

Using volatility information for trading

Last week we looked at the concept of volatility in option trading. We covered the basics of statistical volatility and implied volatility.

We covered what these terms mean, and how they are derived. While being able to calculate these measures by hand is certainly an asset, most modern software packages will do this for you.

What is important how you interpret the numbers. That is what this article is about. We will go through an example and I will suggest ways to interpret the information and how it may help in trading.

Suppose I give you a few stats on volatility. I tell you Soybean statistical volatility is around 25% but T-bond statistical volatility is just 12%. Can we make some money from either market or is it useless information?

Just like any form of analysis, be it technical or fundamental or anything, it's all relative. That is where the use of historical volatility figures comes into play.

I use volatility charts from OptionVue5 software which displays past statistical volatility along side past at-the-money implied volatility for any given asset. From this chart we can answer the following questions:

1. **Where is volatility currently?**
2. **What is the high and the low over the period?**
3. **Where does volatility consolidate?**
4. **How quickly volatility can change?**

One could argue it is a crude form of analysis, but it is effective and it can give you some idea of the type of strategies that may be suitable at certain times in that market.

Example: Soybeans

The chart below shows volatility for Soybean Futures. The red solid line is Statistical Volatility. The blue dashed line is Implied Volatility. The chart spans a little over four years. Each data point on the chart is the measure of Statistical Volatility over the previous 20 trading days. This is it is the standard deviation of prices over the past 20 trading days. It is expressed as a percentage of the average price.

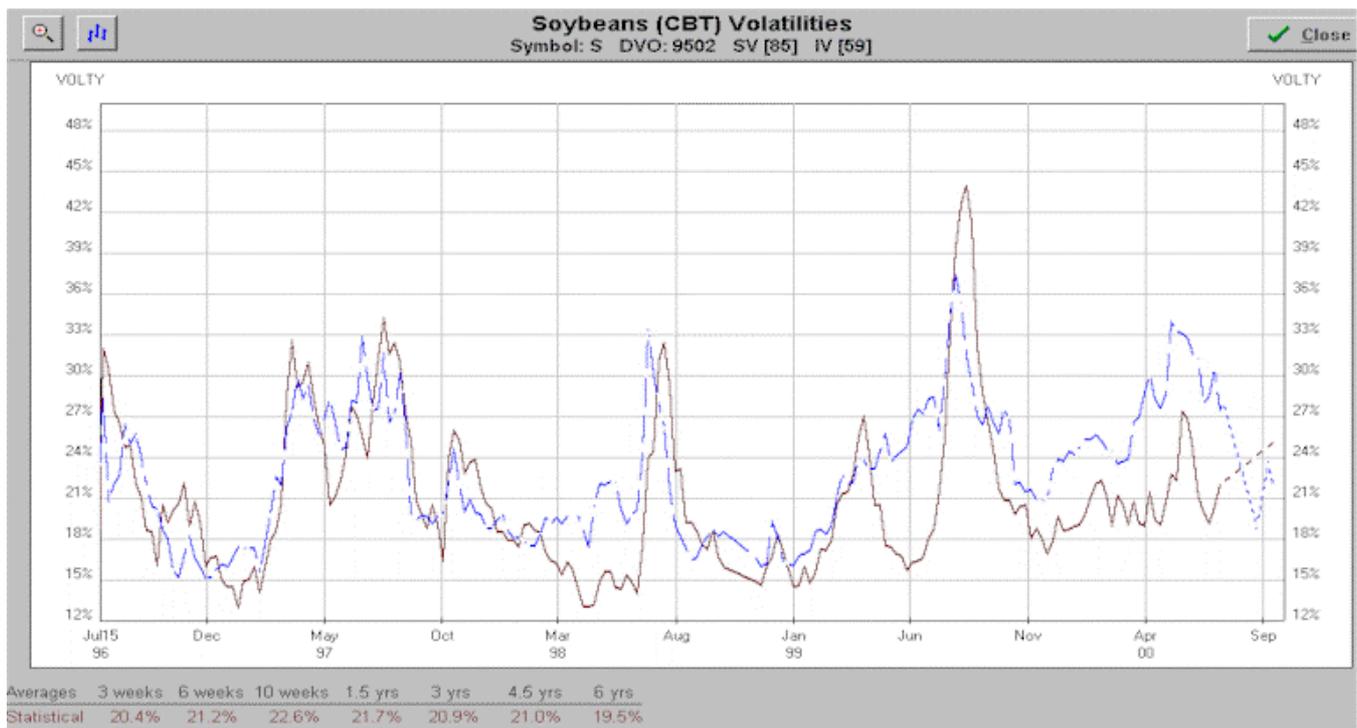
Terms:

Statistical Volatility: (or *historical volatility*) A measure of the degree of price movement in the underlying asset. It is measured using the standard deviation.

Implied volatility: The level of volatility needed so that a pricing model will return a fair value of the option equal to that of *the current market price*.

Long volatility: Describing any strategy that benefits from an increase in volatility. These strategies are best placed when volatility is low. This type of strategy may or may not be directional.

Short volatility: Describing any strategy that benefits from a decrease in volatility. These strategies are best placed when volatility is high. This type of strategy may or may not be directional.



Looking at our four questions:

1. Where is volatility currently?

Currently, Soybean statistical volatility is trading around 25%. How should you interpret that? It's hard to interpret such a figure without a standard of comparison. Knowing where the market has been can tell you if the current level of 25% is high or low. It is all relative. In Soybeans as you can see, Statistical Volatility of 25% is at the lower end of the scale, but this figure in Treasury Bonds for example would be extremely high.

2. What is the high and the low over the period?

Statistical Volatility has varied quite a bit over the past few years. From a high of above 42% to a low of around 14%. This suggests that Soybean Futures moves from period of inactivity and predictable movement to periods of high activity and unpredictable movement. As options traders the last thing we want is a market that subdued and predictable. If that were the case, nobody would trade options.

Another reason to look at the range of volatility is that this can tell you approximately in what range volatility can move. From the chart you can get an idea of what level of volatility is unusually high or unusually low.

Volatility seems to be at the lower end of the recent range, although it is not exceptionally low. With this in mind, strategies such as short straddles, butterflies and ratio spreads may not be appropriate. These strategies could quickly turn ugly if volatility increased irrespective of price movement.

3. Where does volatility consolidate?

On several occasions over the charted period, statistical volatility has consolidated just after a fall from higher levels. In some markets, consolidation periods are far more noticeable and some even seasonal.

This suggests that strategies that are placed at periods of high volatility can be held for a little longer with reduced fear (not no fear) that volatility is likely to spike up once more.

4. How quickly volatility can change?

Some markets will rapidly move from periods of high volatility to periods of low volatility. Others will move slowly. From the above chart, we can see that Soybeans tend to move to from high volatility rather quickly and more slowly when at lower levels of volatility.

At periods of high volatility then, when you are short volatility, you would expect your strategies to show a quick return and therefore plan to be in the trade for a shorter period of time. At periods of low volatility, where you are long volatility, longer dated options and some more patience may be needed.

Summary

This article is not meant to teach you specifically about Soybean futures. It is meant to suggest a couple of basic questions when first looking at an options market.

There are many more things one can do with volatility information from studying seasonal factors to even applying any form of technical analysis. However the suggestions above are designed to give you a feel for how the market trades in terms of volatility. As options traders, we should be able quickly analyse a market in terms of its volatility characteristics and from there start thinking about possible strategies that suit those characteristics.

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