How You Can Find

High-Probability Trading Opportunities Using Moving Averages

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How You Can Find High-Probability Trading Opportunities Using Moving Averages

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Chapter 1 – Defining the Moving Average and Its Components
A rundown of different types of moving averages and how to use a dual moving average crossover system

Chapter 2 – The Most Popular Moving Averages
The specific moving average systems that stock and commodities investors use

About the Author

Jeffrey Kennedy is the Chief Commodity Analyst at Elliott Wave International (EWI). With more than 15 years of experience as a technical analyst, Jeffrey writes and edits *Futures Junctures*, EWI's premier commodity forecasting package that includes *Daily Futures Junctures*, *The Weekly Wrap-Up* and *Monthly Futures Junctures*. EWI has published four volumes of his *Trader's Classroom Collection*, and numerous on-line webinars and eBooks, which present Jeffrey's trading insights, market analysis and advice on how to apply the Wave Principle in real time. Besides analyzing markets, he is a popular speaker at international technical analysis conferences and teaches seminars for EWI on how to spot trading opportunities using the Wave Principle and other technical indicators.

Chapter 1

Defining the Moving Average and Its Components

A moving average is simply the average value of data over a specified time period, and it's used to figure out whether the price of a stock or a commodity is trending up or down. Although simple to construct, moving averages are dynamic tools, because you can choose which data points and time periods to use to build them. For instance, you can choose to use the open, high, low, close or midpoint of a trading range and then study that moving average over a time period, ranging from tick data to monthly price data or longer.

The most common types of moving averages are simple, exponential, weighted, smooth, centered, adaptive, and triangular. Of these, the three most often used by traders and analysts are the simple moving average, exponential moving average and weighted moving average, so I will refer to them often throughout this course.

Figure 1-1

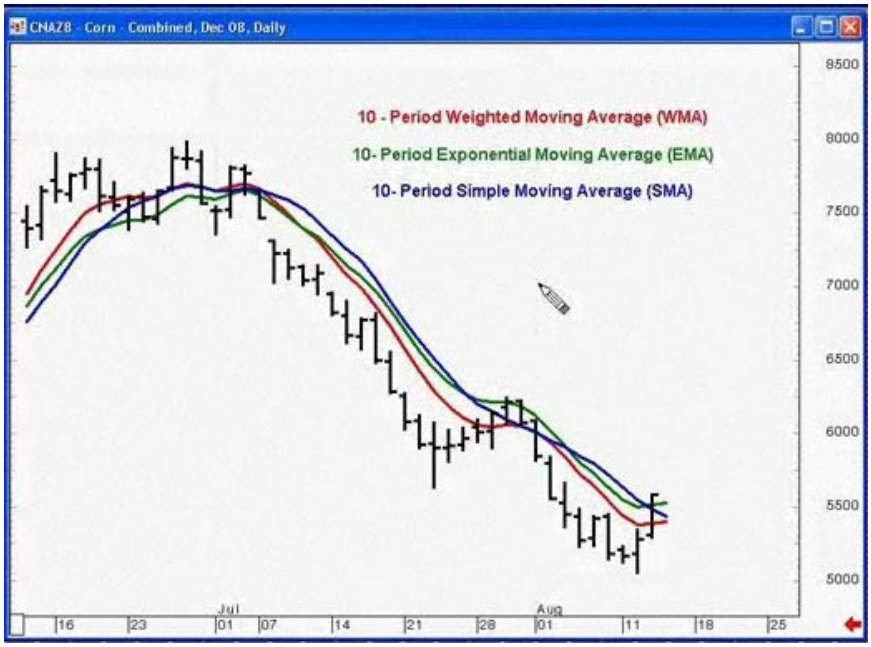


Figure 1-1 plots three moving averages on a daily chart for Corn. The red line represents a 10-period *weighted* moving average, the green line represents a 10-period *exponential* moving average, and the blue line is a 10-period *simple* moving average. Without going into a long discussion of the math behind these moving averages, I want to point out that the exponential moving average and weighted moving average put more value on the front end, which means that while a 10-period simple moving average assigns the same weight to each period, exponential and weighted moving averages put more weight on the most recent data.

