Options Trading for Beginners

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The following presentation is the accompanying PDF to my Options Trading for Beginners 3-hour video on YouTube (plus revamped + brand new content in 2023).

The content will be improved upon and additional materials will be added soon! Stay tuned for an email from me with the new content.

Thank you for trusting me with your options trading education!

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Table of Contents

The sections to the left are the new and improved sections.

The remainder of the presentation is from the 3-hours Options for Beginners video and will be updated and emailed to you upon completion.

Thank you for your support!

— Chris

Defining Options

Defining Options

A stock option is a financial tool that allows the owner **the right to buy/sell 100 shares** of stock at a **fixed price** before a **specified date**.

Key Terminology

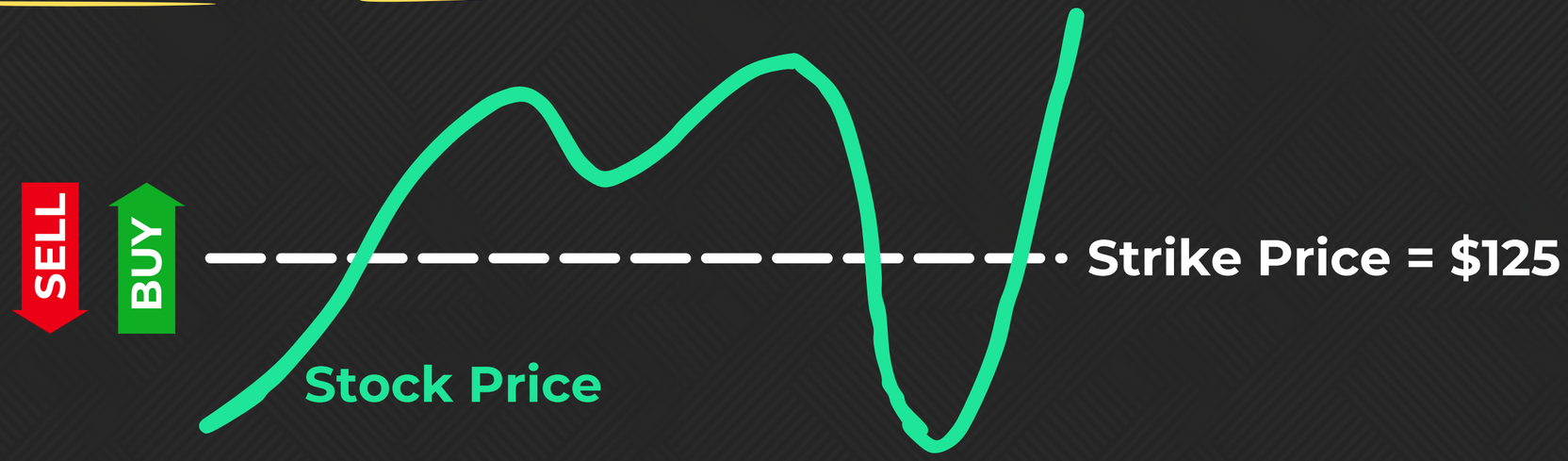
Every option has a **strike price**, **expiration date**, and **contract multiplier**.

We need to learn these terms to understand option prices and what options represent.

The Strike Price

The **strike price** is the specified price at which an option owner can buy/sell the asset the option is tied to.

If I own a call option with a strike price of $125, I have the right to buy stock at $125, no matter what the stock does.



The Expiration Date

The **expiration date** is the final day an option exists and can be traded. An option's final value is determined on the expiration date.

If I own a call with a strike price of $125 that **expires in 30 days**, I can only use the call to buy shares at $125 **for 30 days**.

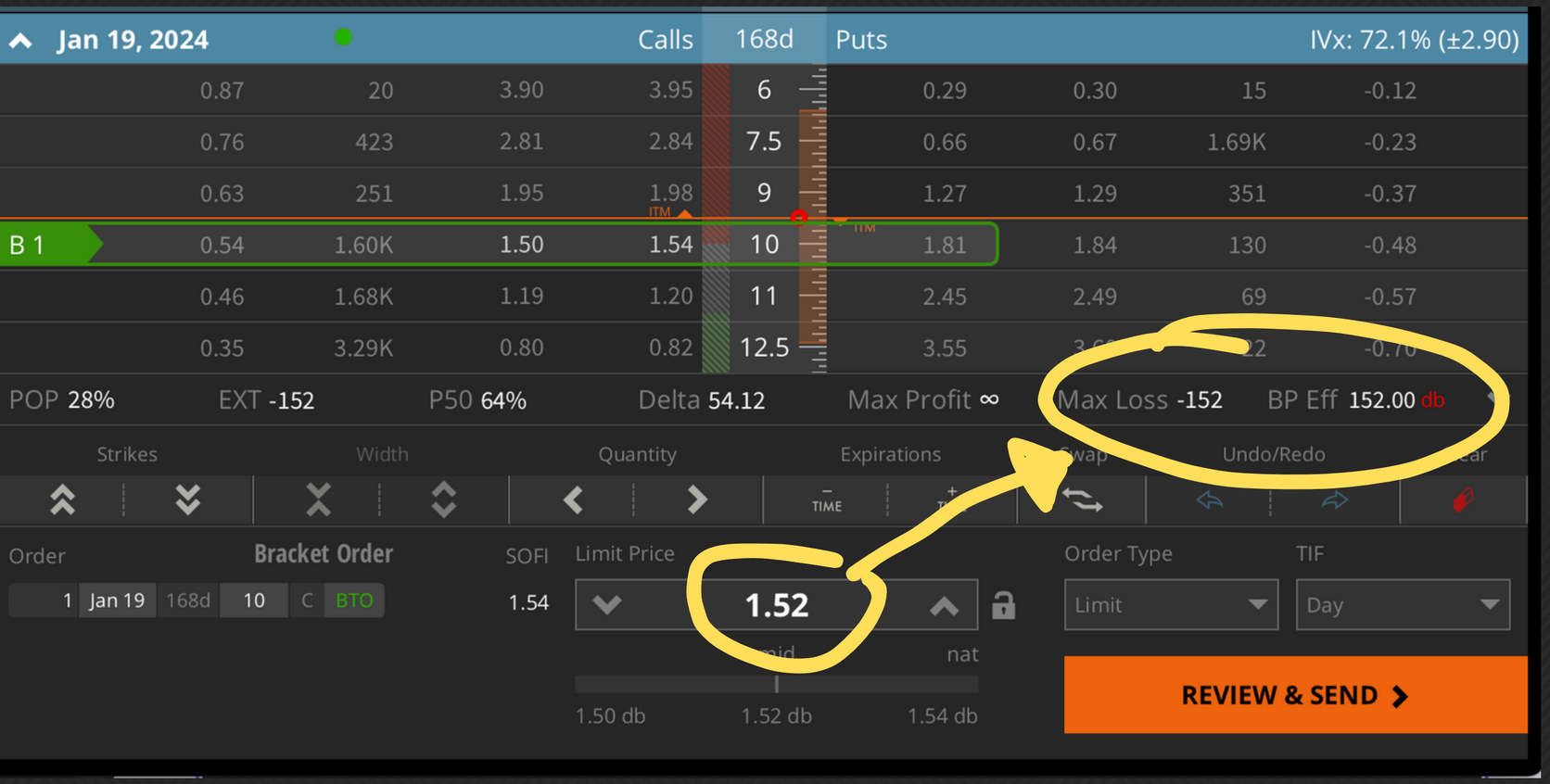
The Contract Multiplier

A single share of stock with a price of $120 can be purchased with $120 in cash. Options are different.

If an AAPL option is listed at **$5.00**, I need **$500** to buy the option.

That's because "standard equity options" (options on AAPL, TSLA, GOOGL, etc.) can buy/sell **100 shares** of stock at the strike price.

The Contract Multiplier



The call option in this image has a price of **$1.52**, requiring **$152** in available funds to purchase.

Price: $1.52

Cost/Value: $152

Here's how to interpret the difference between the option's listed price and its actual cost:

For a cost of $1.52 per share, the contract can **buy 100 shares** of stock at the strike price. If we pay a $1.52 per-share "fee" for the right to buy 100 shares at the strike price of $10, we pay $152.

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Key Terms Revisited

I know it's a lot to take in, but these key terms are the foundation of understanding options and their valuations. Let's recap them:

Strike Price 

The specific price an option can buy/sell shares at, no matter how high or low the stock price goes.

Expiration Date 

The final day an option ceases to exist and can be traded. The expiration date gives our options trades a time limit.

Contract Multiplier *X100*

The number of shares the option can buy/sell. For standard stock options the multiplier is 100. We multiply the listed price by the multiplier to get the option's cost/value.

Exercise and Assignment

Exercise 

Exercising an option is when the holder of an option chooses to buy (in case of a call option) or sell (in case of a put option) 100 shares of stock at the strike price. It's like using a special coupon to buy or sell something at a price you locked in earlier.

Assignment 

Option owners have the right to exercise their options. For every option owner, there is a "short" option trader who is on the other side of the trade.

When an option is exercised, a trader who is short that option is "assigned" shares of stock at the option's strike price.

Don't worry too much about exercise and assignment right now.

Exercise and Assignment

We'll talk more about exercise and assignment throughout the lessons.

For now, it is enough to understand that options allow the owners to buy/sell 100 shares of stock at the strike price before the expiration date.

If a call or put owner wants to use their option to buy/sell shares at the strike price, it is called **exercising the option**.

Option prices stem from the value of the ability to exercise the option and buy/sell shares at the option's strike price. Or, the *potential* value of that ability in the future.

