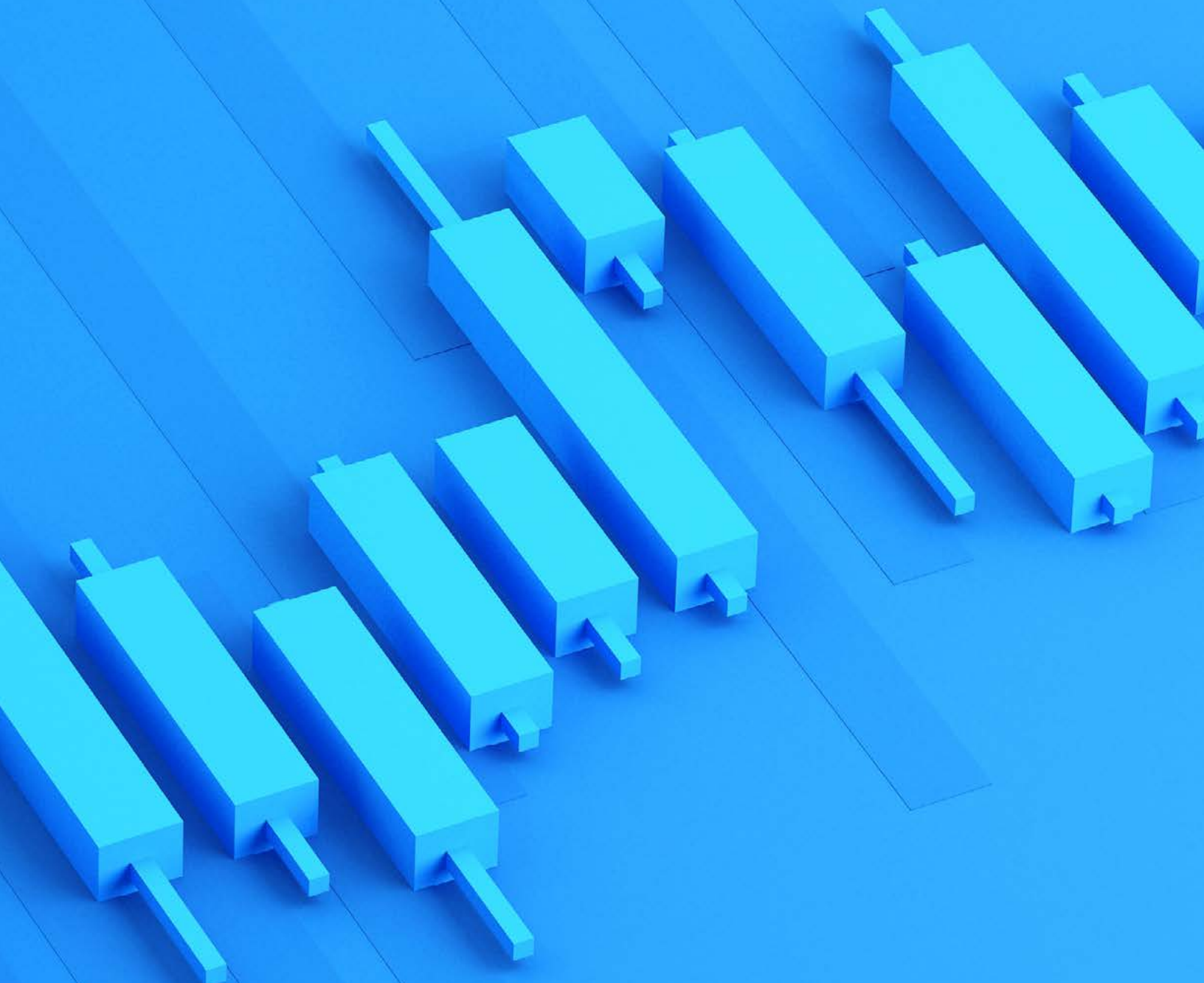




AN INVESTOR'S INTRODUCTION TO  
**TRADING OPTIONS**



# Contents

# Introduction

Options can be an important tool for retail investors and traders. They can either replace individual stocks in your portfolio or make it easier to position yourself in specific companies and exchange-traded funds (ETFs).

