

An option as the name suggests is the option or the right to buy or sell at a predetermined price.

The option is routed through the stock exchanges like other securities and is an enforceable contract. It is a good risk mitigation tool, which works like insurance.

Simply, we insure our houses, cars, and business by paying the insurance carrier an annual premium, which is a small fraction of the value of the property.

Similarly the options market offers us a chance to insure losses against our stocks, indices, and ETFs

How does it work?

The premiums and settlement can be daily, weekly, and monthly, and for many liquid stocks extend through years.

Here are the terms and the definitions of commonly used option jargon.

The premium is what you pay for the option.

Premium: Price of the option per share; what the buyer pays and the seller receives to enter the contract.

The exercise price:

The exercise price is the price at which you want to protect your stocks. Strike price (exercise price): Fixed price at which the option holder can buy (call) or sell (put) the underlying if they exercise. The exercise price and strike price are used interchangeably and are the same. The word underlying means the stock or index that you are taking the option on.

Call option: Contract giving the buyer the right, but not the obligation, to buy the underlying at the strike price on or before expiration.

Put option: Contract giving the buyer the right, but not the obligation, to sell the underlying at the strike price on or before expiration.

Underlying: The asset the option is based on (stock, index, ETF, futures, etc.).

Expiration date: The last day the option is valid; after this date, the contract ceases to exist.

Contract size: Number of underlying shares per options contract, typically 100 shares for U.S. equity options

Money and value

In the money (ITM): Option with positive intrinsic value: call with stock price above strike, or put with stock price below strike. If Nvidia is priced at \$185, and the \$180 strike price Call is in the money and has an intrinsic value of $\$185 - \180 and should theoretically be priced at \$5.

Out of the money (OTM): Option with no intrinsic value: call with stock price below strike, or put with stock price above strike. Similarly a \$190 strike price call is Out Of the Money because the strike price is over the market price of \$185.

At the money (ATM): Strike price approximately equal to the current underlying price.

Intrinsic value: The immediate exercise value of an option: for a call, $\max(0, \text{stock} - \text{strike})$; for a put, $\max(0, \text{strike} - \text{stock})$. If Nvidia is priced at \$185, the \$180 strike price Call is in the money and has an intrinsic value of $\$185 - \$180 = \$5$, and should theoretically be priced at \$5. Similarly, the \$190 strike price Put is in the money has an intrinsic value of \$5.

Time value (extrinsic value): Portion of the premium above intrinsic value, reflecting time to expiration and volatility.

As we can see from the option prices spreadsheet - there is a time value to it, which means if you decide to buy the \$180 call the premium will be more than \$5.

Positions and actions

Long call / long put: Buying calls or puts;

Risk - limited to premium paid - your investment is smaller.

Upside - linked to favorable moves in the underlying.

Let's walk through some examples.

Buying calls - Why

Risk is limited to the premium paid - sometimes you have a trading mindset with a specific goal in mind - it may be earnings, it could be other announcements, or factors.

Lower investment, higher return over a short period of time, as shown in the spreadsheet.

Many do not have the capacity to put down the whole investment.

Options = premiums, which means you have made your breakeven higher, as I show in the spreadsheet.

Switch view to spreadsheet.

Buying Puts

I own 100 shares of Nvidia for the long term and don't want to look at daily price actions or worry about Bitcoin or geo politics and / or macroeconomic factors. I simply do not have the time, inclination or expertise to trade the stock. Nvidia is a fairly volatile stock.

At present the price is \$185.41, and I want to protect myself if it falls.
I could put a stop losses - we'll walk through some spreadsheet examples.

Selling Options

Selling a call / put (writing): Selling options to open a position; **you collect premium but take on obligation if assigned.** Think of yourself as the insurance company that has to pay the claim - you must either own the underlying or have the capacity to pay the difference to the option holder.

Exercise: The holder chooses to use their contractual right to buy (call) or sell (put) the underlying at the strike. Almost all will choose to take the difference.

Naked Call - Never do that, you can be on the hook for a massive price increase, there is no limit theoretically, and thankfully your account will immediately take 100% in margins.

Selling a Call:

The strategy of selling a call is bearish, which means you expect or are worried that the stock to go down, you feel that why should I part with my shares, instead I will collect a premium, and if the stock does go down, the buyer will not exercise their option, and instead I will just collect a premium, which will help the pain of seeing my stock drop - basically it is an underlying hedge. Should the stock go up, however, I lost the opportunity and theoretical gain because I promised to deliver the shares at a lower price.