Call Option Introduction

Call Option Introduction

There are two types of options: call options and put options.

A **call option** can be used by the owner to **buy 100 shares** of stock at the strike price on or before the expiration date.

The value of this ability will grow as the stock price increases further above the call's strike price:

1 I am interested in this house because I think it will increase in value, but I don't want to pay the full $200,000 right now.

Current Price
$200,000

2 Instead, I'm going to **buy a call option** on this house that gives me **the *right* to buy the house for $200,000** within the next **2 years**.

I'll pay **$10,000** for this option.

Strike Price: $200,000
Expiration: 2 Years from Today
Option Cost: $10,000

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Strike Price: $200,000
Expiration: 2 Years from Today
Option Cost: $10,000

I own a call option that allows me to buy the house at the strike price of $200K, but the house is now worth $350K...

I can "**exercise**" my option, meaning choose to buy the house for $200K.

Purchase Price: $200,000
Asset Value: $350,000
Net Profit: +$150,000 - $10,000 Option Cost = **+$140K**

Initial Price
$200,000

Price After 1 Year
$350,000

Strike Price: $200,000
Expiration: 2 Years from Today
Option Cost: $10,000

If the house falls in value, I don't have to use the option at all.

My option gives me **the *right*, *not* the obligation**, to buy the house at the strike price of $200K.

That's why it's called an option.

Loss: -$10,000 Option Cost

Initial Price
$200,000

Price After 2 Years
$150,000

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Note how I would have lost $50,000 if I purchased the house for $200K and it fell to a value of $150K.

If I bought the option for $10K and ended up not using it because it didn't provide any value, I only lose $10K.

Initial Home Price
$200,000

-$50,000

Price After 2 Years
$150,000

Initial Option Price
$10,000

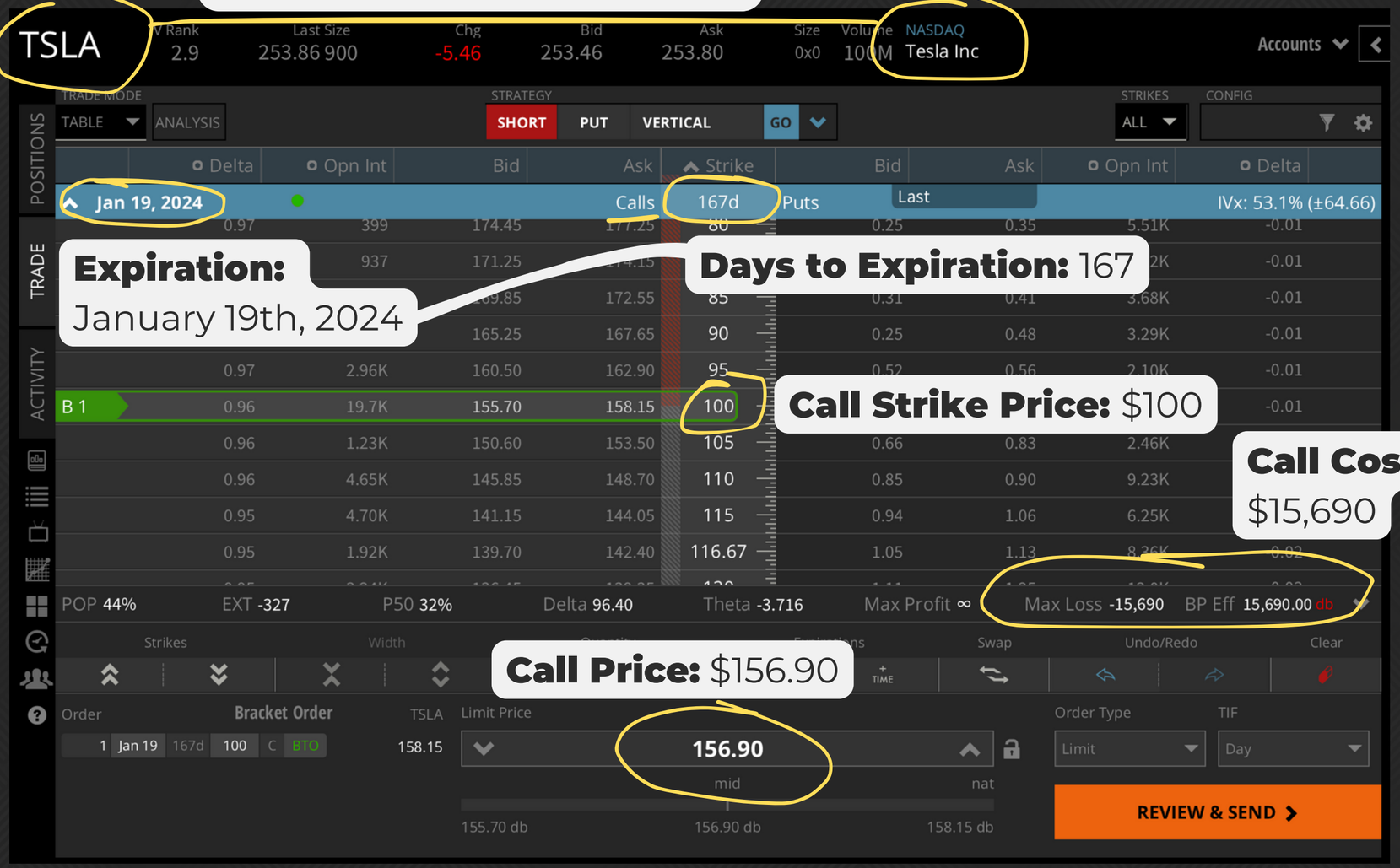
-$10,000

Price After 2 Years
$0

Call Option Introduction

Let's look at a real call option to bridge the gap from a simple house option example to equity options.

Call Option Introduction



I know there's a lot here! Don't worry, it'll become much more familiar as you gain experience.

Let's walk through this option's details on the next slide, then look at its historical performance.

Platform: tastytrade (**click here** for special account opening bonuses).
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Call Option Introduction

Stock: Tesla (TSLA)
Expiration: January 19th, 2024
Days to Expiration: 167
Call Strike Price: $100
Call Price: $156.90
Call Cost/Value: $15,690

A trader who buys this call gains the right to purchase 100 shares of TSLA stock at $100/share on or before the expiration date of January 19th, 2024.

For this ability, a new trader would need to pay **$15,690** at the call's current price.

But TSLA's stock price has gone up a lot in 2023...

Was the call's value always $15,690?

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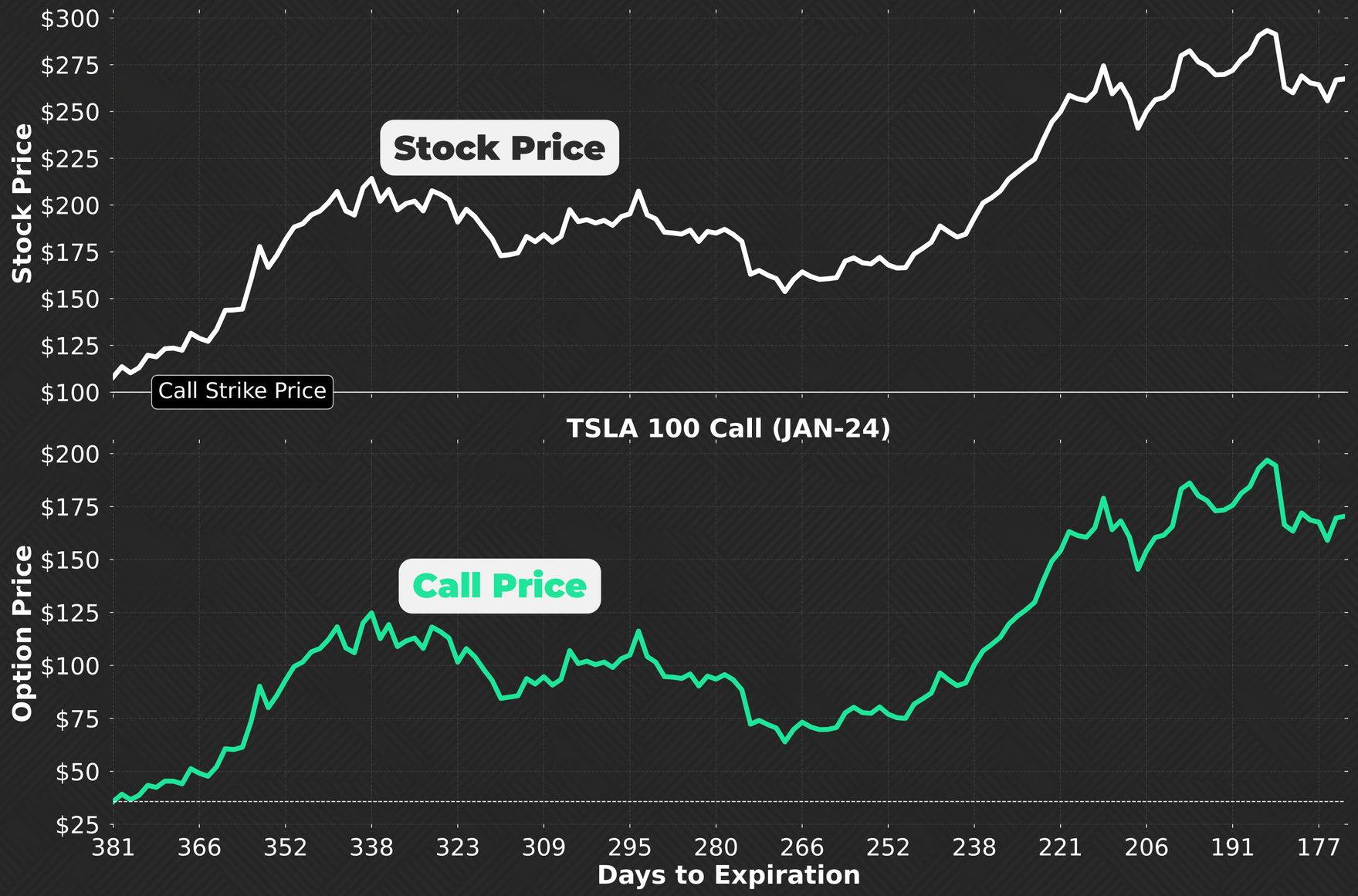
TSLA Call Option Example



At the beginning of 2023, TSLA shares were trading for a little over $100.