## What are **Options?**

Options convey the right to buy or sell an underlying stock or ETF at a certain price over a certain time period. Because they derive their price from something else, options are known as derivatives.

Customers can buy or sell options. Either type of transaction entails its own types of risks and potential benefits.

Because options are complex instruments, they are not suited to all investors. However, traders who take the time to learn options may find significant opportunities to use their capital more effectively and manage risk.

# The Benefits of **Options**

## 1. Options Can **Provide Leverage**

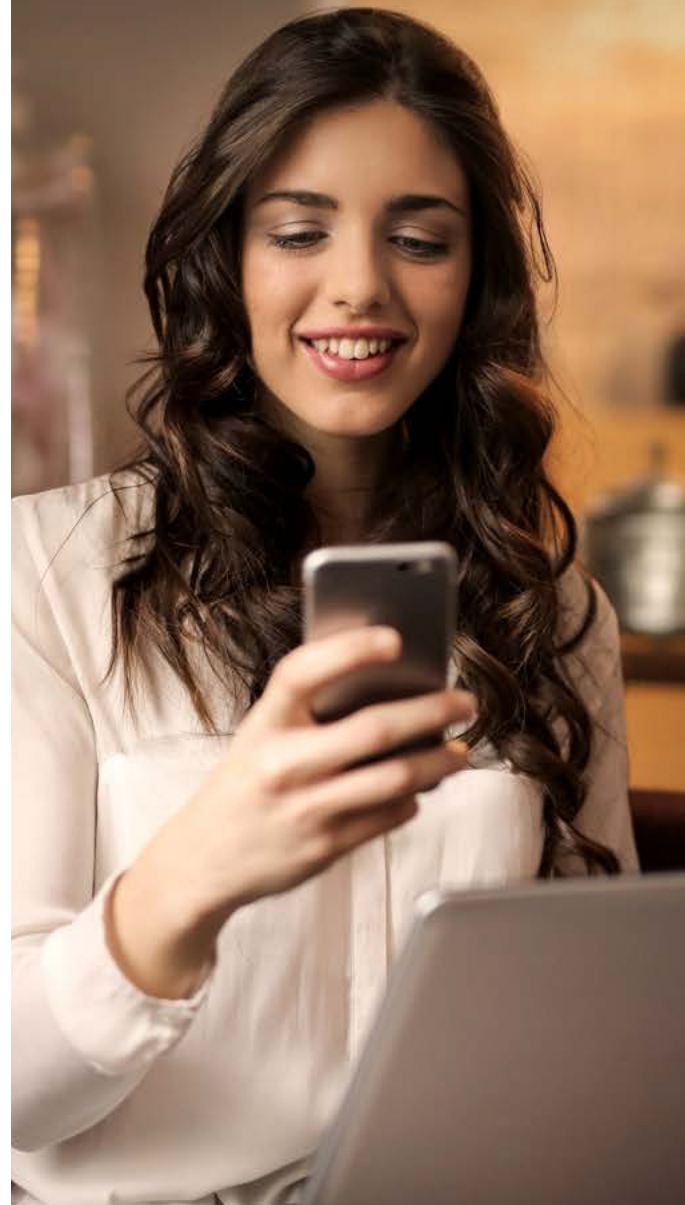
Options typically move more than their underlying stocks and ETFs and because they control a right to buy or sell shares at a certain price. If the desired value — known as the strike price — isn't reached, they will expire worthless.

Options usually cost less than the underlying stock or ETF. As a result, they can move more on a percentage basis. This is another source of their leverage.

Investors can use the leverage of options to minimize capital at risk. For example, say a stock moves 10 percent. A \$1,000 option position could potentially generate a similar amount of profit as a \$10,000 stock position. That can provide traders more bang for their buck from stocks moving in their favor.

However, traders should realize that options have additional risks to stocks. One major risk is that they can expire worthless.

Options let you profit from a stock moving, without needing to own the shares. Despite having more risk of loss than equities, they can significantly reduce risk when used correctly.



# The Benefits of **Options**

## 2. Options Can Be Used **To Hedge Positions**

Because options are tied to specific stocks and ETFs, investors can use them to reduce risk in those underlying securities. This is also known as hedging. Continue reading to see examples of hedging strategies.