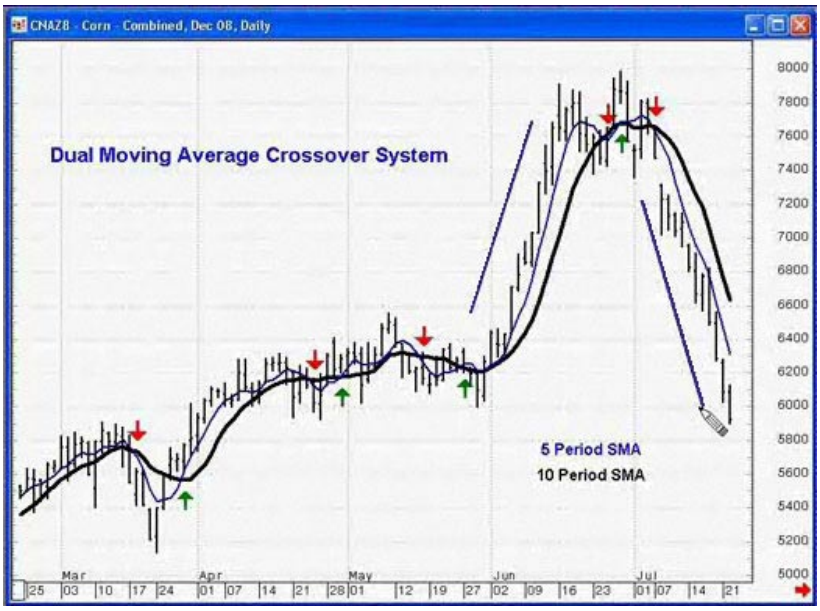
As you can see in Figure 1-1, the variation is noticeable but not enough to make a big difference in their representation. I have worked with all types of moving averages over the years, and I rely mostly on the simple moving average, because simple things usually work best. In this course, I will focus most on the 10-period simple moving average.

The Dual Moving Average Crossover System

When designing a trading system using moving averages, most people will begin with a dual moving average crossover approach, as shown in Figure 1-2. The 5-period simple moving average is shown as a thin blue line. The 10-period simple moving average is the thick black line.

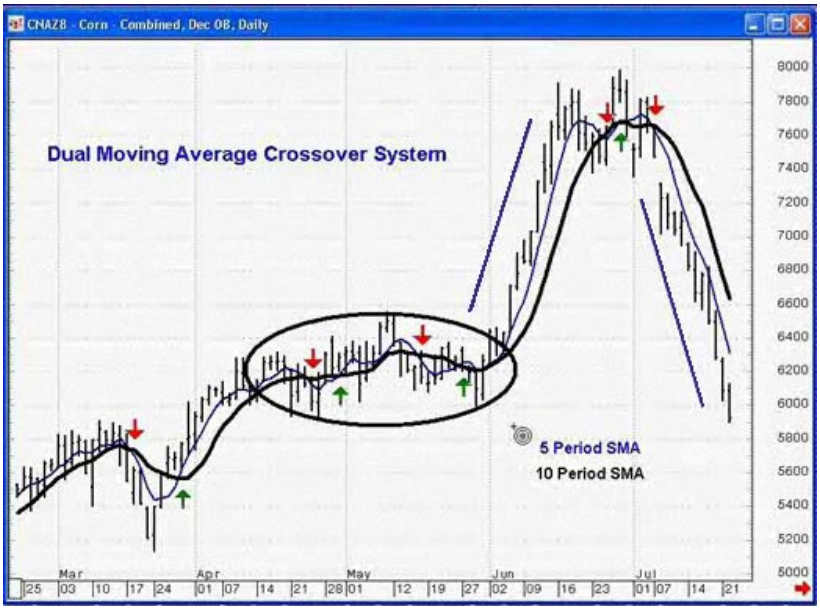
In analysis and technical studies, you'll often see a chart marked like this, and you will also see some exciting price moves as a result. Look at how the two lines cross over one another at the top of the chart, indicated by the red arrows to the downside. These red arrows indicate that the 5-period simple moving average crossed below the 10-period simple moving average.

