create a hypothetical price bar for what will be the next price bar. How to know what the next price bar will be will be shown just ahead. This is easily done on a daily chart with most software. On anything less than a 15 minute chart, you will really have to scramble to get the job done. The truth is, the calculation works best on an hourly, daily or weekly chart. Once you have placed the hypothetical bar on the chart, simply run the CCI study with the hypothetical bar in place, and see what the reading will be.

The hypothetical bar need have only one price for all fields. The open, high, low, and close can all be a Typical Price, but if your software will allow, you can also insert a high and a low if you want to do the extra work.

How do you know what the next bar's Typical Price might be?

We'll show you two ways to do it. Then, we'll show you how to use CCI as a trend following tool that will keep you in a well established trend.

Figuring the next bar's Typical Price in congestion has been done essentially this way since the inception of exchange trading. Each day many specialists and market makers come to the exchange with these figures in hand. They tend to sell at or near the typical high and buy at or near the typical low. If either the high or the low are violated by more than a few ticks, you will see them bail out and run for their lives. This shows up on a chart as an extra long intraday bar.

FIGURING THE NEXT BAR'S TYPICAL PRICE IN CONGESTION

$$(\text{Open} + \text{High} + \text{Low} + 2(\text{Close})) / 5 = X$$

2X minus The High = Next Bar's Projected Low

2X minus The Low = Next Bar's Projected High

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Example: $(24 + 25 + 23 + 2(23.5)) / 5 = 23.8$

$2(23.8) - 25 = 22.6 = \text{Next Bar's Projected Low}$

$2(23.8) - 23 = 24.6 = \text{Next Bar's Projected High}$

Next Bar's Typical Price = $(\text{Next Bar's Projected Low} + \text{Next Bar's Projected High}) / 2$

$(22.6 + 24.6) / 2 = 23.6$

FIGURING THE NEXT BAR'S TYPICAL PRICE IN A TREND

TYPICAL PRICE IN AN UPTREND.

To compute the next bar's Typical Price in an uptrend, we need to find the average rate of ascent. It's important to use 4 bars for this computation.

What we want to know is, on average, how much prices are moving in the direction of the uptrend. To find out, we measure from low to high.

Here are the steps to follow:

We measure from one bar's low to the next bar's high, to see how far prices move over a two bar period. We do this for three overlapping two bar periods.

Let's take an example:

BAR	LOW	HIGH	AMOUNT MOVED
1	26.00		
2	26.50	28.00	2.00
3	27.75	30.25	3.75
4	29.25	31.00	3.25

We then add those measurements together and divide by three.

$$2 + 3.75 + 3.25 = 9, \quad 9 / 3 = 3 \text{ on average.}$$

Adding 3 to the last known low (29.25), we obtain a number of **32.25**, which is the next bar's projected high.

Next we need to determine tomorrow's projected low.

We measure the average volatility for the last three bars. **Average volatility equals the sum of the differences between high and low, divided by three.**

BAR	LOW	HIGH
1	26.00	
2	26.50	28.00
3	27.75	30.25
4	29.25	31.00

We have:

$$31.00 - 29.25 = 1.75$$

$$30.25 - 27.75 = 2.50$$

$$28.00 - 26.50 = 1.50$$

The three differences are 1.75, 2.50, and 1.50.

Summing these and dividing by 3 = $5.75/3 = 1.92$ (rounded).

Subtracting 1.92 from the projected high (32.25), **we obtain a number of 30.33 for the next bar's projected low.**

The final step is to add the projected high to the projected low and divide by two to come up with a Typical Price.

In this case, $(32.25 + 30.33) / 2 = 31.29$.

It's important to realize that this is not an exact science, but you might be surprised how often we can come within a tick or two of being right.

We can also compute the Typical Price differently by measuring from high to high to get the projected high.

To obtain the projected low, we would then do as we've just done and subtract average volatility for three days from the projected high.

A third idea is to also measure from close to close to come up with a projected close.

Then we can add the projected high + the projected low + the projected close, and then divide by three to come up with a close weighted Typical Price.

The ultimate situation would be to project an open and throw that in there as well.

Then we could substitute the four prices into the formula I gave for finding Typical Price in a congestion.

It's a matter of choice, yours. With today's software in many instances being programmable by the user, we can figure all the different ways and then make our choice.

Tomorrow's Typical Price in a Downtrend

To compute tomorrow's Typical Price in a downtrend, we need to find the average rate of descent. It's important to use 4 bars for this computation.

What we want to know is, on average, how much prices are moving in the direction of the downtrend. To find out, we measure from high to low. Here are the steps to follow:

We measure from today's low to the previous day's low, to see how far prices move over a two day period. We do this for three overlapping two day periods.

BAR	HIGH	LOW	AMOUNT MOVED
1		61.25	
2	63.50	60.75	2.25
3	62.75	60.00	2.00
4	61.50	59.25	1.50

We then add those measurements together and divide by three.
 $2.25 + 2.00 + 1.50 = 5.75 / 3 = 1.92$ (rounded) on average.