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## 3. Options Can Be Used **To Generate Revenue**

Options can be purchased, resulting in a cost or debit. Traders can also sell them to collect the premium, resulting in a credit to their account.

Credit strategies generate their potential profit upfront, with the risk of losing a greater amount of money in the future.

Debit strategies cost money upfront, with the potential for greater profit in the future. For most debit trades, the initial outlay is the most that can be lost.



# The Benefits of **Options**

## 4. Options Can Be **Combined Into Spreads**

Traders can take positions in two or more option contracts at a time. These multileg strategies, or spreads, can further reduce risk.

# The Risks of **Options**

Because they are leveraged, options can lose money rapidly if the trader predicts the underlier's movement incorrectly.

Options have time decay, which reduces their value as expiration approaches.

Selling options can result in losses greater than the value of your account.

Options often have less favorable pricing because their bid/ask spreads can be wider than equities.





How do

# Options Work?

Options have existed for centuries but became widely available after the Chicago Board Options Exchange (CBOE) was opened in 1973. CBOE's options had standard features, making them uniform and accessible to a much wider range of investors.

**All options are either calls or puts:**

**CALLS** give the holder the right to buy a stock. They generally gain value when shares rise.



**PUTS** give the holder the right to sell a stock. They generally gain value when shares fall.



Stock and ETF options potentially control 100 shares. They're quoted at a per-share price but are transacted in lots of 100. Therefore the value of any option transaction is 100 times the quoted premium.

	<b>Calls</b>	<b>Puts</b>
<b>How to Profit?</b>	Gain value when stock prices rise	Gain value when stock prices fall
<b>What do they do?</b>	Fix the price to buy a stock	Fix the price to sell a stock
<b>When do investors buy?</b>	When bullish	When bearish
<b>When do investors sell?</b>	When neutral/ bearish	When neutral/ bullish

All options have **three basic components**:

# 1

## **An Underlier**

For example, Apple (AAPL) common stock.

# 2

## **A Strike Price**

The price where AAPL can be bought or sold.

# 3

## **An Expiration Date**

The date at which the option expires worthless or must be exercised.



## Options Can Be Bought.

This costs money upfront and results in a “long” position.

**A**

Long calls generally make money when the underlying stock rises.

**B**

Long puts generally make money when the underlying stock falls.

## Options Can Be Sold.

This generates money upfront and results in a “short position.” *Short options are highly risky when not combined with ownership of stock or other options.*

**A**

Short calls generally lose money when the underlier rises. Investors holding stocks often sell calls against their shares, which is known as a “covered call.”

**B**

Short puts generally lose money when the underlier declines. Investors often sell puts when they think a stock has bottomed.

# What Are **SPREADS?**

Spreads involve buying and selling two or more options of the same type to form a single position.

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For example, say stock XYZ is at \$100, and you expect it to rise to \$110. You could create a **bullish spread** like this:

- Buy the \$105 calls for \$2
- Sell the \$110 calls for \$1

This trade would cost a net \$100 because you'd pay \$200 and receive \$100.

*If stock XYZ closes at \$110 on expiration, the \$105 calls would be worth \$5, and the \$110 calls would be worthless. The spread would generate a 400 percent return (\$4 profit versus \$1 cost) from the stock moving just 10 percent. **This is a classic example of leverage.***

	Call Debit Spread	Put Debit Spread
<b>How to Profit?</b>	Stock rises to a certain level; usually, the strike of the contract sold	Stock falls to a certain level; usually, the strike of the contract sold
<b>Profit potential</b>	The spread between the two strike prices, minus the initial cost/debit	The spread between the two strike prices, minus the initial cost/debit
<b>Maximum Risk</b>	The initial cost/debit	The initial cost/debit
<b>Directional Bias</b>	Bullish	Bearish

It can also work when prices decline. Say stock XYZ is at \$100, and you expect it will fall to \$90.

You could create a **bearish spread** like this:

- Buy the \$95 puts for \$2
- Sell the \$90 puts for \$1



This trade would also cost \$1 because you'd pay \$2 and receive \$1.

*If stock XYZ closes at \$90 on expiration, the \$95 puts would be worth \$5, and the \$90 puts would be worthless. The spread would generate a 400 percent return (\$4 profit versus \$1 cost) from the stock moving just 10 percent. The same leveraging principle applies in this case as the bullish strategy.*



In both cases, using a spread lowers cost. That can result in greater leverage on a percentage basis.

