

A Spreadsheet For A Trend-Following Approach

Here's a template for a spreadsheet that anyone can use to set up a simple trend-following system.

by Ron McEwan

he cult classic 1980s movie *Trading Places* was supposedly based on the famous Wall Street legend of two great traders, Richard Dennis and his partner William Eckhardt. The story goes that the two had a disagreement over whether trading skills were an innate talent or whether they were a skill that could be learned or taught. Dennis believed it could be

taught. He likened it to a turtle farm he had once seen and commented something to the effect of, “We are going to grow traders just like they grow turtles.” And that began the now-legendary tale of the “Turtle” traders. Many of these traders went on to reap millions in profits.

The Turtle trading method was a rule-based trend-following system. The Turtle trading money management rules can be easily found on the Internet, so I won't go into them here. Instead, in this short article, I will just describe a simple method for setting up an Excel spreadsheet for implementing a basic "Turtle"-style trend-following application.

SETTING UP THE SPREADSHEET

To start, paste 100 days of historical data into a workbook in cells A1 thru E100, as depicted in Figure 1. I used historical data from the Yahoo Finance website, since it is readily available.

The next step in creating the trend bands is to enter the variable-range formulas into cells G21 and H21.

The formula for G21 is:

=MAX(OFFSET(C21,-(\$G\$2-1),0):C21)

The formula for cell H21 is:

=MIN(OFFSET(D21,-(\$G\$2-1),0):D21)

Copy these formulas down to the end of the data range. In this example, the formulas are copied down to cells G100 and H100.

You will see that these two formulas require a variable-range number entered into cell G2. This number defines the range that will be calculated. In this case, the range entered is 5. By adjusting this range, you can experiment based on your individual preferences in applying this indicator.

G2 = 5

The second set of formulas are entered in cells J21 and K21, respectively. The formula for J21 is:

= MAX(OFFSET(C21,-(\$J\$2-1),0):C21)

The formula for K21 is:

=MIN(OFFSET(D21,-(\$J\$2-1),0):D21)

Again, copy these formulas down to the end of the data range. In this example, the formulas are copied down to cells J100 and K100.

As in the previous formulas, a variable-range value needs to be entered in cell J2:

J2 = 2

You will now have five columns of price data and four columns of range formulas.

The last sets of formulas entered are an example of a basic buy/sell rule. Variations to this rule are left to the individual's imagination. I just provided this as a starting point for building a set of signals for entry and exit points.

For the signal formulas, enter in cell M21:

=G21-J21

And for the second signal parameter, in the next column, N21, enter:

= K21-H21

One of the greatest hazards to trend trading models is the occurrence of unanticipated (news) events.



The last step is to enter formulas that will determine if the signal formulas are indicating a "buy" or "sell" (entry and exit).

In cell P21, enter the formula:

= IF(AND(N21>M21),"Buy","")

And in cell Q21, enter the formula:

= IF(AND(M21>N21),"Sell","")

WHAT IT DOES

In the following example charts, you can see that what this formula does is to enter a long position when the difference between the two-day low trend and the five-day low trend is greater than the difference between the two-day high trend and the five-day high trend.

A sell (or short) position is entered when the opposite occurs—that is, when the difference between the two-day high