Subtracting 1.92 from the last known high (61.50), **we obtain a number 59.58 for tomorrow's projected low.**

Next we need to determine tomorrow's projected high.

We measure the average volatility for the last three bars. **Average volatility equals the sum of the differences between high and low, divided by three.**

BAR	HIGH	LOW
1		61.25
2	63.50	60.75
3	62.75	60.00
4	61.50	59.25

We have:

$$61.50 - 59.25 = 2.25$$

$$62.75 - 60.00 = 2.75$$

$$63.50 - 60.75 = 2.75$$

The three differences are, 2.25, 2.75, and 2.75.

Summing these and dividing by 3 = $7.75 / 3 = 2.58$

Adding 2.58 to the projected low, we obtain a number of 62.16 for tomorrow's projected high. $59.58 + 2.58 = 62.16$.

The final step is to add the projected low and the projected high and divide by two to come up with a Typical Price. In this case, $(62.16 + 59.58) / 2 = 60.87 =$ tomorrow's Typical Price.

One last thing. For those of you who might want to know the formula for the CCI, it's shown on the following page.

FOUR STEPS TO CALCULATE CCI

1. COMPUTE TODAY'S "TYPICAL" PRICE, USING HIGH, LOW AND CLOSE:

$$X_1 = 1/3 (H + L + C)$$

2. COMPUTE A MOVING AVERAGE OF THE N MOST RECENT TYPICAL PRICES:

$$\bar{x} = \frac{1}{N} \sum_{i=1}^N x_i$$

3. COMPUTE THE MEAN DEVIATION OF THE N MOST RECENT TYPICAL PRICES:

$$MD = \frac{1}{N} \sum_{i=1}^N |x_i - \bar{x}|$$

4. COMPUTE THE COMMODITY CHANNEL INDEX:

$$CCI = \frac{(x_1 - \bar{x})}{1.5 * MD}$$

WHERE:

N = NUMBER OF DAYS IN THE DATA BASE

X₁ = CURRENT BAR'S TYPICAL PRICE

X₂ = PREVIOUS BAR'S TYPICAL PRICE

X₃ = BAR BEFORE PREVIOUS BAR'S TYPICAL PRICE

X_N = OLDEST TYPICAL PRICE IN THE DATA BASE

$$\sum_{i=1}^N$$

$$\sum_{i=1}^N x_i = x_1 + x_2 + x_3 \dots + x_N$$

|| SIGNIFIES "ABSOLUTE VALUE"; DIFFERENCE SHOULD BE ADDED AS IF ALL WERE POSITIVE NUMBERS.

We had to take that to a mathematician to have it translated. To the best of our knowledge, CCI shows you the relationship (expressed as the mean deviation) of today's Typical Price to a moving average of Typical Prices. By measuring today's Typical Price against a moving average of typical prices, we are in effect taking a measurement of volatility.

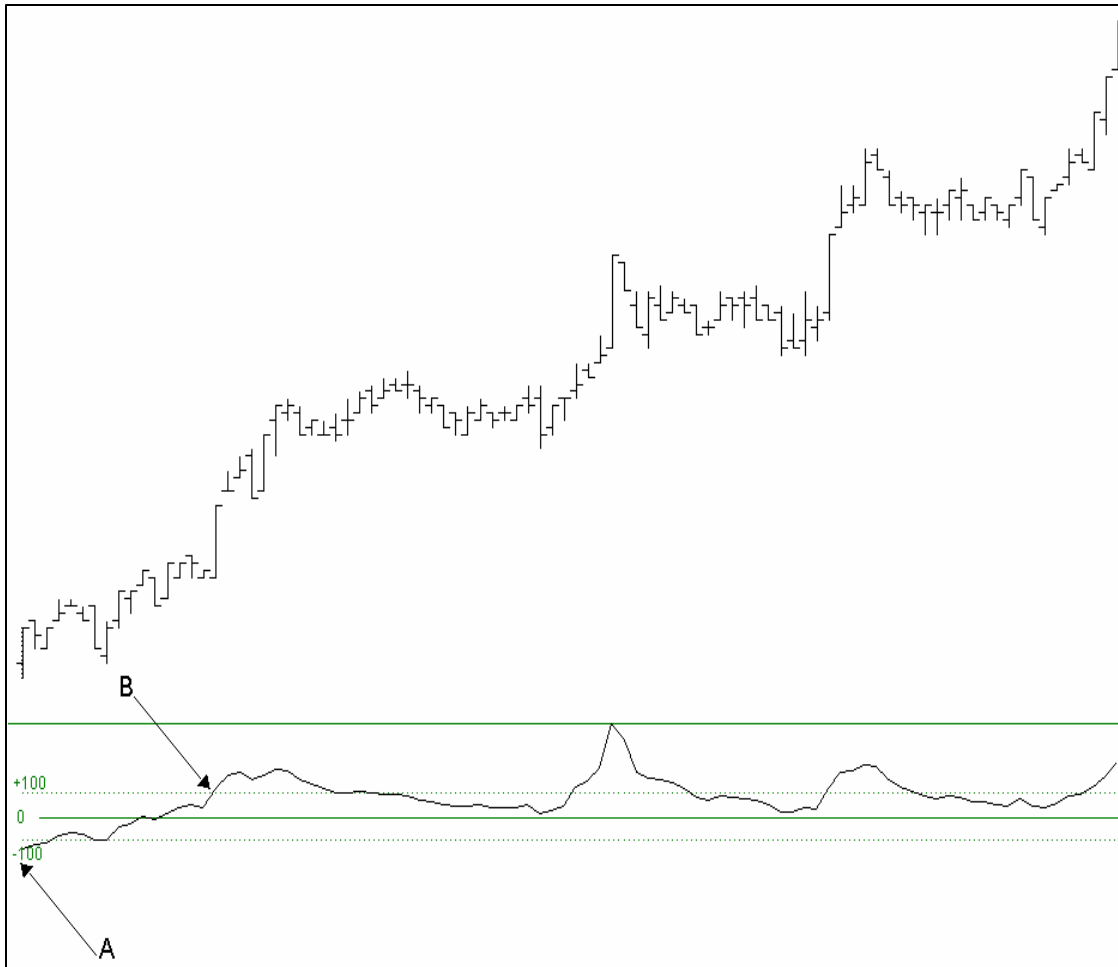
Now it's time to we look at how to use this concept to stay with a trend. The rules are similar to what we showed in Trading The Ross Hook, yet this set of rules are a little different, so pay attention.

