

Seasonal Tendencies in Commodities

The fundamentals are useful when trading commodities as well

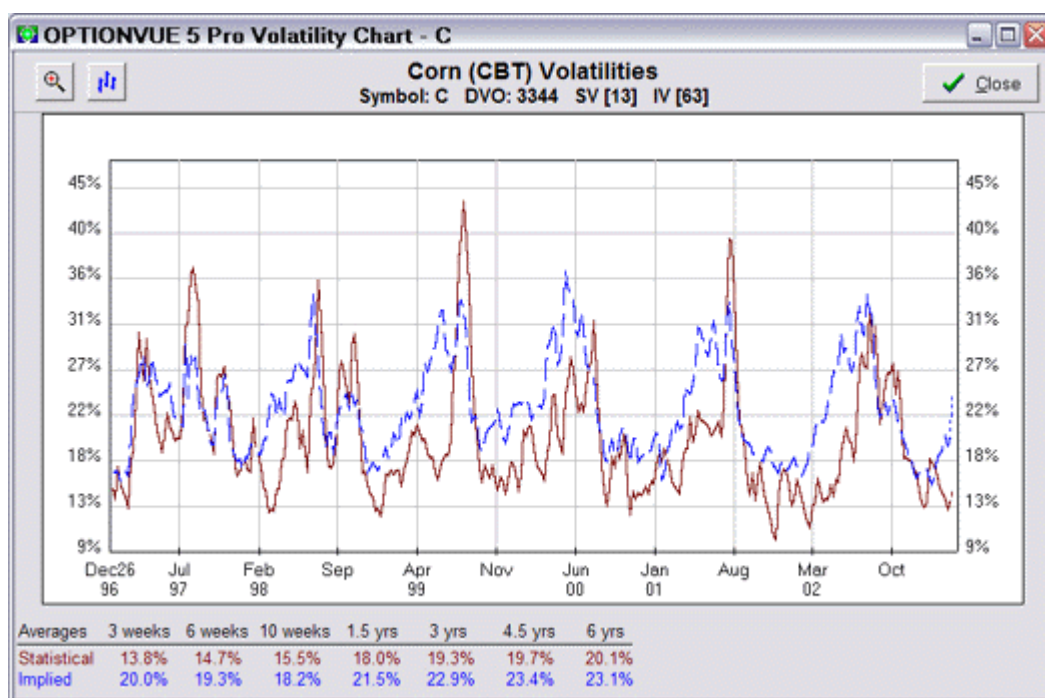
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To understand commodity futures prices, you need to understand the production and consumption of the commodity in question. Some futures contracts are based on annually produced commodities: Corn, Wheat, Soybeans, Cotton, Cattle, Hogs, etc. These annually produced commodities tend to have supply available just once a year (harvest), while demand is variable and occurs throughout the year.

Changes in supply and demand create unstable conditions and these markets often move more than you might anticipate - and stay at these levels for long periods. Understanding the transition periods between uncertainty and certainty for is the key to understanding these commodities. I want to focus on those periods of potential change to future supply or demand that reoccur on a consistent basis. Placing these events into the context of supply, demand, and the current market you can find potentially profitable trades that take advantage of these patterns.

The seasonal patterns of the grain markets are one of the most consistent patterns in the commodities markets. There are fundamental reasons why these markets react in a similar direction during certain periods of the year. These seasonal patterns can also be seen in the volatility of the futures contracts. The difference is that predicting a seasonal change in volatility is much more reliable than a change in price. This can easily be seen by looking at a historical chart of volatility, such as the historical Volatility Chart for corn shown below:



The solid red line represents the actual volatility of the corn contracts, the blue dashed line represents the volatility implied by option prices, and a simple bar price chart is shown in the background.

The marketing of last year's crop and transportation are the two dominant features of the grain markets in February. Most farmers sell their grains to elevators, which store and market them throughout the year. Most elevators are located near grain producers in the Midwest and it is difficult to market their stores until spring (since most inland waterways like the Saint Lawrence Seaway are iced over during winter). This tends to create a supply surplus in the Midwest, and a scarcity on both coasts where much of the US population lives.

Most grain producers also operate on a calendar year tax basis, so they tend to step up marketing at the start of a new tax year. They need to begin raising money to finance planting, as well as make their tax and land lease payments. These factors tend to suppress grain prices in the beginning of their new year, driving grain prices lower during February. With the current weak export picture, the corn market does not look too promising in the short term, and typically following a weak January corn prices tend to make a lower low in February. Following the last 11 weak Januarys (out of the previous 21 years), corn futures have posted a lower low in February 10 times.

Though February is usually bearish, time works against bears in the grain markets. With planting around the corner and the inland waterways thawing, grain markets typically turn in March when the important fundamentals shift from marketing of crops to planting and the uncertainty regarding future supply. Grains tend to exhibit the most strength at the beginning of their production cycle, and the futures are most likely to rise during the period between field preparation and the completion of planting. This is because if planting goes poorly - too much rain, too little rain, too hot, too cold - the yield will be lower and supply less. Since no one can tell the future, the market builds in a risk premium to compensate producers for the risk involved. These upward moves in the grain markets are best viewed as opportunities to sell into strength, rather than the start of a bullish trend.