Still, whatever the loss of the share is, I have made up a part of it with some premiums

Selling a call must be a Covered Call - You must own the underlying stock, ETF or Index. Why? If the purchaser of the call option asks for the stock since they have a right to buy, you have to deliver the stock, or buy the stock from the market. **Theoretically a stock can go to infinity....**

Say you sold the \$170 exercise price, Feb 20th expiry, Nvidia call from our first example for the premium of \$17.57, and the stock closed at \$195, you have lost $\$195 - \$170 = \$25$ less \$17.57 premium received = \$7.43

You have to pay that amount at expiry or simply deliver 100 shares.

As the insurance company you must have the capacity to pay the claim, right because you're collecting the premiums.

Selling a Put - You must have the money to take delivery of the underlying stock, ETF or Index.

When you sell a put, you have given the put option purchaser the right to sell you the shares at the exercise price, which means you can't back out, and as the stock drops you're holding an investment, which you expected to go up, and were hoping to just collect premium. Instead you're holding the stock can theoretically go to zero, which means you're out of the entire investment, or a 100% loss. Realistically you'll exit your position...at a loss.

Strategy:

When you're selling a Put, you're bullish, but instead of buying shares with your funds, you decide that I will keep aside the money in the event of taking delivery, and instead collect premiums from those who are buying puts. So should the stock go up, their Puts will expire worthless and I will keep the premium.

Let's take a look at some examples in the spreadsheet.

These two are good tools to look at before making decisions.

Open interest: Total number of outstanding option contracts for a given strike/expiration that have not been closed or exercised. A must to understand where the positions and possibilities are.

Volume: Number of contracts traded during a specific period (e.g., that day).

Some Advantages and Risks

Advantages:

Hedging and risk management

Options can hedge an existing stock or portfolio position (e.g., protective puts, collars) to define a worst-case loss while retaining upside.

Index and ETF options also let you hedge systematic risk more efficiently than trying to reshuffle every underlying stock position.

Income generation

Writing covered calls or cash-secured puts on stocks you already own (or want to own) can generate additional premium income.

This can enhance yield or improve effective entry/exit prices compared with trading the stock outright.

Defined risk (for buyers)

When you buy options (rather than write them naked), your maximum loss is the premium paid, regardless of how far the underlying moves.

This can be attractive if you want to cap downside in a highly volatile name while still expressing a directional or volatility view.

Leverage and lower capital outlay

Options let you control 100 shares with a relatively small premium instead of paying full notional for the stock.

This can produce much higher percentage returns on capital for a given move in the underlying (at the cost of higher risk of total premium loss).

Advanced trading and risk management strategies

With options you can construct payoff profiles that don't exist in cash equities: capped risk/uncapped reward, range-bound income, defined-risk directional bets..

Strategies like vertical spreads, straddles/strangles, butterflies, and iron condors allow you to target specific views on direction, volatility, and time, which you can't replicate simply by buying or shorting shares.

Risks

Time decay and expiration risk

Options are wasting assets: as expiration approaches, time value erodes (theta), so you can lose money even if the underlying drifts in your direction but too slowly.

If the thesis doesn't play out before expiration, long options can go to zero, unlike stock which can be held indefinitely.

Leverage and large percentage losses

Options let you control large notional with small premium, so a modest move against you can mean a 100% loss of capital in that trade.

Some selling strategies (e.g., naked calls/puts) can create losses far greater than the premium collected and even greater than your initial capital if not controlled.

Volatility and vega risk

Option value is highly sensitive to implied volatility; IV crush after events (earnings, Fed, product news) can hit option prices even if the underlying price move is "right direction, wrong vol."

Long options suffer when IV contracts; short options suffer when IV unexpectedly spikes, expanding losses and margin needs.

Assignment, margin, and liquidity

Short options carry assignment risk, including early assignment on American-style contracts (e.g., around ex-div dates for calls), which can force you into unwanted stock positions.

Margin requirements on short options can change quickly with volatility and price moves, leading to margin calls or forced liquidation at bad levels.

Many strikes/expiries are illiquid, with wide bid-ask spreads and shallow depth, so slippage and poor fills can materially impact P&L versus "model."

Complexity and operational errors

Options add layers of complexity: Greeks, multi-leg structures, path dependency, and sensitivity to multiple variables, so mis-specifying the payoff or failing to manage the position dynamically is common.

It's easy to input the wrong order (sell instead of buy, wrong strike/expiry/side), creating unintended risk that may only be noticed after a move.