**(Lower cost = greater leverage)**

# What Are **CREDIT SPREADS?**

The examples above are debit spreads. They have an upfront cost, with the potential for profit later. They make money from certain levels being reached.

**Credit spreads** are just the opposite. They generate revenue upfront, with the potential for losses later. They make money from certain levels not being reached.

**Because they're the mirror image of debit spreads, bullish credit spreads involve puts, and bearish credit spreads use calls.**

.....

For example, say stock XYZ is at \$100, and you think it will remain above \$95.

You can create a **bullish credit spread** like this:

- Sell the \$95 puts for \$2
- Buy the \$90 puts for \$1



This trade would generate a \$1 credit because you receive \$2 and pay \$1.

*If stock XYZ closes at \$95 or higher on expiration, both options will expire worthless, and you'll keep the \$1 as profit. However, you start to lose money if it drops under \$95, with a maximum loss of \$4 at or below \$90.*



	<b>Put Credit Spread</b>	<b>Call Credit Spread</b>
<b>How to Profit?</b>	Stock remains above a certain level, usually the strike of the contract sold	Stock remains below a certain level, usually the strike of the contract sold
<b>Profit potential</b>	Limited to the credit received when opened	Limited to the credit received when opened
<b>Maximum Risk</b>	The spread between the two strike prices, minus the initial credit	The spread between the two strike prices, minus the initial credit
<b>Directional Bias</b>	Neutral / Bullish	Neutral / Bearish

On the other hand, say stock XYZ is at \$100, and you think it will remain below \$105.

You can create a **bearish credit spread** like this:

- Sell the \$105 calls for \$2
- Buy the \$110 calls for \$1



This trade would generate a \$1 credit because you receive \$2 and pay \$1.

*If stock XYZ closes at \$105 or lower on expiration, both options will expire worthless, and you'll keep the \$1 as profit. However, you start to lose money if it rises above \$105, with a maximum loss of \$4 at or above \$110.*



Here are the **KEY POINTS TO REMEMBER**  
about the two types of spreads:

1

With debit spreads, you pay money with the expectation that something will happen. You lose money if it doesn't happen.

2

With credit spreads, you receive money with the expectation that something won't happen. You lose money if it does happen.

## What Do I Need To Know **About Expiration?**

The cases above only consider hypothetical option values at the expiration date. However, they have other values beforehand. Here are some key things to know about options leading up to expiration:

1

In general, options with more time until expiration cost more.

2

Options lose value based on time decay, which is measured in theta.  
(See the section on greeks below.)

3

Options lose value most quickly in their last six to eight days before expiration.

4

Expiration can be a major risk if you own calls in hope of a rally, or puts expecting a decline.

5

Expiration can work in your favor if you've sold a credit spread.

