

IBKRWEBINARS.COM



May 9, 2023

Market Chameleon

Implied Volatility vs Historical Volatility

Dmitry Pargamanik
Market Chameleon

Will McBride
Market Chameleon

Exchange and Industry Sponsored Webinars are presented by unaffiliated third parties. Interactive Brokers LLC is not responsible for the content of these presentations. You should review the contents of each presentation and make your own judgment as to whether the content is appropriate for you. Interactive Brokers LLC does not provide recommendations or advice. This presentation is not an advertisement or solicitation for new customers. It is intended only as an educational presentation.



Disclosure:

Options involve risk and are not suitable for all investors. For information on the uses and risks of options, you can obtain a copy of the Options Clearing Corporation risk disclosure document titled [Characteristics and Risks of Standardized Options](#) by calling (312) 542-6901.

Multiple leg strategies, including spreads, will incur multiple transaction costs.

Futures are not suitable for all investors. The amount you may lose may be greater than your initial investment. Before trading futures, please read the [CFTC Risk Disclosure](#). For a copy visit interactivebrokers.com.

There is a substantial risk of loss in foreign exchange trading. The settlement date of foreign exchange trades can vary due to time zone differences and bank holidays. When trading across foreign exchange markets, this may necessitate borrowing funds to settle foreign exchange trades. The interest rate on borrowed funds must be considered when computing the cost of trades across multiple markets.

The Order types available through Interactive Brokers LLC's Trader Workstation are designed to help you limit your loss and/or lock in a profit. Market conditions and other factors may affect execution. In general, orders guarantee a fill or guarantee a price, but not both. In extreme market conditions, an order may either be executed at a different price than anticipated or may not be filled in the marketplace.

There is a substantial risk of loss in trading futures and options. Past performance is not indicative of future results.

Any stock, options or futures symbols displayed are for illustrative purposes only and are not intended to portray recommendations.

- IRS Circular 230 Notice: These statements are provided for information purposes only, are not intended to constitute tax advice which may be relied upon to avoid penalties under any federal, state, local or other tax statutes or regulations, and do not resolve any tax issues in your favor.
- Interactive Brokers LLC is a member of [NYSE FINRA SIPC](#)

Implied Volatility vs Historical Volatility

What is Implied Volatility
What is Historical Volatility
How to Chart Volatility
How to Compare Volatility

Implied Volatility

Implied Volatility is a derived value from option prices

You need an options pricing model to derive the implied volatility

The model has assumptions and limitations

Implied Volatility

Option Pricing Model needs inputs. These user inputs will impact the calculated IV. It is a methodology and not everyone will have the same IV.

Assumptions:

Such as interest rate and dividend assumptions, days to expiration (business or calendar), option price (midpoint, bid, offer) and stock price inputs etc..

Limitations:

Normal distribution function, does not price in gap risk

Option Pricing Model

The model assumes you will hedge your risks (delta and gamma) and trade the implied volatility vs realized volatility

Implied Volatility

The implied volatility is the market predicted future volatility for the underlying stock

Historical Volatility

It is a measure of a stock volatility in the past.

It is the actual or realized volatility of a stock for a certain date range.

You calculate the historical volatility from trade data.

There are different methods to calculate the historical volatility

Historical Volatility

You can use different prices

Close-to-close

Open-High-Low-Close

You can also use different date ranges

20 Day, 252 Day

Implied Volatility vs Historical Volatility

The implied volatility is compared to the historical volatility of the underlying to determine how far apart the forecasted volatility diverges from the historical measure.

When the implied volatility is above the HV, it indicates trades are pricing in higher than usual price movements in the underlying.

When the implied volatility is below the historical volatility it suggest traders are anticipating the stock to move in a more narrow range than before