Figure 1-2



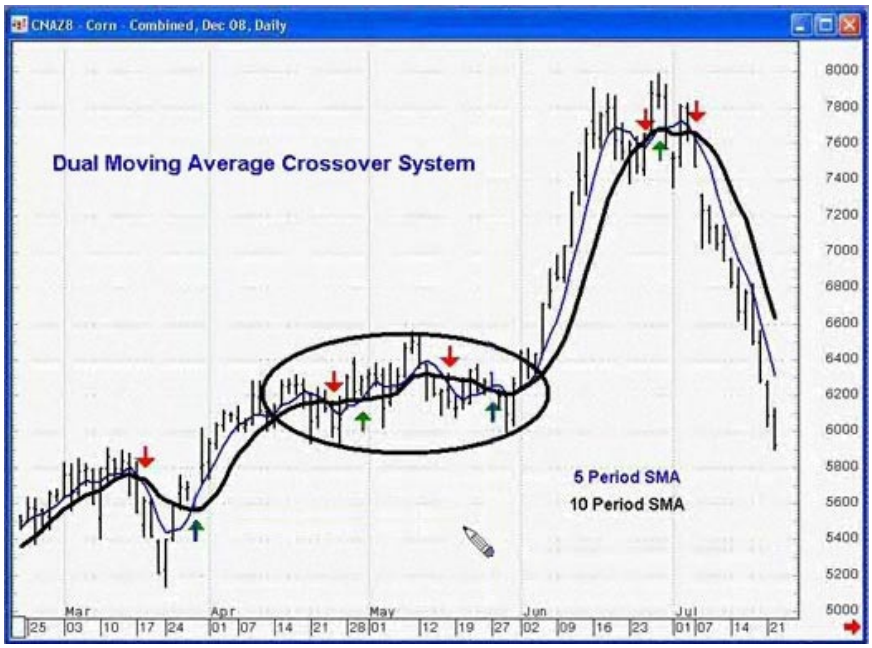
At first, you might think, "Wow, that looks like a great trade." Since the trendline break gave a signal, you figure you would have been short and made lots of money. However, what you need to realize is that a moving average is actually a trend-following indicator: it always lags the market. This means that whenever the market is trending, such as during the periods marked with a blue line, moving averages work nicely to give you worthwhile signals.

Figure 1-3



But they can also give you false signals, particularly when you enter a sideways market or a market where there's no trend, circled in Figure 1-3. From all my years of testing moving averages, I have learned the hard way that there is no one magic moving average setting. There is no period that works across all markets and time frames.

Figure 1-4



So, if you're interested in optimizing a market according to a moving average or a moving average crossover approach, I recommend the following actions:

1. First, identify the specific market and time frame you want to study, such as Corn on the daily level.

2. Second, make sure the period you are initially testing contains both a trending phase and a non-trending phase. This step will ensure that your results do not include a trend bias.

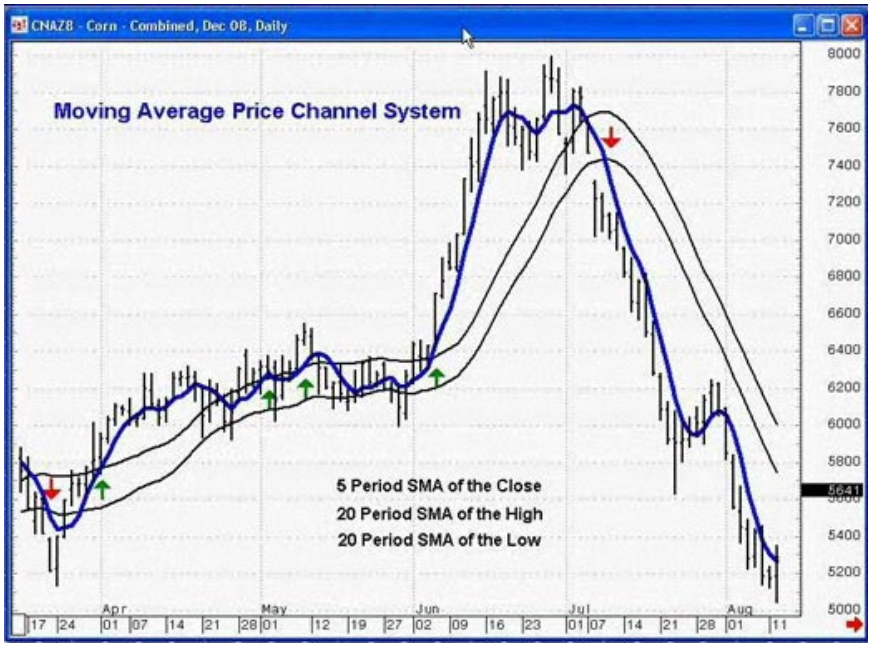
3. Then perform a simple optimization to identify which moving average parameters are best to use.