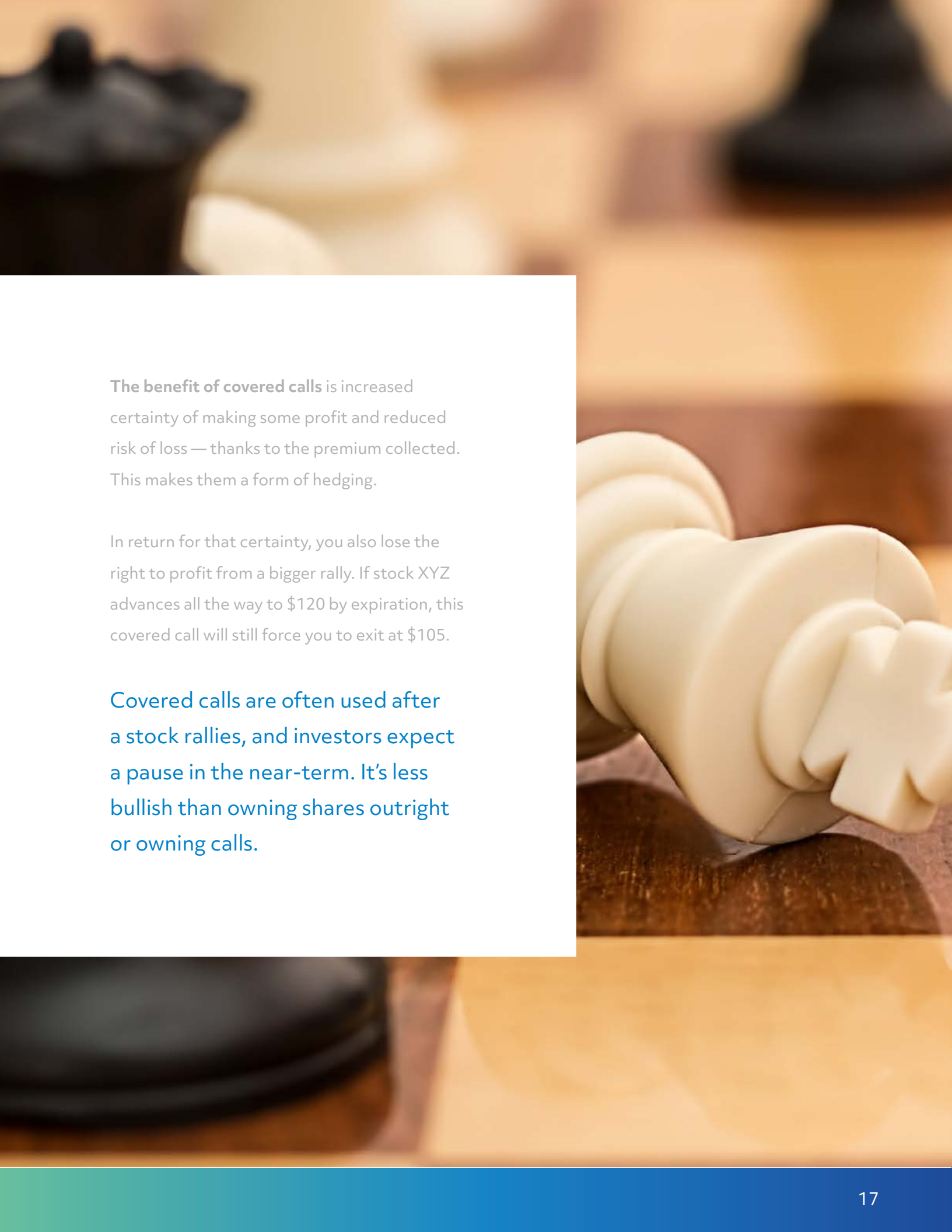


## What Are **Covered Calls?**

One of the **most popular and a lower risk options strategies** is the covered call, which lets investors collect returns on stocks they own. Say stock XYZ is at \$100, and you own 100 shares. Using the same values cited above, you could:

- Sell one call at the \$105 strike price and collect \$2 per share or \$200 in total.
- This money is now yours to keep, effectively lowering your cost basis in the position.
- If stock XYZ closes under \$105, you keep the shares and the \$2 extra per share.
- If stock XYZ closes above \$105, you must relinquish your position for \$105. But including the \$2 you already collected, your effective exit price is \$107.





**The benefit of covered calls** is increased certainty of making some profit and reduced risk of loss — thanks to the premium collected. This makes them a form of hedging.

In return for that certainty, you also lose the right to profit from a bigger rally. If stock XYZ advances all the way to \$120 by expiration, this covered call will still force you to exit at \$105.

Covered calls are often used after a stock rallies, and investors expect a pause in the near-term. It's less bullish than owning shares outright or owning calls.



## What Are **Protective Puts?**

Protective puts are another popular strategy for investors looking to hedge a position in a stock. Say stock XYZ is at \$100, and you own 100 shares. If you're concerned about it potentially dropping, you could hypothetically do this:

- Buy one put at the \$95 strike, paying \$2 per share.
- If stock XYZ falls below \$95, the puts will increase in value. That will offset losses on the 100 shares you own.
- The \$2 you spent on the puts raises your cost basis and reduces your profit.
- Because of the \$2 spent, your effective level of protection is \$93.
- Unlike the covered call, you still have unlimited upside potential.