The 100-strike call expiring in January 2024 had a year until expiration.

The call's price was near $35 (a total cost/value of $3,500).

As TSLA shares rose further above the call's strike of $100, the 100-strike call gained value as well.

Why? Its ability to purchase shares at a bigger discount to the stock price became more valuable.

And when the stock price came back down, so did the value of the call's ability to buy stock at $100.

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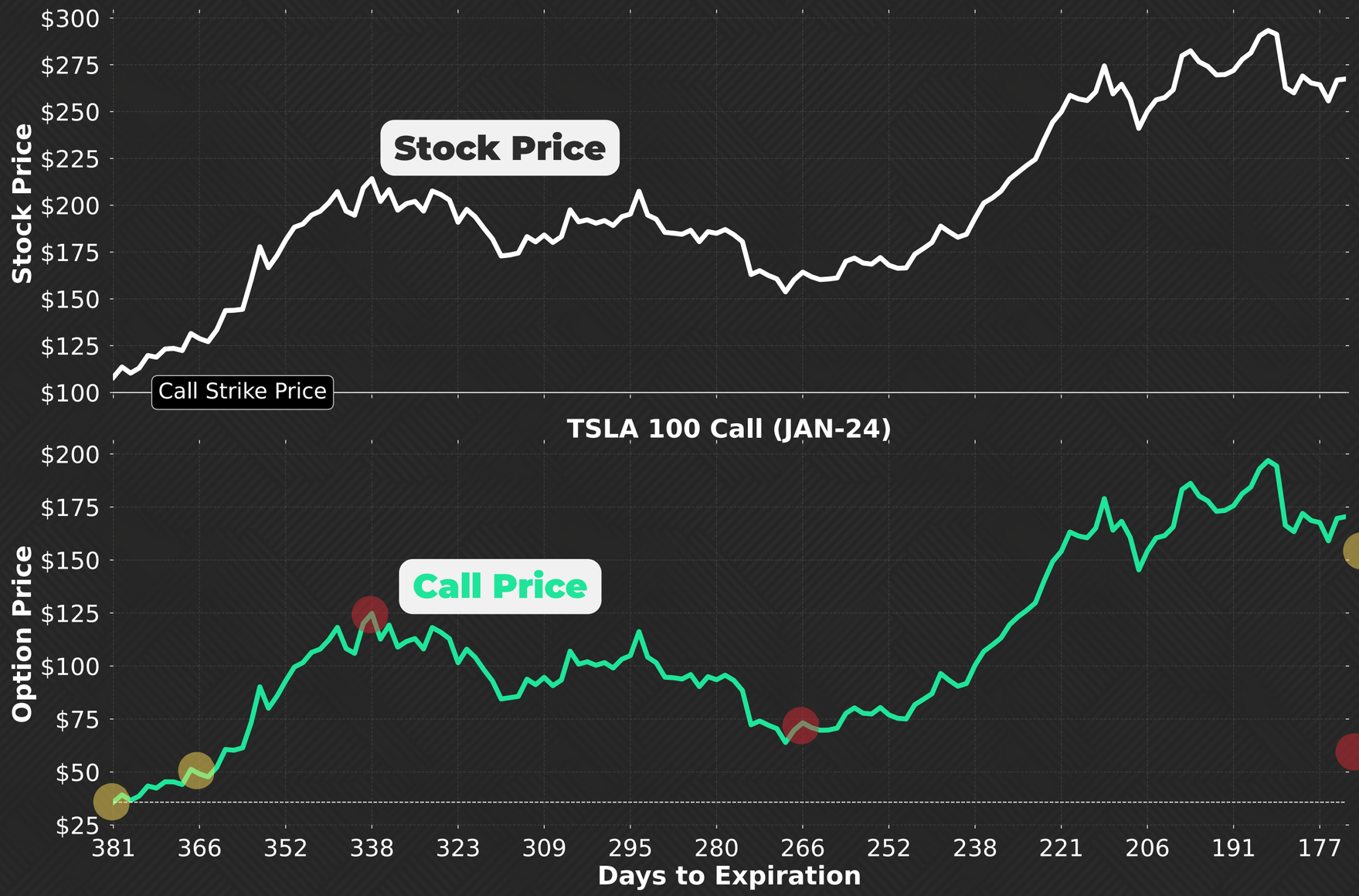
TSLA Call Option Example



Key Takeaways:

1) Note how the call price goes up with the stock price because the value of buying shares at $100 (the call strike) changes as the stock price changes.

2) Option prices change every day as the stock price changes. You can buy/sell options whenever the market is open.

You could have bought the call at the beginning for $3,500 and sold it a few weeks later for $5,000, making a $1,500 profit.

Or, you could have bought it for $12,500 at 338 DTE and sold it for $7,500 at 266 DTE, losing $5,000.

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Exercising an Option

"Exercising" an Option

As mentioned, exercising an option refers to using the option to buy/sell shares of stock at the option's strike price.

For instance, if we own the 100-strike TSLA call, exercising the call would mean using the option to buy 100 shares of stock at $100/share.

We would purchase 100 shares of stock at the strike price of $100.

The call option in our account would be replaced by +100 shares of stock with a purchase price of $100.

"Exercising" an Option

I **rarely** talk about exercising options because options traders rarely exercise their options...

Instead, **they buy and sell the options at different times with the goal of profiting from the price change of the option.**

But it's still important to understand exercising options because the ability to do so is what gives an option its value.

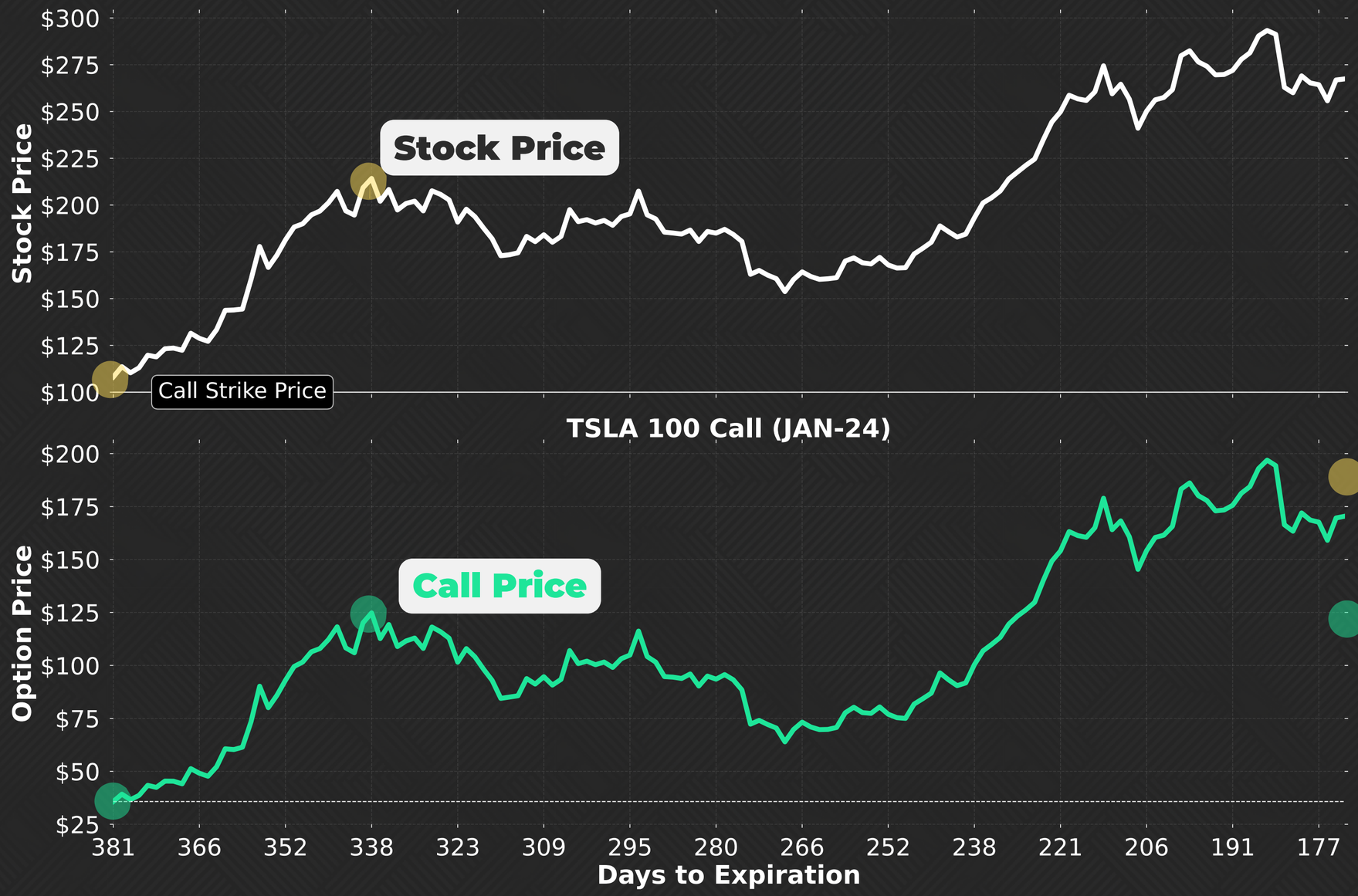
"Exercising" an Option

For instance, in the TSLA example, we wouldn't necessarily buy the 100-strike call with the intention of actually buying 100 shares of TSLA at $100/share.