4. Once you complete those steps, you will then want to examine a totally different period of time, something that may have occurred months or even years ago. This step is extremely important because it is similar to what some refer to as a Double-Blind study. In the "biz," it is referred to as Out-of-Sample Data testing, the result of which will determine if you have identified a viable mechanical trading system.

Moving Average Price Channel System

Figure 1-5

One way to overcome whipsaws or false signals with a dual moving average crossover system is by employing a moving average price channel. The moving average, the higher black line in Figure 1-5, is a 20-period simple moving average of the high. The lower black line is the 20-period simple moving average of the low. The moving average price channel is the area in between. The blue line is a 5-period simple moving average of the close.



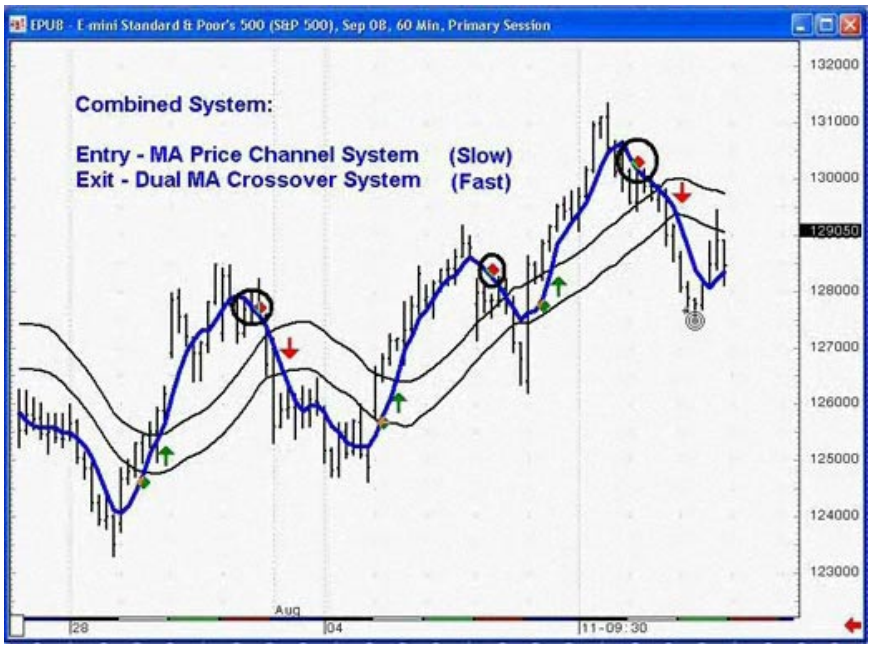
In Figure 1-5, the buy and sell signals are marked with arrows. A buy occurs when the 5-period simple moving average of the close, or the blue line, crosses above the upper boundary line of our price channel. A sell is when the blue line crosses below the lower line, or the 20-period simple moving average of the low.

Using a price channel cuts down on the number of whipsaws because it creates a more significant hurdle for prices to overcome before a signal is generated. In the same figure, notice that since the move up began in late March 2008, there were buy signals to the upside, as well as a nice move to the downside, which signaled the short seen here in Corn.

When designing a mechanical trading system using moving averages, dual moving averages or moving average channels, it is important to remember that what may work in Corn may not work as well in the Canadian Dollar and vice versa. Again, there's no magic setting.

Combining the Crossover and Price Channel Techniques

Figure 1-6



Another way to work with moving averages is to combine the crossover technique with the price channel technique. The price channel system is shown on a chart of E-mini S&P 500 in Figure 1-6. The green arrows identify when the blue line crosses the 20-period moving average of the higher line, which is a 20-period simple moving average of the high. The red arrows indicate a close below. The circled diamonds indicate when the 5-period moving average crossed below the 10-period. (In an attempt to make this price chart easier to interpret, I have not shown the 10-period simple moving average.)