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q |
|-----|---------|--------|--------|--------|--------|---|--------|--------|---|--------|--------|---|------|------|---|------|------|
| 1 | | | | | | | Max Hi | Min Lo | | Max Hi | Min Lo | | | | | Buy | Sell |
| 2 | Date | Open | High | Low | Close | | 5 | | | 2 | | | | | | | |
| 74 | 3/22/19 | 283.22 | 283.80 | 279.18 | 279.25 | | 285.18 | 279.18 | | 285.18 | 279.18 | | 0.00 | 0.00 | | | |
| 75 | 3/25/19 | 278.87 | 280.19 | 277.64 | 279.04 | | 285.18 | 277.64 | | 283.80 | 277.64 | | 1.38 | 0.00 | | Sell | |
| 76 | 3/26/19 | 280.99 | 282.18 | 279.56 | 281.12 | | 285.18 | 277.64 | | 282.18 | 277.64 | | 3.00 | 0.00 | | Sell | |
| 77 | 3/27/19 | 281.11 | 281.76 | 277.93 | 279.65 | | 285.18 | 277.64 | | 282.18 | 277.93 | | 3.00 | 0.29 | | Sell | |
| 78 | 3/28/19 | 280.35 | 281.21 | 279.07 | 280.71 | | 283.80 | 277.64 | | 281.76 | 277.93 | | 2.04 | 0.29 | | Sell | |
| 79 | 3/29/19 | 282.39 | 282.04 | 281.14 | 282.40 | | 282.04 | 277.64 | | 282.04 | 279.07 | | 0.00 | 1.43 | | Buy | |
| 80 | 4/1/19 | 284.70 | 286.16 | 284.40 | 285.83 | | 286.16 | 277.93 | | 286.16 | 281.14 | | 0.00 | 3.21 | | Buy | |
| 81 | 4/2/19 | 286.04 | 286.23 | 285.09 | 285.97 | | 286.23 | 277.93 | | 286.23 | 284.40 | | 0.00 | 6.47 | | Buy | |
| 82 | 4/3/19 | 287.32 | 287.76 | 285.75 | 286.42 | | 287.76 | 279.07 | | 287.76 | 285.09 | | 0.00 | 6.02 | | Buy | |
| 83 | 4/4/19 | 286.78 | 287.46 | 286.01 | 287.18 | | 287.76 | 281.14 | | 287.76 | 285.75 | | 0.00 | 4.61 | | Buy | |
| 84 | 4/5/19 | 287.92 | 288.63 | 287.60 | 288.57 | | 288.63 | 284.40 | | 288.63 | 286.01 | | 0.00 | 1.61 | | Buy | |
| 85 | 4/8/19 | 288.10 | 288.91 | 287.37 | 288.79 | | 288.91 | 285.09 | | 288.91 | 287.37 | | 0.00 | 2.28 | | Buy | |
| 86 | 4/9/19 | 287.72 | 288.08 | 286.70 | 287.31 | | 288.91 | 285.75 | | 288.91 | 286.70 | | 0.00 | 0.95 | | Buy | |
| 87 | 4/10/19 | 287.77 | 288.39 | 287.31 | 288.29 | | 288.91 | 286.01 | | 288.39 | 286.70 | | 0.52 | 0.69 | | Buy | |
| 88 | 4/11/19 | 288.83 | 288.84 | 287.58 | 288.21 | | 288.91 | 286.70 | | 288.84 | 287.31 | | 0.07 | 0.61 | | Buy | |
| 89 | 4/12/19 | 290.00 | 290.47 | 288.26 | 290.16 | | 290.47 | 286.70 | | 290.47 | 287.58 | | 0.00 | 0.88 | | Buy | |
| 90 | 4/15/19 | 290.24 | 290.35 | 289.08 | 289.97 | | 290.47 | 286.70 | | 290.47 | 288.26 | | 0.00 | 1.56 | | Buy | |
| 91 | 4/16/19 | 290.95 | 291.01 | 289.50 | 290.16 | | 291.01 | 287.31 | | 291.01 | 289.08 | | 0.00 | 1.77 | | Buy | |
| 92 | 4/17/19 | 291.40 | 291.43 | 288.99 | 289.45 | | 291.43 | 287.58 | | 291.43 | 288.99 | | 0.00 | 1.41 | | Buy | |
| 93 | 4/18/19 | 290.10 | 290.32 | 288.66 | 290.02 | | 291.43 | 288.26 | | 291.43 | 288.66 | | 0.00 | 0.40 | | Buy | |
| 94 | 4/22/19 | 209.17 | 290.44 | 209.07 | 290.27 | | 291.43 | 200.66 | | 290.44 | 200.66 | | 0.99 | 0.00 | | Sell | |
| 95 | 4/23/19 | 290.68 | 293.14 | 290.42 | 292.88 | | 293.14 | 288.66 | | 293.14 | 289.07 | | 0.00 | 0.41 | | Buy | |
| 96 | 4/24/19 | 292.79 | 293.16 | 292.07 | 292.23 | | 293.16 | 288.66 | | 293.16 | 290.42 | | 0.00 | 1.76 | | Buy | |
| 97 | 4/25/19 | 292.12 | 292.78 | 290.73 | 292.05 | | 293.16 | 288.66 | | 293.16 | 290.73 | | 0.00 | 2.07 | | Buy | |
| 98 | 4/26/19 | 292.10 | 293.49 | 291.24 | 293.41 | | 293.49 | 289.07 | | 293.49 | 290.73 | | 0.00 | 1.66 | | Buy | |
| 99 | 4/29/19 | 293.51 | 294.45 | 293.41 | 293.87 | | 294.45 | 290.42 | | 294.45 | 291.24 | | 0.00 | 0.82 | | Buy | |
| 100 | 4/30/19 | 293.49 | 294.00 | 291.92 | 293.88 | | 294.45 | 290.73 | | 294.45 | 291.92 | | 0.00 | 1.19 | | Buy | |