Traders would buy the call because they think TSLA shares will surge, resulting in a more valuable call option. Then, they could sell the option for a higher price and make a profit, JUST like trading shares of stock.

Stock Buyer Goal: Buy shares low and sell shares high (**+$$$**)
Option Buyer Goal: Buy options low and sell options high (**+$$$**)

Why Traders Buy Calls?



A TSLA options trader who thinks the stock will surge can buy calls to make more money than simply buying shares.

For example, it would have cost $11,000 to buy 100 shares of TSLA at the beginning of this chart period.

It would have cost $3,500 to buy the 100-strike call expiring in January 2024.

Stock Price Change (381 - 338 DTE)
~$110 to $210 (**+91% Gain**)

Call Price Change (381 - 338 DTE)
~$35 to $125 (**+257% Gain**)

Options traders buy/sell options instead of stock because the options can see much larger returns compared to the stock price, but they come with more risk, too.

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"Exercising" an Option

Call Option Recap: A call option gives the buyer the right to buy 100 shares of stock at the fixed strike price before the option's expiration date.

As the stock goes up, the value of the call's ability to buy shares at that fixed price will also go up.

The trader can simply sell their call option position for a higher price, realizing a profit on the option price increase.

There's always the option to exercise the call and actually buy shares at the strike price, but traders rarely do that.

Option Pricing Law

An option's price will **ALWAYS** include the benefit/gain that it can provide the owner if they were to exercise the option.

TSLA Call Strike Price: $100
TSLA Stock Price: $225

I can use the call option to make a $125 profit per share by exercising the option, buying 100 shares for $100/share, then selling the shares for $225.

Because of this, the call option MUST be worth $125, or have a cost/value of $12,500, since it can give me a $125 per-share profit on 100 total shares.

Let's verify this by going back to the TSLA call chart once again!

A Call Option is Always Worth the Benefit it Provides the Owner...

1. The stock is at $150.
   The 100-strike call is worth over $50.

2. The stock is at $200.
   The 100-strike call is worth over $100.

3. The stock is at $275.
   The 100-strike call is worth over $175.

In each instance, the 100-strike call is worth AT LEAST the per-share profit that an owner of the option can gain by purchasing shares at the strike price (exercising the call) and selling the shares at the current stock price.

So option prices ALWAYS include the profit the owner can gain by exercising the option and closing the shares at the current stock price.

Because of this, we don't need to exercise the option to realize that gain. We can simply sell the option.

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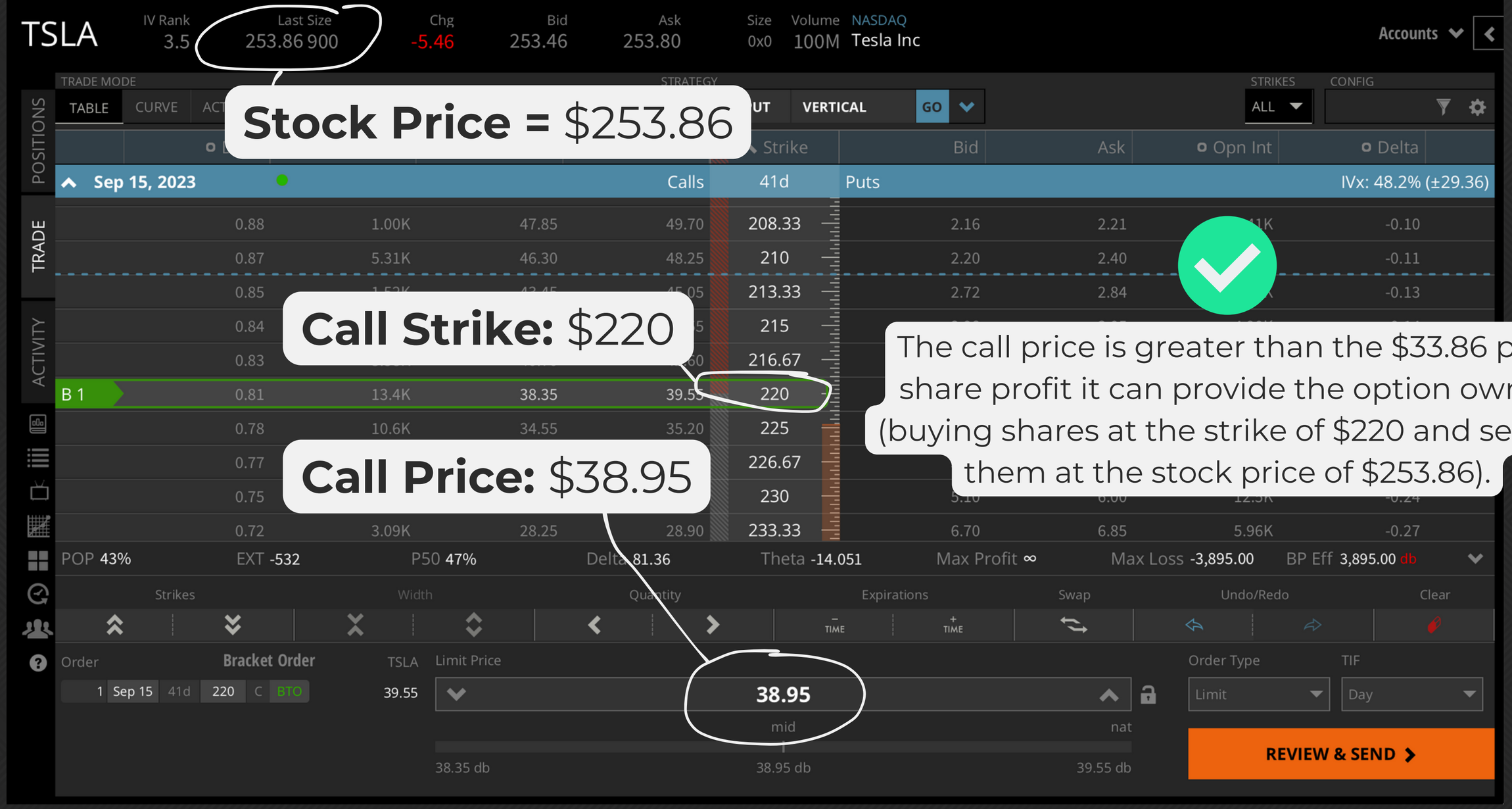

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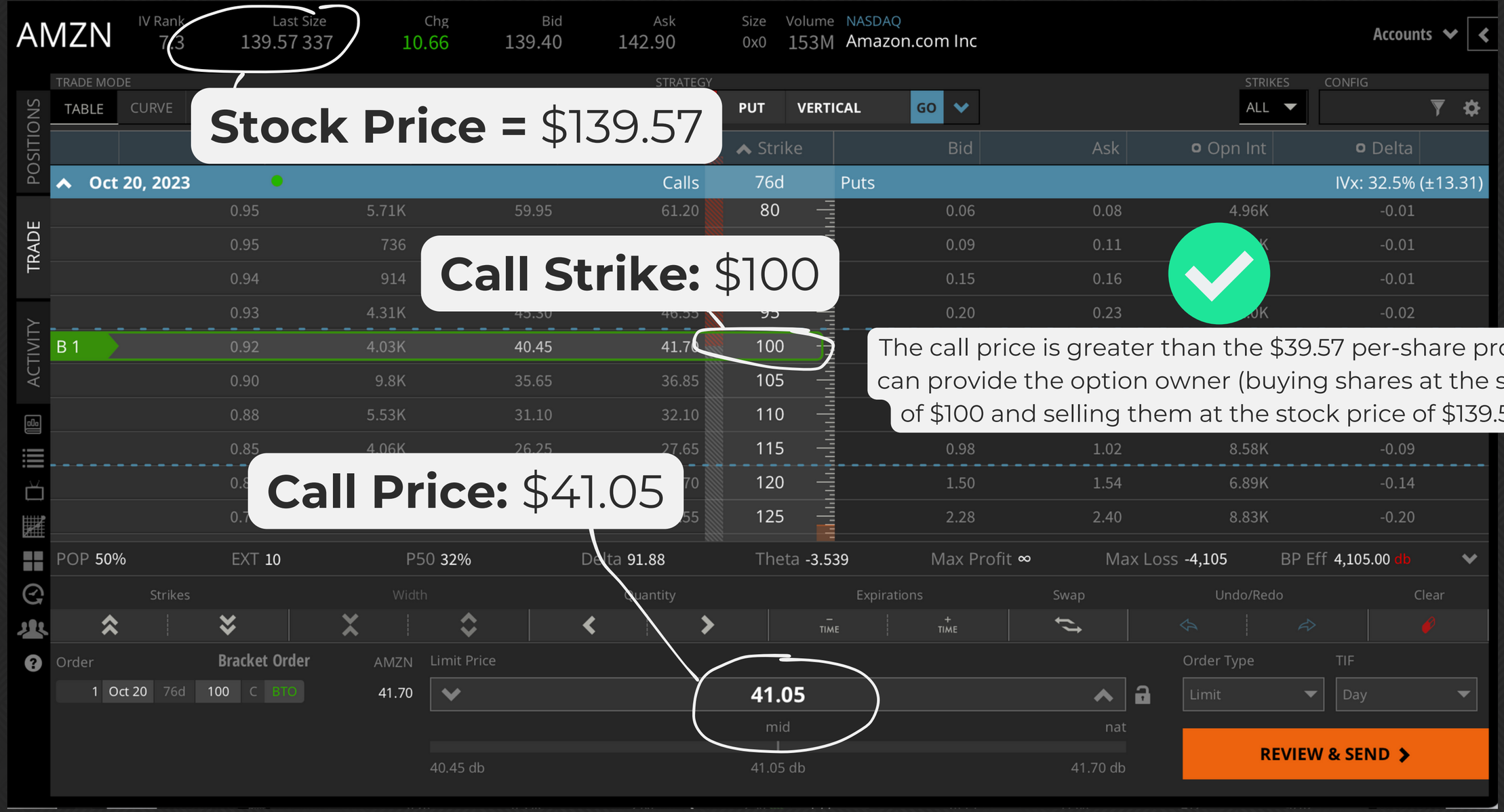

