

# Option Pricing

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## 1 Price of the Option

- Also known as the Option Premium
- It roughly follows the Black-Scholes formula
- It constantly changes

There are three main factors when pricing options:

## 2 The Price of the Underlying

- The first factor that affects the option premium is the price of the Underlying.
- In Calls: As the market price of the underlying rises, so will the call option premium.
- In Puts: As the market price of the Underlying falls, the option premium will rise.
- This is the most easily identifiable factor when determining the option premium as you can follow the stock price when you want to better understand the Option premium.

## 3 The Time of Expiration

- Option premiums will be higher in options that have more time to run.
- As time goes by, the time value of the Option premium decreases.
- As a result, Options that have only a few days to expiration are much cheaper than those with months to expiration.
- Options are known as a wasting asset as they become less valuable as they age, you know, like how companies treat people.
- Another thing to know is time value decays in a logarithmic way, ie the rate at which value is lost is heavily weighted towards the expiration date.

## 4 Volatility

- The third factor that affects the price of an option is volatility.
- Options on more volatile underlyings are more expensive.
- In theory, the more volatile the underlying, the probable for the option to be in the money (ITM).