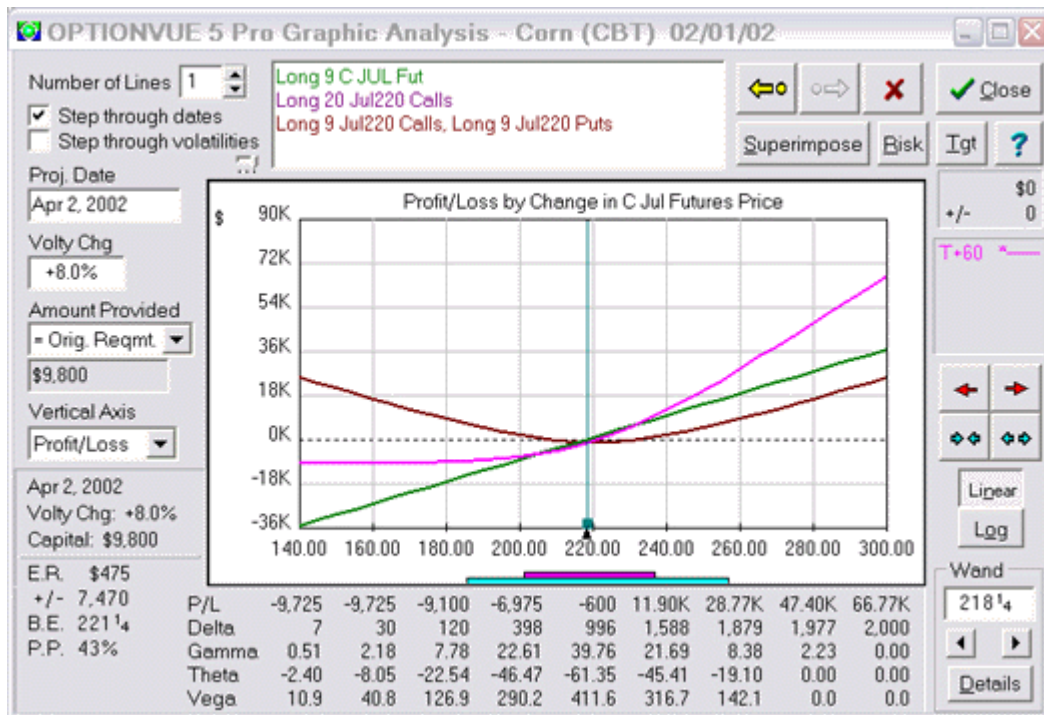
For traders, the best time to enter a position is when a market has a strong historical tendency for a directional move. Going long corn futures would be the obvious way to take advantage of the anticipated price increase. However, while corn prices often increase at this time of year, it is not always the case. While January 2001 saw the worst performance in January for the March contract in the last two decades, it was not followed by a strong rally in March. Instead (after a smaller than normal rally) corn futures prices then continued to plunge all the

way until June.

This unusual price behavior creates a situation that favors an options trader. Options allow you to build a risk profile that takes advantage of both price and volatility changes while tailoring risk to your comfort level. An aggressive strategy would be to simply buy call options. This strategy limits your risk better than simply being long the underlying futures contract. Call options increase in value when the price increases, and they will also gain value from increases in implied volatility. Even when prices drop, some of the loss in a call options' value is offset if implied volatility increases.

A more conservative strategy would be a non-directional trade like a long straddle or strangle, where you don't care which way the price moves. The long options on each side gain in value from increased volatility, and large movements in either direction add to your profit.

Let's look back to February 1, 2002 to see how a \$10,000 trade in each of these three strategies would have performed, projecting a holding period of 60 days and an expected increase in implied volatility of 8%, with the different possible prices of the July futures contract shown along the bottom (x-axis):



As you can see, the traditional trade, going long the July futures contract (the green line) results in less of a gain if the price increases than going long the at-the-money July calls options (the pink line). In fact for a straight bet on price, the call option beats the futures contract both ways, since that strategy actually limits your losses relative to the long futures trade if you are wrong, and the price drops. The long strangle (maroon line) is profitable over the widest range of prices. You make the least when the price increases, but if you are wrong and it decreases substantially, you still stand to make a reasonable profit. So how did each of these perform over the next 60 days to April 2nd, 2002.

The price of the July futures contract dropped from 211 1/2 to 210 1/2 over the 60 day period, while implied volatility actually increased about 6%. You would have done best with the strangle trade, losing \$720. Going long the futures contract would have resulted in a loss of \$3,622. The worst performance came from going long the call options, which would have resulted in a loss of \$4,425.

So the straight volatility play would have resulted in the smallest loss. Remember, this is when the price went the opposite direction of what you were expecting. While some traders shy away from options because they perceive them as too risky, you can see that their versatility actually allows you to create less risky trades.

Looking at the volatility chart, you can see that sellers of options could just as easily play the other side, selling when implied volatility is high (and the options are expensive), and then buying them back after implied volatility drops. In fact this is usually a much higher probability play than the purchase at the low we just went over.

While understanding past market tendencies to move in a particular direction can be used to make informed, and often profitable, trading decisions, traders should exercise due diligence and use other forms of analysis in conjunction with seasonality. Seasonal events can be early, late, or never come at all. Each year is unique. Just because a market has reacted a particular way in the past does not mean it has to repeat this year. The CFTC, which regulates commodity futures and options trading, has brought actions over the past several years against brokers that lured customers with the claim that they could earn large profits with little risk based on predictable seasonal demands.