## Covered Call

## Protective Put

### How it works

Sell calls to receive a credit

Spend money to buy puts

### Hedging Potential

Limited to the credit received when opened

Unlimited

### Initial cost

Low

High

### Potential opportunity cost\*

High

Low

*\*Potential cost of missing a rally*

The logo for TradeStation, featuring a stylized white 'T' icon to the left of the word 'TradeStation' in a bold, white, sans-serif font. A registered trademark symbol (®) is located at the top right of the word 'Station'. The background is a dark blue gradient with faint, glowing green and blue lines representing a financial candlestick chart.

**TradeStation**®

In the money/ Out of the Money

# Intrinsic / Extrinsic values

Options are in the money when they have some value if exercised.

## CALLS

Calls are in the money when the stock is above the strike price. After all, they let you buy for less than the market price. Therefore, they have real value.

## PUTS

Puts are in the money when the stock is below the strike price. Likewise, if they let you sell for more than the market, then they have real value.

The amount that options are in the money is also known as **intrinsic value**.

Intrinsic value is the value of an option based only on its exercise price.

If stock XYZ is at \$100, its \$95 calls will have \$5 of intrinsic value.

If stock XYZ is at \$100, its \$105 puts will have \$5 of intrinsic value.

Any part of an option's value that isn't intrinsic or, in-the-money, is **extrinsic value**.

This is also known as time value.

Say stock XYZ is worth \$100, and its \$95 calls cost \$7. They have \$5 of intrinsic value and \$2 of extrinsic value.

Say stock XYZ is worth \$100, and its \$105 puts cost \$7. They have \$5 of intrinsic value and \$2 of extrinsic value.



If options aren't "in the money," they're "**out of the money.**"  
This is when calls or puts cannot be economically exercised.

## CALLS

Calls are out of the money when the stock is below the strike price. If the current market price is below the strike price, then it makes no sense to buy at the strike.

## PUTS

Puts out of the money when the stock is above the strike price. If the current market price is above the strike price, it makes no sense to sell at the strike.

Not surprisingly, all options that are "out of the money" also have zero intrinsic value. However, they still are worth something because they have the potential to go in the money over time if the stock moves past the strike price.

**This is why longer-dated options cost more:** They have more time for the stock to move potentially in their favor.

What Is  
**Implied  
Volatility?**

Because options include the potential for movement, they cost more for stocks that tend to move a lot. This is called “implied volatility.”

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Implied volatility is the market’s expectation of how much the underlying shares can fluctuate. It’s calculated on an annualized basis.



## What Is **The Vix?**

VIX measures implied volatility on the S&P 500, the most widely used stock-market benchmark. It's calculated by the CBOE and published as an index. The VIX generally rises when the market begins to drop. Therefore it's often called the "fear index" or indicator of overall sentiment.

While the VIX cannot be traded directly, it has several related products.

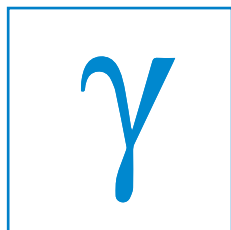
## What Are **The Greeks?**

"Greeks" are a series of values that help describe options' value and price behavior. These terms apply to all options. They're called Greeks because they're named after the Black-Scholes mathematical formula that uses Greek letters.



**Delta** describes how much an option's value changes based on movements in the underlying share price. It also indicates the probability of contracts expiring worthless.

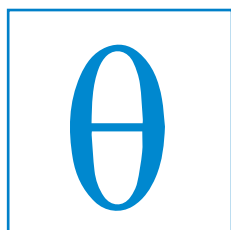
- Calls have positive delta because they gain in value when shares rise.
- Puts have negative delta because they move in the opposite direction.



**Gamma** describes how much an option's delta changes based on movements in the underlying share price. Gamma is always positive or zero.



**Vega** describes how much an option's value fluctuates based on changes in the underlier's implied volatility. Vega is always positive or zero.



**Theta** describes how much time extrinsic value disappears each day because of time decay. Theta is always negative or zero. It has a greater absolute value (lower negative) the closer expiration is.



# Conclusion

Thanks for reading TradeStation's Retail Investors Guide to Trading Options. We hope this overview of options trading will help you as you develop your own options trading strategy and plan.

TradeStation is proud to serve the options traders and offers advanced tools designed to help power your options trading, along with a dedicated team of options specialists and one of the lowest pricing plans for options traders.

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