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Buying a Call Option:
Risk Graph Analysis

Call Purchase (Long Call) Risk Graph

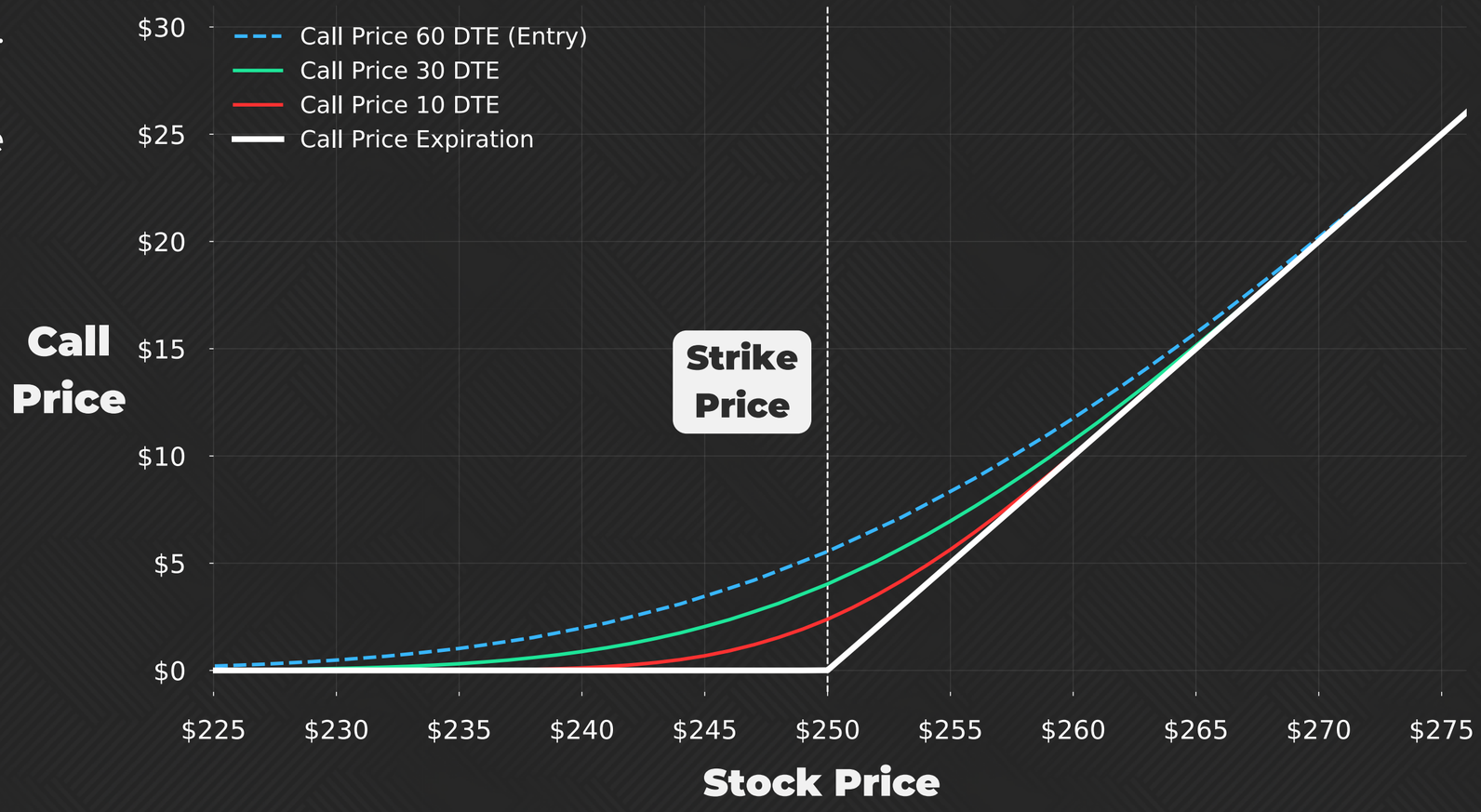
Strike Price = $250, 15% Volatility, 5% Risk-Free Rate

Stock Price at Entry: $250
Call Strike Price: $250
Time to Expiration: 60 Days (60 DTE)
Initial Call Price: $5.54 ($554 Cost/Value)

At expiration, a call option will expire worthless if the stock price is at/below the strike price.

The **maximum loss** in that scenario is the amount paid for the option initially.

The **maximum profit** of a call purchase is theoretically unlimited because the call price will go up with the stock price, and there's no limit to how high a stock's price can go.



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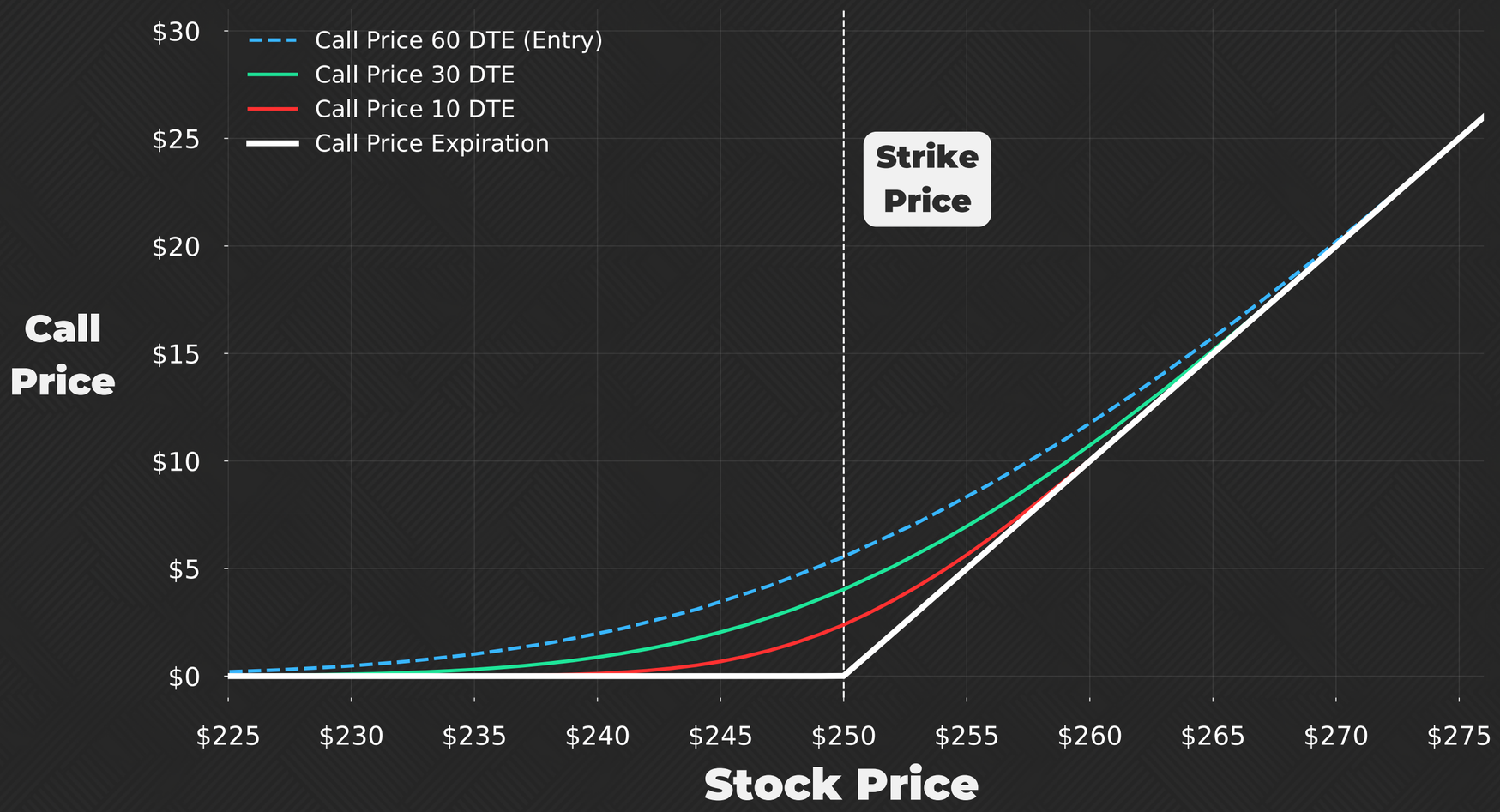
Call Purchase (Long Call) Risk Graph

Strike Price = $250, 15% Volatility, 5% Risk-Free Rate



This is a simulated "risk graph" of buying a 250-strike call option.

