

Options: Aligning Volatility with Strategies

FREQUENTLY ASKED QUESTIONS

Where is it that I can find the implied vol percent to use in these calculations?

You can download the daily implied volatility data going back as far as necessary and then load it onto an excel spreadsheet and do a "rank and percentile" calculation.

Any tools to estimate volatility change in CME tool?

No, CME Group doesn't try to estimate volatility. We have many tools, but they are probability based and none are for implied volatility at this point.

It seems that volatility spikes indicate an oversold market, but how can volatility be used to determine over bought markets?

In equities, spikes tend to occur in oversold markets but not in futures, like the metals or energies markets. The phrase "buy low, sell high" applies to options volatility too.

How about interest rate change to option pricing during low and high rate environments?

We covered delta, gamma, theta and vega. Rho is the derivative for measuring an options sensitivity to changes in interest rates. With futures options, unless rates skyrocketed rather quickly, you would not have to be too concerned unless you were trading Treasury or Eurodollar futures options.

If implied volatility is calculated from option premium, how does it have the greatest effect on options premium?

That's the point - changes in implied volatility DIRECTLY impact premiums because traders imply their behavior as the bid/offer for options. Gains in volatility are usually referred to as premium coming into the market or volatility losses are usually referred to as premium coming out of the market.

Is volatility generally expressed in rolling 3-year periods?

It's usually expressed as an annualized number. If you wanted, you could do a 3-year period but I'm not aware of anyone doing that.

Is only normal distribution used to calculate probability of any options?

Prices do not precisely follow normal distributions and that's why we have volatility skew.

Why use standard deviation instead of absolute deviation?

The difference between the two norms is that the **standard deviation** is calculating the square of the difference, whereas the **mean absolute deviation** is only looking at the absolute difference. Hence, large outliers will create a higher dispersion when using the standard deviation instead of the other method.

Am I right to say, that volatility follows mean reversion rule?

In general, yes. Bitcoin is testing this theory, but in less volatile markets we tend to see mean reversion. Remember, bitcoin has a very short operating history relative to most futures contracts.

When the volatility is low, does the dealer price it at the low level or some 50th percentile level?

The premiums, and therefore the implied volatility, are a result of ALL market participants - market makers, dealers, retail traders and institutional traders. No one entity can price. However, market makers do try and buy "under" theoretical value and sell "over" theoretical value.

Are all the options premiums on different underlying (Gold, ES, Nat Gas, etc.) calculated using Black Scholes?

There are multiple options pricing models available to traders. Some work well with certain commodities and other price better with other commodities or futures. Unless you trade huge size, the difference is not large.

Can you explain trading differences on options on equities vs futures?

Equity options are generally not available for 24 hours like futures options. Equity options are for 100 share amounts, whereas futures are for 1 contract, not 100 contracts. Equities pay dividends, futures do not. Taxes (for US participants) are more efficient with futures and futures options vs. equity options.