Rules

- 1. LOOKING BACK FROM WHERE THE PRICE ACTION IS NOW, THE CCI MUST HAVE PASSED THROUGH THREE OF THE "VISIBLE HORIZONTAL" (VH) LINES (+100, 0, -100) IN A DOWNTREND OR LINES (-100, 0, +100) IN AN UPTREND. PRIOR TO DECIDING THAT THIS IS A TREND WORTH STICKING WITH.**
- 2. WHEN PRICES HAVE PASSED THROUGH ALL THREE LINES, YOU USUALLY WILL DISCOVER THAT YOU HAVE A STRONG AND CONTNUOUS TREND IN EFFECT. THIS IS THE TIME TO SERIOUSLY CONSIDER HOLDING A POSITION UNTIL IT ONCE AGAIN REACHES 0:**

Keep in mind that CCI varies from one software program to another, but then, of course, so does data vary somewhat from one supplier to another. However: **AS LONG AS CCI IS CONSISTENT WITH THE CHARTS CREATED BY YOUR OWN SOFTWARE, IT IS ACCEPTABLE TO TAKE THE SIGNALS GENERATED.**

Following are some illustrations to help clarify the concept.



The chart above is 5 minute chart spanning a time period of 3 days. (We were able at the time this was written to use a 5 minute chart only because the software were using [no longer available], allowed us to quickly plug in a price and the software instantly came up with a CCI value. Conversely, we could hand the software a CCI value and it would tell us at what price that value would occur.) Let me also add that the ability to make such a projection is not necessary to the technique I'm describing.

At "A" CCI is below the -100 line. Notice that the CCI curve rises above -100, then above 0, and finally, above the +100 horizontal lines. When you see such action by CCI, you should suspect a trend in the making. If you have other indications of a trend such as a technical study, or a 1-2-3 formation followed by a Ross Hook, you should consider using CCI for your trailing stop.

Once CCI rises above the +100 (in the case above), you would resolve to hold your position until CCI once again touches the 0 line, or could be projected to touch 0 through the use of typical price calculations. A projection would indicate to you exactly at which price the value of CCI would touch 0 and you would plan to exit at that price. In this particular instance, CCI never again touched 0.



The chart above is a 5 minute chart spanning a time period of 3 days.

At "A" we see CCI crossing below the +100 line. Subsequently, it crosses through "0" and then -100 at "B." This, combined with any other filters we may have, should alert us that a trend is in progress. Shortly after "B," CCI touches "0," but after that, the trend begins in earnest. CCI never again touches "0" until "C."

PERTINENT POINTS

- CCI in and of itself is not a great indicator of the start of a trend. However, it offers an excellent alert that a trend may be forming once you see CCI crossing three horizontal lines.
- CCI should be filtered with at least one other method for confirmation of the trend.
- If you choose to not compute typical prices for purposes of CCI projection, simply exit the trade on the first bar after CCI touches "0." Statistically, the results will be about the same as with the projection. For day traders, this may mean waiting an extra few minutes depending upon the time frame in which the trading is done. However, for position traders this can mean an extra day or an extra week. Therefore, position traders, because they have the time to compute the projection, are probably better off doing so.