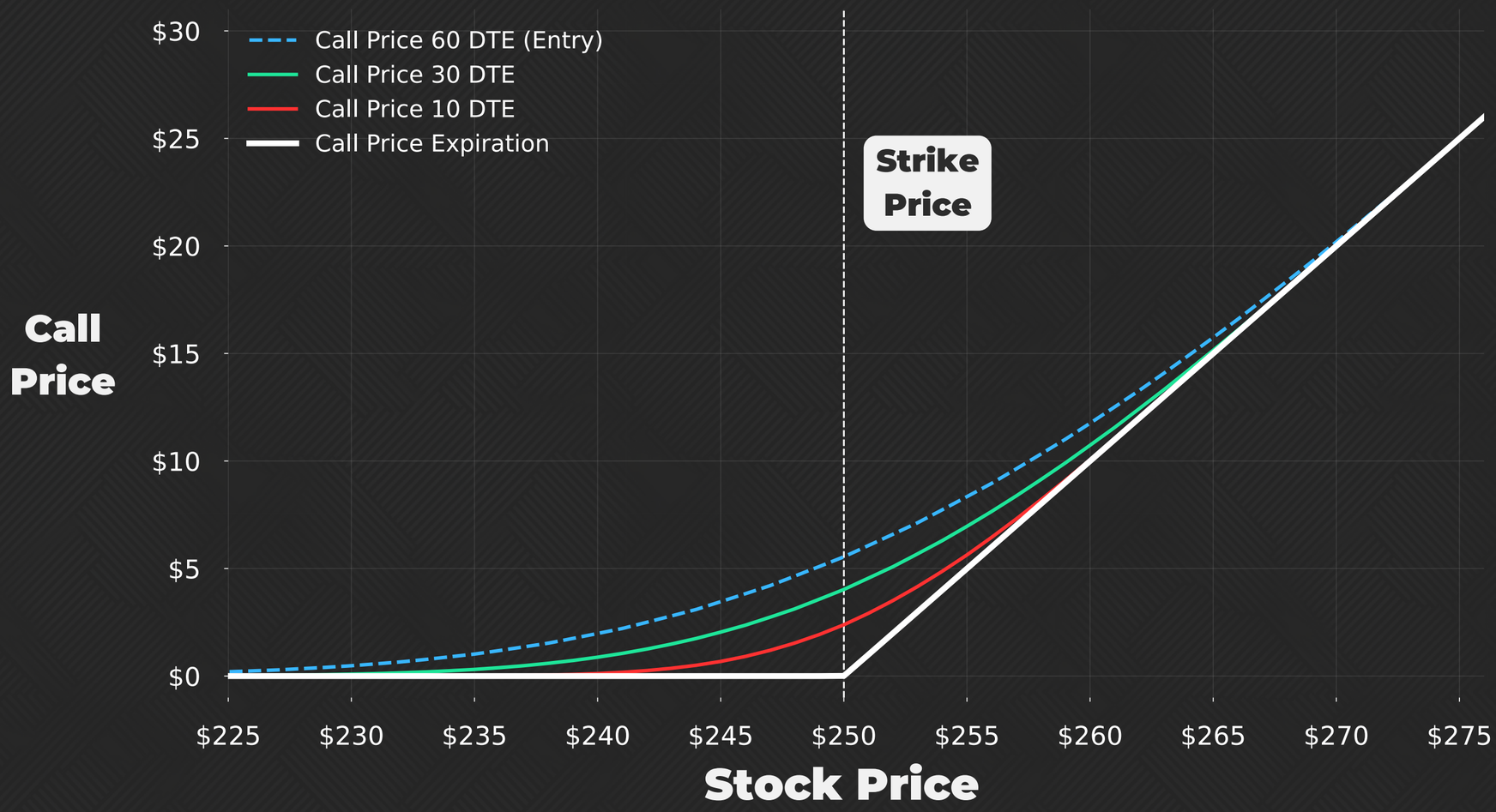
It shows the simulated prices of the call option at various stock prices and with various amounts of time until expiration (days to expiration or DTE).

As we saw in the TSLA example, the price of the call increases and decreases with the stock price.

But at expiration, the call option will be worthless if the stock price is at or below the strike of $250.

Call Purchase (Long Call) Risk Graph

Strike Price = $250, 15% Volatility, 5% Risk-Free Rate



At expiration, a call is worthless if the stock is at/below the call's strike because there's no value in the call's ability to buy stock at the strike price.

Ex: if the stock is at $240 at expiration, we can just buy stock at the market price of $240, a more favorable price than the call's $250 strike price.

Since there's no more time for the stock to increase and make the call valuable, it expires with a final value of $0.

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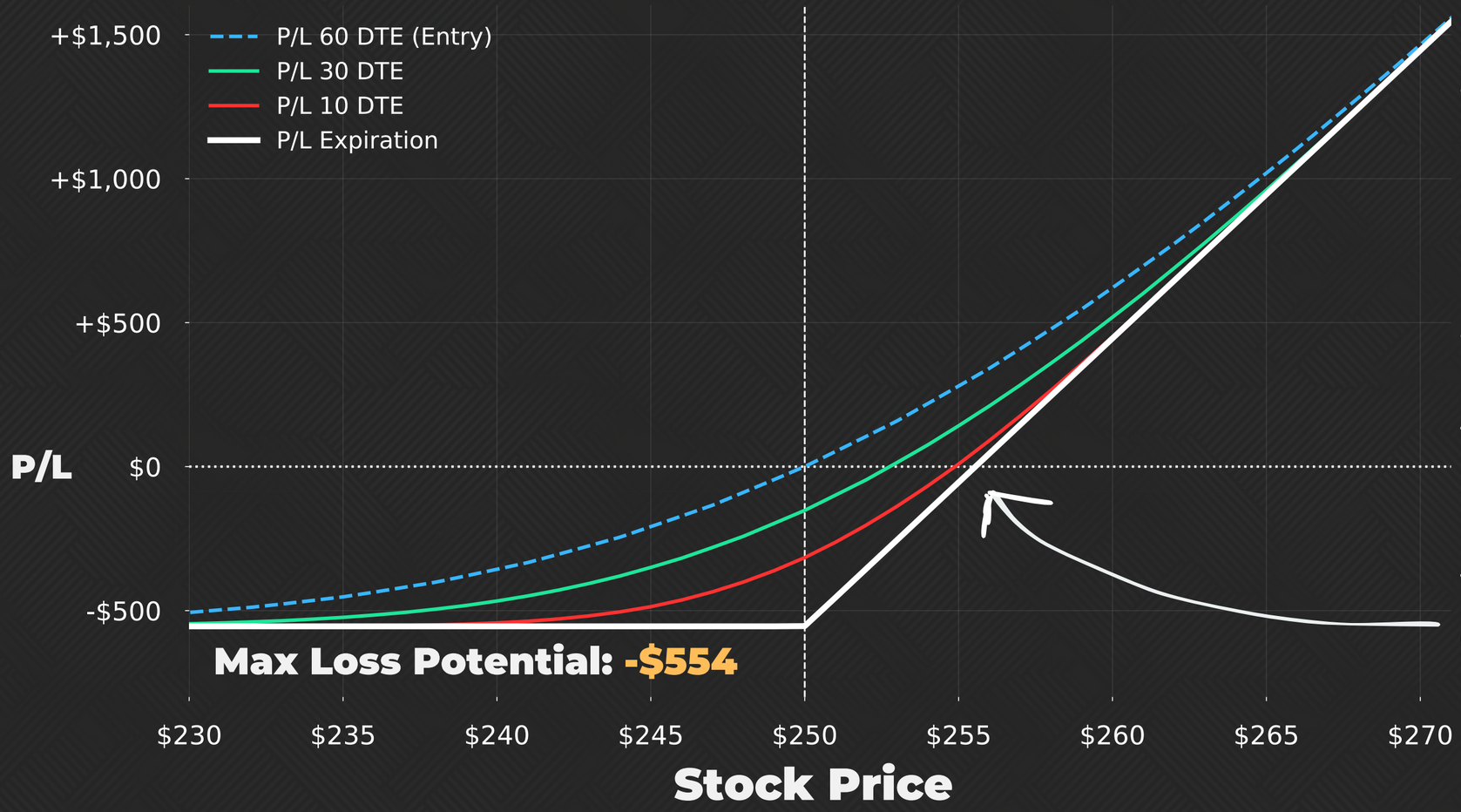
Call Purchase (Long Call) Risk Graph

Strike Price = $250, 15% Volatility, 5% Risk-Free Rate



Here I've changed the Y-axis to show the P/L of the call purchase if we were to buy the 250-strike call when it had 60 days to expiration. The stock was at $250 at the time of entry. The simulated call price at entry was $5.54.

If the stock doesn't increase, we'll lose money on the trade as time passes (we'll talk more about this later).

The **max loss** is the amount paid for the option initially, which was $554.

The **breakeven stock price at expiration** is $255.54, which is the strike price plus the initial option purchase price.

The **max profit** is theoretically unlimited as the call price goes up with the stock price.

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Call Options: What We've Learned

1. A call option is one of the two option types.
2. Calls give the buyer the ability to buy 100 shares of stock at the call's strike price.
3. Calls become more valuable as the share price rises because the ability to buy shares at the strike price can produce greater and greater profits.
4. You don't have to exercise a call to realize profits. The call's price will always include any profit you can make by exercising it. We can take profits by simply selling the call option at a higher price than we paid for it.
5. Call options can provide far greater returns than the stock price return.