Essentially, this method combines the best of two moving average systems into one. Its purpose is to give you a slow entry using the moving average price channel system, which eliminates false trading signals, but a quick exit to protect profits by using a dual moving average crossover system.

Figure 1-7

To further explain this methodology, look at the Net Logic stock chart in Figure 1-7. See the circled green arrow and the circled red diamond, which indicate a slow entry but a quick exit. If I had to pick between a dual moving average crossover system versus a price channel system, I would favor the price channel system, because it more easily identifies areas of support where you can expect trend reversals.

Figure 1-8

In Figure 1-8, notice how the market – and especially the moving average – dipped into the price channel and then turned back up, which is marked with the first small vertical line. This is an excellent indication of a countertrend move within a larger upturning market. Then the same thing happened again, marked by the second small vertical line.

Figure 1-9

Figure 1-9 is an updated price chart of the same stock. In the downside within the stock's sell-off, prices pushed into the price channel and then turned back down, and you can see the successful break of the price channel on the far right of the chart. From there, let's assume the price channel continues higher. From a trading perspective, I would consider this situation to be a buying opportunity for a move above the extreme, especially if prices pulled back into the channel and then began to turn back up, because this is the signature of a countertrend move within a larger uptrending market.

Figure 1-10

This chart of Corning in Figure 1-10 shows how each time the market moves into the price channel (marked by the short vertical lines), it signals a buying opportunity. When Corning's price breaks through the price channel (indicated by the short diagonal line), the trend has turned to the downside. So, we have a clear uptrend followed by a clear downtrend. This moving average price channel identifies countertrend moves with an uptrending market. Notice how the blue line keeps revisiting the 20-period moving averages of the high or 20-period moving average of the close.

It's very similar to Elliott wave analysis, where impulse waves consist of five moves and a three-wave correction. Buying opportunities are in wave 2 and wave 4, and there's a selling opportunity at the top of wave 5, which you can see from the wave pattern drawn below the stock chart.

Chapter 2

The Most Popular Moving Averages

In this section, I will explain the moving averages that are most popular on the Street, both for the stock exchanges and the commodities markets. Among technicians who work mainly with stocks, the most popular moving average is a 50-period simple moving average of the close and a 200-period simple moving average of the close. In fact, these settings are so popular that you may have even heard them referred to by technical analysts on CNBC.

Figure 2-1
Figure 2-1 shows an example of when the 200-period moving average provided resistance in an April-to-May move up in the Dow Jones Industrial Average (circled on the heavy black line). As you can see, the 50-period moving average provided support (circled on the blue line).

Figure 2-2
Notice in Figure 2-2 how the 50-period moving average provided resistance in a daily time frame, as marked by the short, red vertical lines. But you can also see how the Dow penetrated the 50-period simple moving average line decisively and pushed up higher. That's a good example of why you should remember that although moving averages can be a wonderful tool, these little blue and black lines can also become ropes that tangle you mentally and emotionally if they're misused.

Figure 2-3
For other markets, such as commodities and currencies, it's the 10-period and 40-period simple moving averages that are popular. In Figure 2-3 of Sugar, you can see how the 10-period moving average crossed below the 40-period moving average line and then came back to moderately test it before reversing sharply to the downside (marked by the red line). Some commodity traders highly value the 10-period simple moving average of the close and the 40-period simple moving average of the close.

