What Are Options?

Options are contracts that give investors the right, but not the obligation, to buy or sell an asset at a specific price by a certain date. Their use dates back to 600 BC, when Greek philosopher Thales of Miletus paid a small sum in advance to access local olive presses. Thales then turned a tidy profit by renting out the presses at a much higher price during a bountiful olive harvest the next spring.

Thales's strategy resembles a modern option: He paid a relatively small amount for the **option to use something later if it became valuable.**

Today, options are among markets' most durable tools. They support a wide range of uses — hedging, income generation, speculation, stock ownership — at low cost. And because traders can simply let options expire if they're unprofitable, they typically carry limited downside risk.

That flexibility has spurred an explosion in options' popularity. U.S. listed options volume reached a record in 2025, more than double 2020 levels, according to The Options Clearing Corporation.*

As Thales's ancient olive approach shows, an options contract can unlock the ability to buy or sell practically any type of asset. While options on stocks and indexes like the Nasdaq-100 Index® (NDX®) are the most popular with investors, options contracts also exist for exchange-traded funds (ETFs), bonds, and even futures.

Because an options contract's value is derived from the value of its underlying asset, it belongs to a class of securities called derivatives.

The Structure of an Option

Every option contract is built around a few key elements:

- **Underlying asset:** the asset the option is based on (e.g., a stock or index);
- **Strike price:** the price at which the asset can be bought or sold if the option is exercised;
- **Expiration date:** the last date the option can be exercised; and
- **Premium:** the price paid to purchase the option contract.

An option buyer pays the premium to obtain the buying or selling rights the contract offers.

For example, an investor might buy an option that allows them to purchase shares of a stock at **$100 any time before June 20.** If the stock rises above $100, the option may become valuable, since it allows the investor to buy the stock at a price below its current market value.

Expiration Dates

Every option has a defined lifespan. The expiration date determines **how long the contract remains valid.**

The holder of an option contract may choose to sell it prior to its expiration. Or, if the value of the option's underlying asset moves into profitable territory relative to its strike price, the holder can **exercise** it — meaning they use their contractual right to buy or sell the underlying asset. If the option is not exercised by the expiration date, it becomes worthless.

Expiration cycles vary. Some options expire months in the future. Others may expire weekly or even daily. The shorter the time remaining to expiration, the less opportunity the underlying asset's price has to move.

Calls and Puts

There are two main types of options: calls and puts.

A **call option** gives the buyer the right to **buy** the underlying asset at the strike price.

A **put option** gives the buyer the right to **sell** the underlying asset at the strike price.

Investors typically buy calls when they believe prices will rise and buy puts when they believe prices will fall. But options can also be used to hedge risk or create more complex strategies.

Long and Short Positions

Options involve two sides: a buyer and a seller.

The **buyer** of an option is said to be **long** the option. They pay the premium and gain the right to buy or sell the contract's underlying asset.

The **seller** (sometimes called the **writer** because they draft the option contract) is **short** the option. They receive the premium but take on the obligation to fulfill the contract if the buyer chooses to exercise it.

This structure lets investors take different views on the market while also managing risk in different ways.

Note the distinction here between calls and puts, which refer to buying or selling an option's underlying asset, and long and short positions, which involve buying or selling the option contract itself.

Contract Size

Options are standardized contracts. In U.S. equity options markets, **one options contract typically represents 100 shares** of the underlying stock.

An option with value is considered "in the money." One whose strike price matches the price of its underlying asset is "at the money." If the price of the option's underlying asset does not meet the option's strike price, it remains "out of the money."

This standardization makes trading easier, because all market participants know exactly what each contract represents. For example, a call option quoted at **$2.50** would usually cost **$250 per contract** ($2.50 × 100 shares).

Index options work slightly differently, because they are based on market indexes rather than individual shares. Many widely followed benchmarks like the NDX have actively traded options that give investors exposure to a group of companies through a single contract.

How Options Are Priced

Unlike stocks, which have a straightforward market price, options derive their value from several factors. The main components of an option's value include:

- The **underlying asset's price;**
- The **option's strike price;**
- **Time remaining to expiration;**
- **Interest rates; and**
- **Volatility,** or how much the asset's price tends to move.

Financial models combine these inputs to estimate an option's **theoretical value,** sometimes called its **fair value.**

One key concept in options pricing is **put-call parity.** This principle links the prices of calls and puts with the same strike price and expiration. Under certain conditions, the prices of these contracts must stay in balance with each other and with the price of the underlying asset.

If they do not, traders may be able to profit through arbitrage (i.e., capitalizing on differences in an asset's price across markets).

The Role of Volatility

Among all option pricing factors, volatility plays a particularly important role.

Volatility measures how much an asset's price tends to fluctuate. Higher volatility increases the chance that an option will become profitable before expiration. As a result, options generally become **more expensive when volatility rises.**

But volatility is inherently uncertain. Because no one can know exactly how much prices will move in the future, option prices always contain a degree of uncertainty.

This uncertainty is one reason options markets remain active: Traders continuously adjust prices as expectations about future market movements change.

Success Through Flexibility

At their core, options are simply contracts that provide choice and flexibility. They let investors express views about market direction, hedge existing positions, or gain exposure to assets in various ways.

From the olive presses of ancient Greece to the modern electronic markets that trade options tied to indexes like the NDX, the same powerful concept has helped investors meet diverse trading objectives for more than two thousand years.

We'll explore those objectives in more detail in our next essay.

* https://www.theocc.com/newsroom/views/2026/01-05-occ-annual-2025-and-december-2025-volume

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