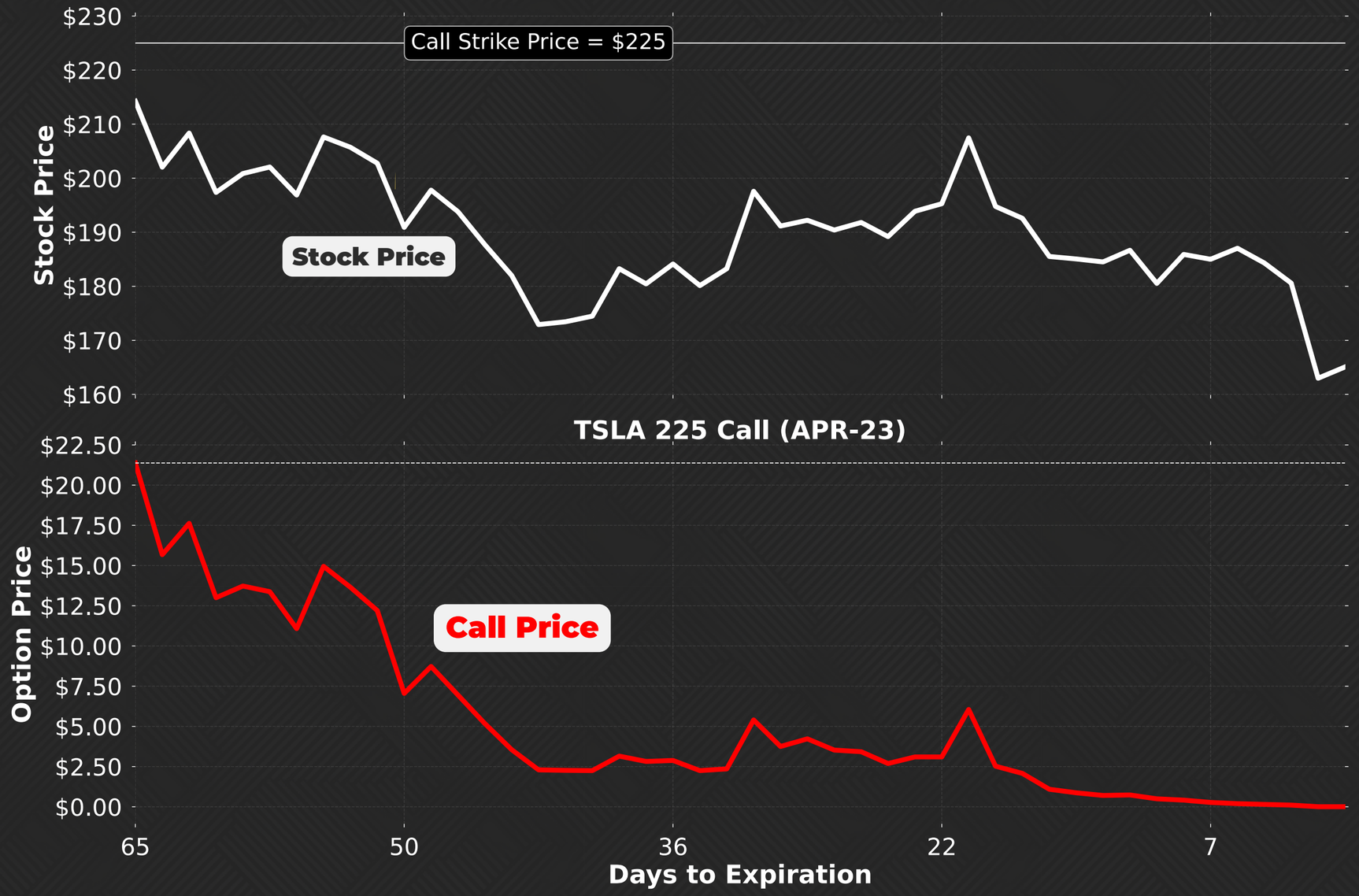
Losing Money Buying Call Options

If you buy a call option and the share price falls, so will the value of the call option.

If the stock price is below the call's strike price at expiration, the call option will "expire worthless" and **you will lose the entire premium you paid for the option.**

Let's look at a real example of this in TSLA.

Losing Money Buying TSLA Calls



Initial Stock Price: $214
Call Strike: $225
Expiration: April 21, 2023
Days to Expiration (DTE): 65
Option Purchase Price: $21.38

In this example, the stock price begins at $214 on February 15th, 2023.

The call strike price is $225.

As the stock price trended lower and time passed, the 225 call's value plummeted as it became less likely for it to be valuable at the time of expiration.

It expired worthless as the stock price was at $165 at expiration.

There's no value in the 225 call's ability to buy stock at $225 when the stock price is at $167.

And since the option reached expiration, there was no more time for the stock price to increase to make the call valuable.

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Losing Money Buying Call Options

The failed TSLA call purchase highlights a big risk of buying options:

You will lose 100% of your investment if the stock price ends below your call strike at expiration.

The stock didn't go to zero, but the option did.

Losing Money Buying Call Options

Therefore, a similar investment in the option and shares would result in a much higher loss in the option.

TSLA shares went from $214 to $165: **a 23% loss**.

The 225-strike TSLA calls expiring in April went from $21.38 to $0.00: **a 100% loss**.

$10,000 in Shares → **$7,700**

$10,000 in Calls → **$0**

From Calls to Puts

We're now going to move on from call options and talk about the second option type: put options.

We'll cover more call option materials later on.

If you'd like to deep-dive into call options, I'd highly recommend watching my **Call Options for Beginners 2023** YouTube video:

Put Option Introduction

Put Option Introduction

The second option type is called a **put option**.

A put option can be used by the owner to **sell** 100 shares of stock at the put option's strike price.

As the stock price plummets, this ability grows in value.

Put Purchase (Long Put) Risk Graph

Strike Price = $250, 15% Volatility, 5% Risk-Free Rate

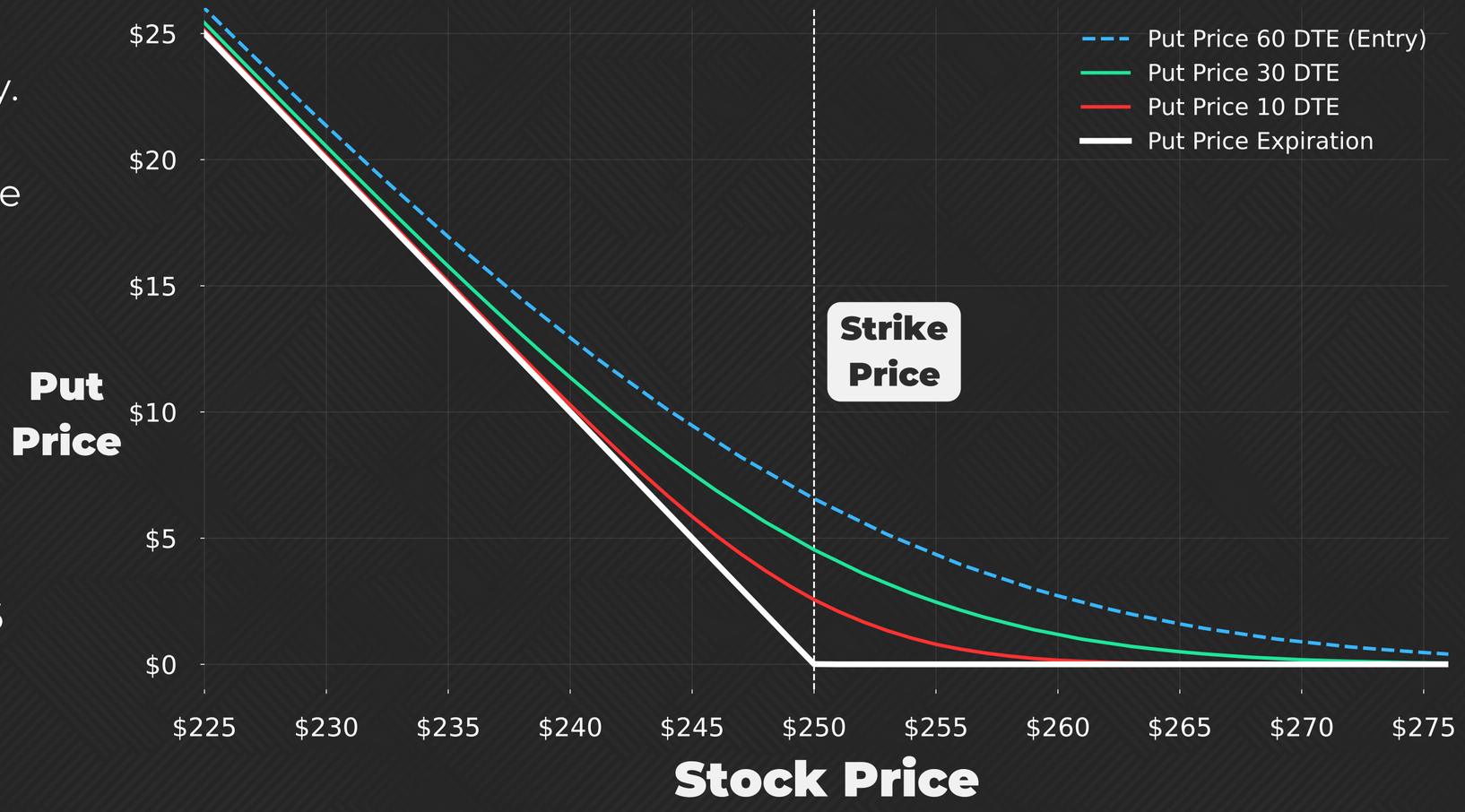
Stock Price at Entry: $250
Call Strike Price: $250
Time to Expiration: 60 Days (60 DTE)
Initial Call Price: $6.56 ($656 Cost/Value)

At expiration, a put option will expire worthless if the stock price is **at/above** the strike price.

