By Cynthia A. Kase

Tools for Technical Analysis

Technical analysis can be of great value to the informed user tasked with understanding today's volatile and seemingly erratic energy markets. This was true during the early 1990s, when markets were less mature, less volatile with lower prices. And it is true today when prices and volatility are higher.

Here are three examples of how technical analysis can help. The first shows how to evaluate a market when it is reaching a turning point, based on an "indicator," which is a mathematical algorithm that evaluates market data. The second demonstrates calculation of support and confirmation of a directional move based on candlesticks, which chart opening and closing prices during a particular timeframe, such as an hour or a month. The third shows that a pattern can reveal how a particular direction—in this example, down—really means that the market will go up, and it will give an estimate on how far.

In Figure 1, a chart of the six-month strip for natural gas from about October 2004 shows the forward curve, which would be used by a hedger to place a forward sale or purchase of a swap, or purchase of a cap or floor. The indicator shown in the lower subchart is a version of the Kase PeakOscillator (KPO) designed for use on strips. The KPO is classified technically as a "momentum" indicator and looks at the difference between trend strength up vs. down. It is plotted as a histogram between +/- 100.

The phenomenon shown is a standard technical pattern called "momentum divergence" and is characterized by a higher peak in price and a lower peak in momentum. Here, the first set of "highs" is shown by the solid black ovals, with the second set in dotted black ovals. For those who might have some trouble seeing that the second momentum high was lower than the first, the exact values were 82.9 and 80.1 respectively. This textbook example of "bearish divergence" could have been used by producers to accelerate placement of hedges and by consumers to remove or restructure profitable hedges.

Figure 2 is a candlestick pattern called a "dark cloud cover." A candlestick displays price by showing a rectangle (called a real body or body) between the open and close of a time increment, such as daily, weekly or as shown below, monthly. A black candlestick means the open is the top of the body and the close at the bottom—and vice versa for white. The price above (bullish) or below (bearish), which the market needs to close to complete formation, is the midpoint of the body or the average between the open and close.

The chart shown is a monthly natural gas "perpetual" chart. This is a chart of the price activity for the first nearby contract on a rolling basis. Because the candlesticks formed by the activity during the month of October 2004 had a large range between the open and close, its midpoint of $7.673 became important support. So by the end of October, the technicals had generated an important threshold number of about $7.67. The following month of November not only traded well below this level but also closed just below the important threshold at $7.62, confirming the bearish outlook would continue, which it did for two more months. (The chart also shows how the midpoint of the September 2004 candlestick also formed support during January and February 2005). Thus,

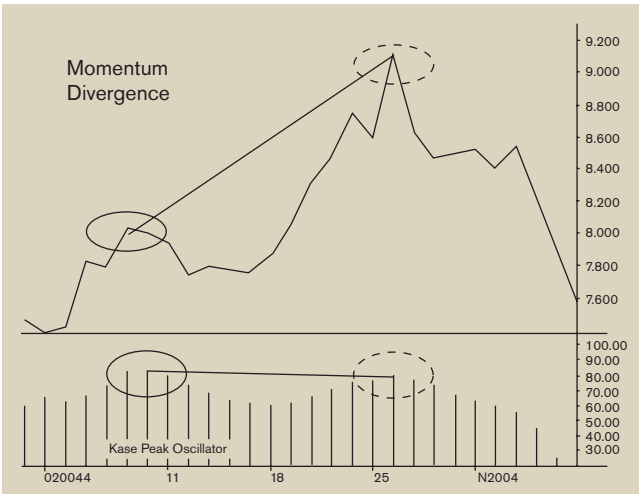

Figure 1

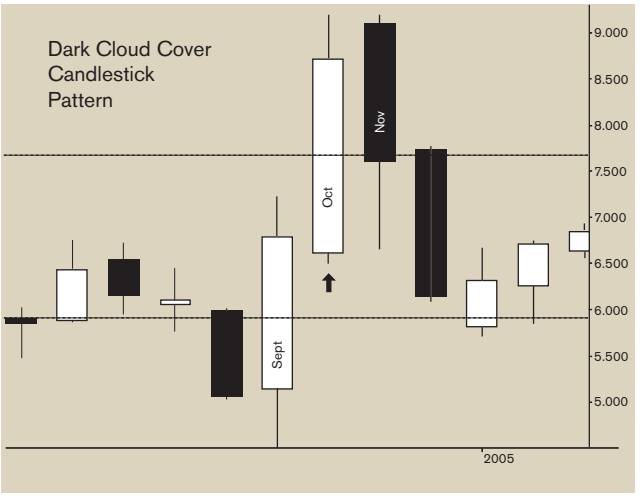

Figure 2

a forecaster would have had an initial bearish target of $7.67 that ended up getting hit, as well as a confirmation that the downward move would likely continue.

Figure 3 is a bullish "pennant" formation. The chart shown is the April 2005 natural gas contract with daily bars. A pennant is formed by two downward sloping lines that appear to converge. A similar formation is a flag, which has lines that are roughly parallel. These patterns can fool those who are not familiar with the technicals because in bullish formations the price activity is downward and vice versa; however, they have been shown statistically (when found on a daily chart or longer time frame) to have more than an 80% success rate of breaking higher.

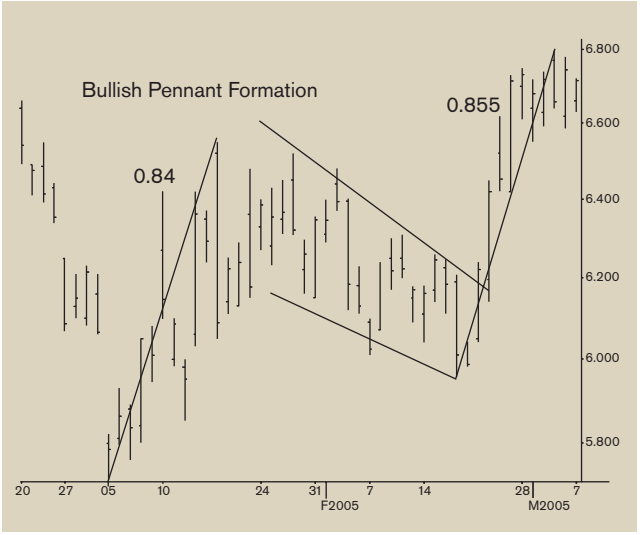

Figure 3

In addition, when a bullish pennant forms off a low, such as the $5.71 in this case, instead of after a sustained trend, then the move up into the pennant is likely to at least double. The chart shows how the initial move up to $6.55—a "wave" 84¢ high—projected off the pennant low of $5.95 to $6.79, and $6.815 was actually met. Thus, during the pennant phase, those concerned about the market price increases could have planned for such an increase so that they were not surprised, and once the move up began, they would have had the means to estimate how far the initial move up was likely to go. •

***Cynthia Kase**, CMT, has more than 30 years of industry experience and is a former oil trader turned market technician and risk management advisor. For nearly 15 years, the president of Kase and Company Inc. has helped energy hedgers and traders through weekly forecasts, quarterly hedge advisory services and computer trading and hedging models. For more information,* visit kaseco.com.