FIGURE 1: A TREND BANDS WORKBOOK. You can use a spreadsheet to set up a simple trend-following system that draws trend bands on the chart using historical data.

trend and the five-day high trend is greater than the difference between the two-day low trend and the five-day low trend.

Figures 2 through 6 show examples of the trend-following bands applied to various securities.

A CAVEAT FOR ANY TREND-FOLLOWING SYSTEM

It's worth mentioning that one of the greatest hazards to trend trading models is the occurrence of unanticipated (news)

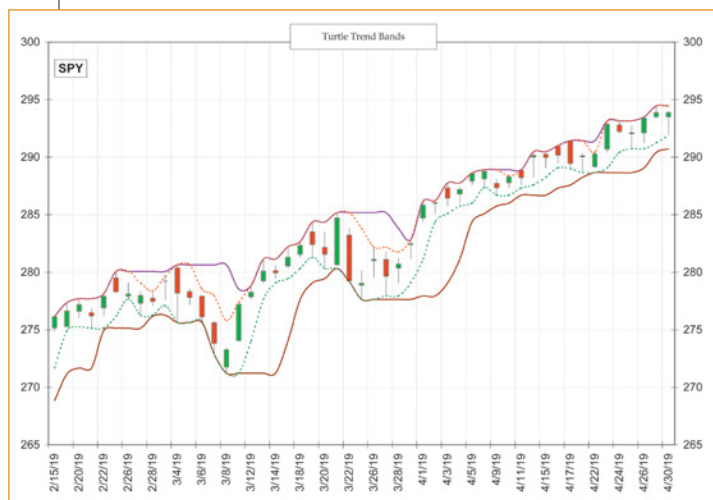


FIGURE 2: TREND BANDS ON SPY DAILY

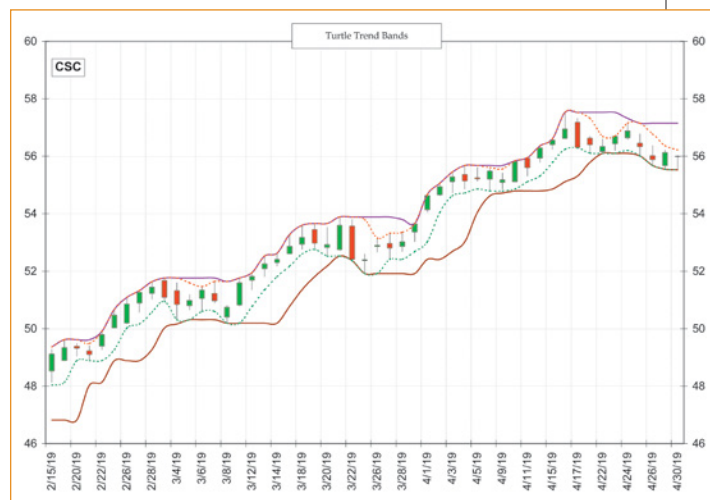


FIGURE 5: TREND BANDS ON CSC DAILY



FIGURE 3: TREND BANDS ON QQQ DAILY

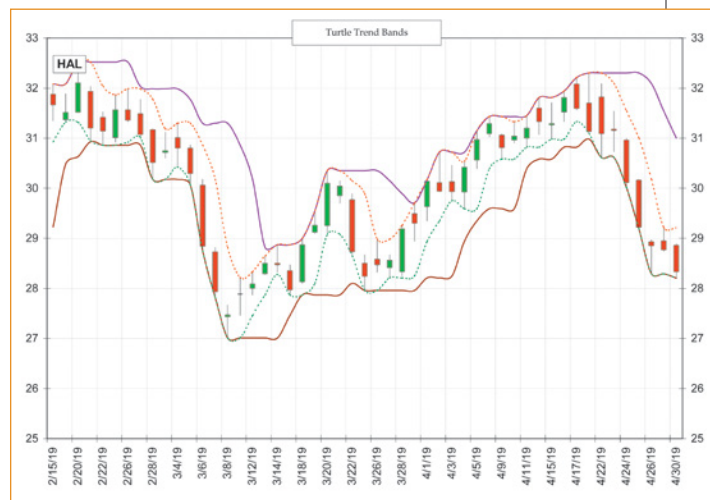


FIGURE 6: TREND BANDS ON HAL DAILY



FIGURE 4: TREND BANDS ON BA DAILY

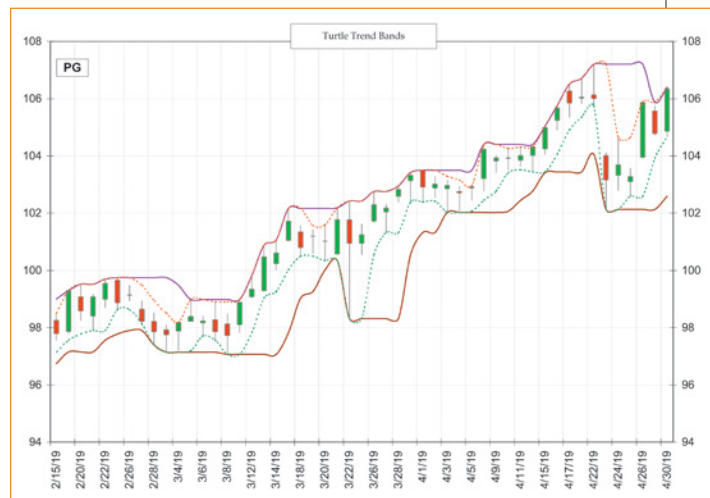


FIGURE 7: TREND BANDS ON PG DAILY

events. An unexpected event can have the effect of ending a trend, with often immediate and catastrophic effects to the trader's bottom line. You can see examples of this occurring in Figures 8 and 9 of the SPY and IBM monthly charts with trend bands. IBM experienced a severe disruption in trend after negative events were reported in the news, resulting in a rapid decline in price. For reasons such as this, it is up to the individual trader or investor to exercise portfolio diversification and effective money management strategies with any trading strategy.

I hope this workbook will provide a useful application for traders and investors.