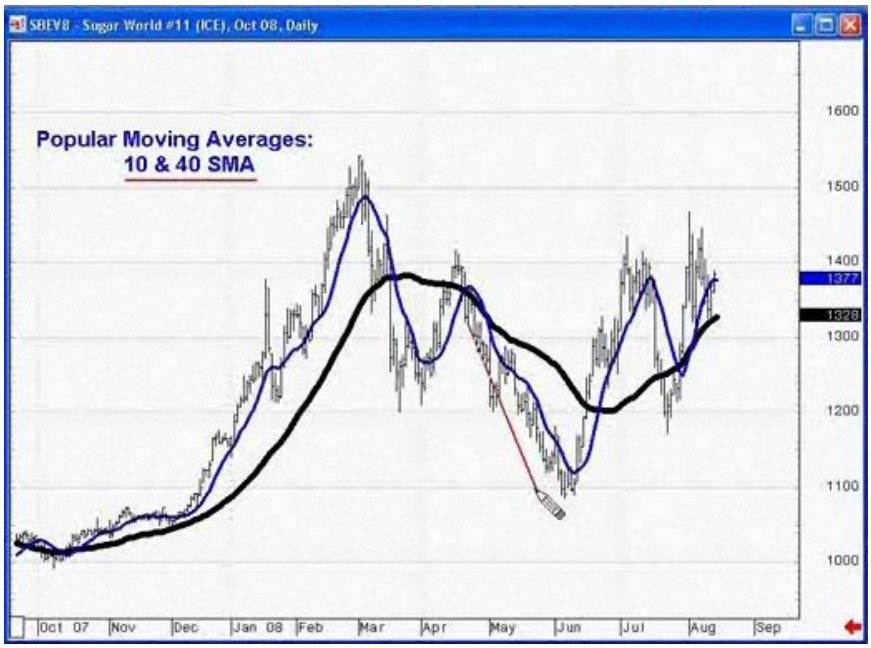
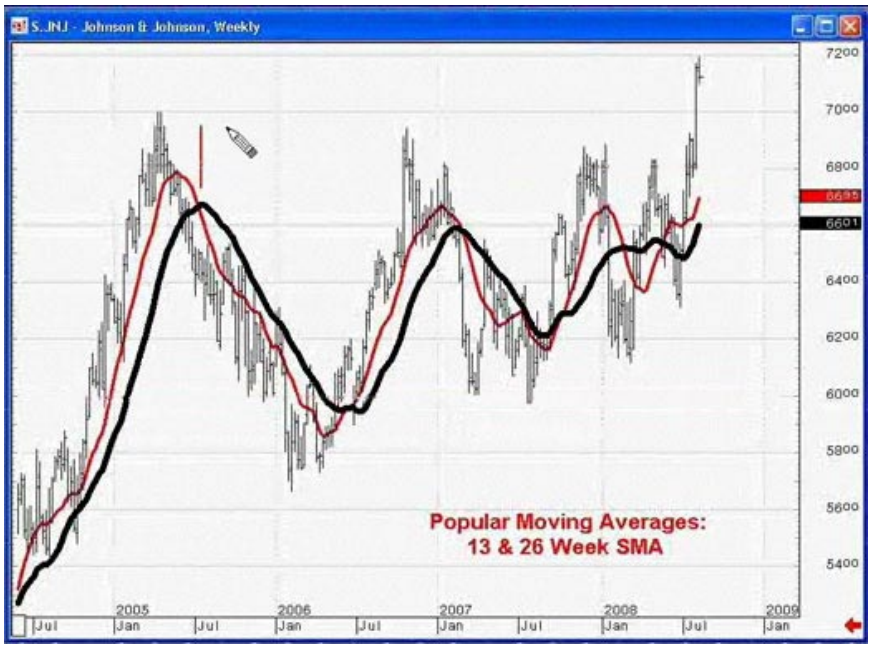


Figure 2-4
Now, let's look at another popular setting with regard to a weekly time frame that I like: It's a 13-week setting. One way to think of a moving average is that it's an automated trend line. This Sugar chart features a 13-week simple moving average of the close on a weekly time frame, in Figure 2-4. The 13-period simple moving average of the close works equally well in commodities, currencies and stocks. In this chart, prices crossed the line (marked by the short, red vertical line), and that cross led to a substantial rally. This chart also shows a whipsaw in the market, which is circled. Later, I'll explain a tool that might help you overcome whipsaws like these where the market gyrates up and down almost in place.

Figure 2-5
Another popular moving average setting that many people work with is the 13- and the 26-period moving averages in tandem. Figure 2-5 shows a crossover system, using a 13-week and a 26-week simple moving average of the close on a 2004 stock chart of Johnson and Johnson. Obviously, the number 26 is two times 13. During this four-year period, the range in this stock was a little over $20.00, which is not much price appreciation. This dual moving average system worked well in a relatively bad market by identifying a number of buy-side and sellside trading opportunities.



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