Testing the Simple Moving Average across Commodities, Global Stock Indices, and Currencies

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"I absolutely believe that price patterns are being repeated. They are recurring patterns that appear over and over, but with slight variations. This is because markets are driven by humans and human nature never changes."

—Jesse Livermore

CHALLENGING THE EFFICIENT MARKETS HYPOTHESIS

Buy and hold can safely be considered the most popular investing strategy currently for individual investors (Investment Company Institute [2008]). The popularity of the buy-and-hold approach to investing is in part attributed to acceptance of the efficient markets hypothesis (EMH). The EMH states that securities markets are informationally efficient. In other words, as long as an investor does not have access to nonpublic information, the investor cannot consistently achieve risk-adjusted returns in excess of average market returns.

The efficient markets hypothesis has not gone unchallenged, however. There have been several studies that investigated whether some price-based strategies (also known as technical strategies) can outperform the market on a risk-adjusted basis. Moving average strategies are one such set of strategies that are popular with technical traders (Brock, Lakonishok, and Lebaron [1992]). While there are several variations of moving average strategies, the most basic of these, the simple moving average strategy, involves buying a security once it starts to trade above the average of its closing prices from a specified last number of days or months and selling the security when its price falls below that same average.

In Exhibit 1, the broken line tracks the average of a security's closing prices from the last 200 days of trading. Each day, a new 200-day moving average is calculated and the broken line fluctuates up or down accordingly. When the security's price (the solid line) crosses above this average, a buy signal is generated. When it crosses below the average, a sell signal is executed. For ease of reference, we will at times refer here to the simple moving average strategy as "the strategy" and abbreviate buy and hold to "B&H."

Many research papers have been written on the topic of moving average strategies—in fact, one website counts fifty or more.[1] Many of these papers claim that moving average strategies can outperform the market on a risk-adjusted basis. In other words, an individual using these strategies can outperform a buy-and-hold strategy without the trader/investor taking on additional volatility or risk. Unfortunately, few of those papers can be considered comprehensive in their approach.