Ron McEwan is an independent trader and analyst. He can be reached by email at rmac@juno.com.

*The Excel workbook mentioned in this article is available in the **Article Code** section of our website, Traders.com.*

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FURTHER READING

Brys, Guy, Anja Struyf, and Luc Van Hof [2001]. "Trading The Turtle System On Currencies," *Technical Analysis of STOCKS & COMMODITIES*, Volume 19: August.

Hartle, Thom [1992]. "Talking With 'Turtle' Russell Sands," interview, *Technical Analysis of STOCKS & COMMODITIES*, Volume 10: December.

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FIGURE 8: TREND BANDS ON SPY MONTHLY DATA



FIGURE 9: TREND BANDS ON IBM MONTHLY DATA

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Continued from page 8

*The code given in this article is available in the **Article Code** section of our website, Traders.com.*

*See our **Traders' Tips** section beginning on page 48 for commentary and implementation of John Ehlers' technique for various technical analysis platforms. Accompanying program code can be found in the **Traders' Tips** area at Traders.com.*

FURTHER READING

Ehlers, John F. [2013]. *Cycle Analytics For Traders*, John Wiley & Sons.

Montevirgen, Karl [2019]. "Market Data Insights With John

Reduction of lag is probably the most desirable characteristic for an indicator.



Ehlers," interview, *Technical Analysis of STOCKS & COMMODITIES*, Volume 37: September.

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