The **maximum loss** in that scenario is the amount paid for the option initially.

The **maximum profit** of a put purchase is the strike price - the purchase price of the put because the stock can only go to zero.

If the stock goes to zero, we can sell shares at $250, making a $250 profit per share. Since we paid $6.56 for the put, our per-share profit is $250 - $6.56 = **$243.44.**



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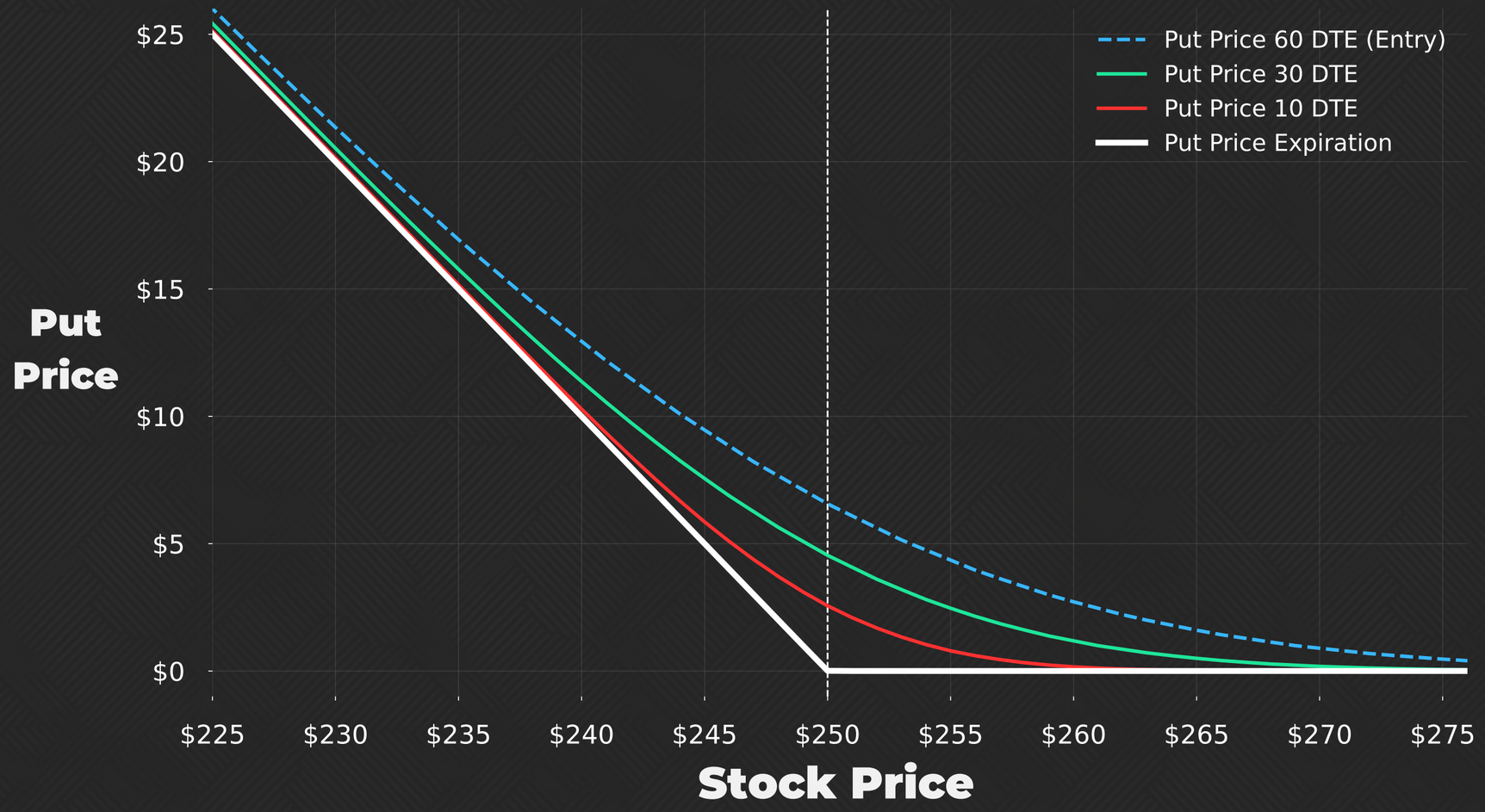
Put Purchase (Long Put) Risk Graph

Strike Price = $250, 15% Volatility



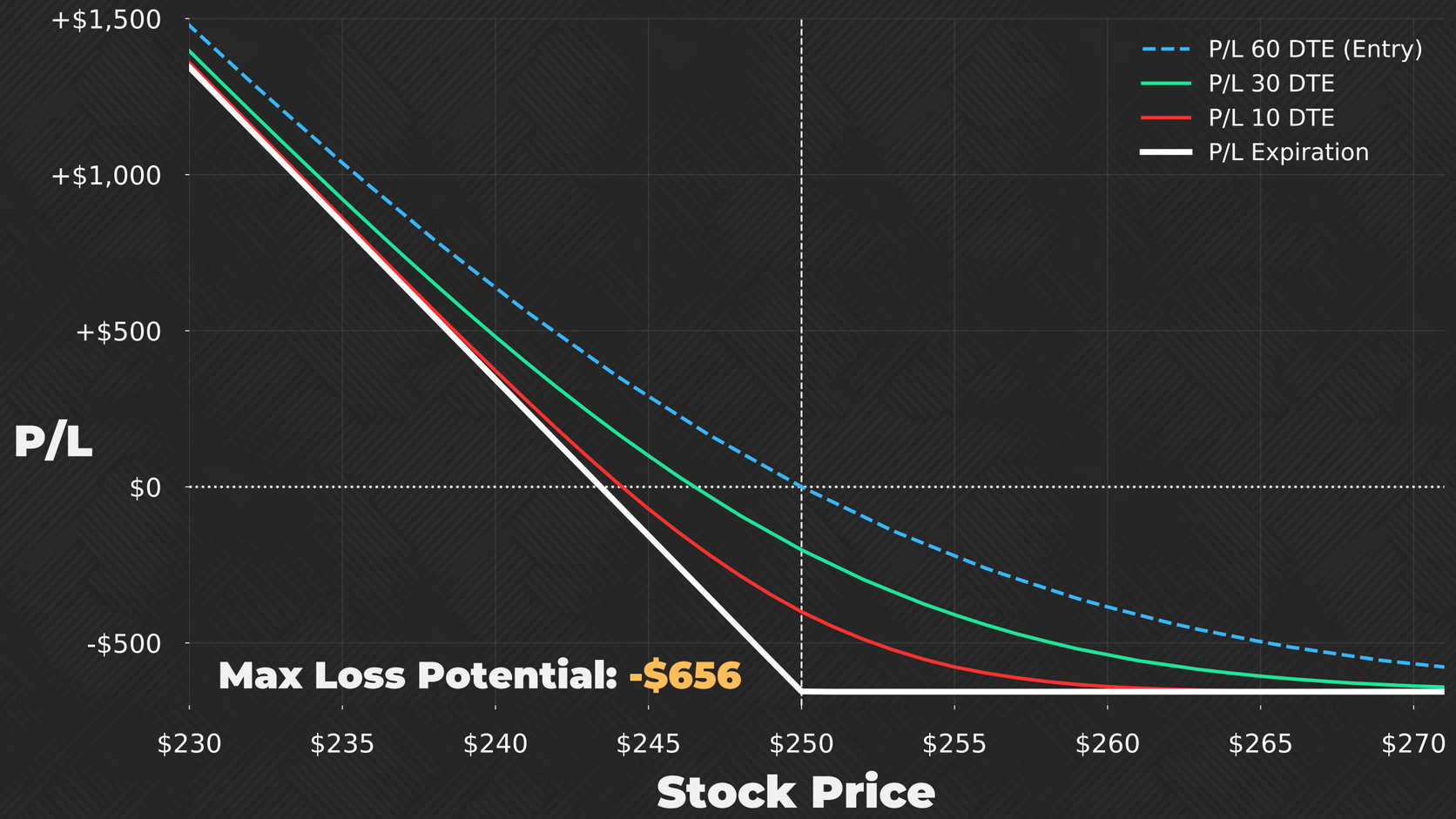
At expiration, a put is worthless if the stock is at/above the put's strike because there's no value in the put's ability to sell stock at the lower strike price.

Ex: if the stock is at $260 at expiration, we can just sell stock at the market price of $260, a more favorable price than selling at the put's $250 strike price.

Since there's no more time for the stock to fall and make the put valuable, it expires with a final value of $0.

Put Purchase (Long Put) Risk Graph

Strike Price = $250, 15% Volatility, 5% Risk-Free Rate



Here I've changed the Y-axis to show the P/L of the put purchase if we were to buy the 250-strike put when it had 60 days to expiration. The stock was at $250 at the time of entry. The simulated put price at entry was $6.56.

If the stock doesn't fall, we'll lose money on the trade as time passes (we'll talk more about this later).

The **max loss** is the amount paid for the option initially, which was $656.

The **breakeven stock price *at expiration*** is $243.44, which is the strike price MINUS the initial option purchase price.

The **max profit potential** is the strike - price paid, or $243.44, which occurs if the stock goes to zero.

Put Purchase (Long Put) Max Profit Potential

Strike Price = $250, 15% Volatility, 5% Risk-Free Rate

For all intents and purposes, the maximum profit potential of a put purchase is "unlimited" as we'll make more money as the stock price falls.

However, there is technically a limit since the stock can only go to zero.

If we buy a 250-strike put for $6.56, our max profit potential is +$24,344:

Buy 100 Shares for Zero
Pay $0

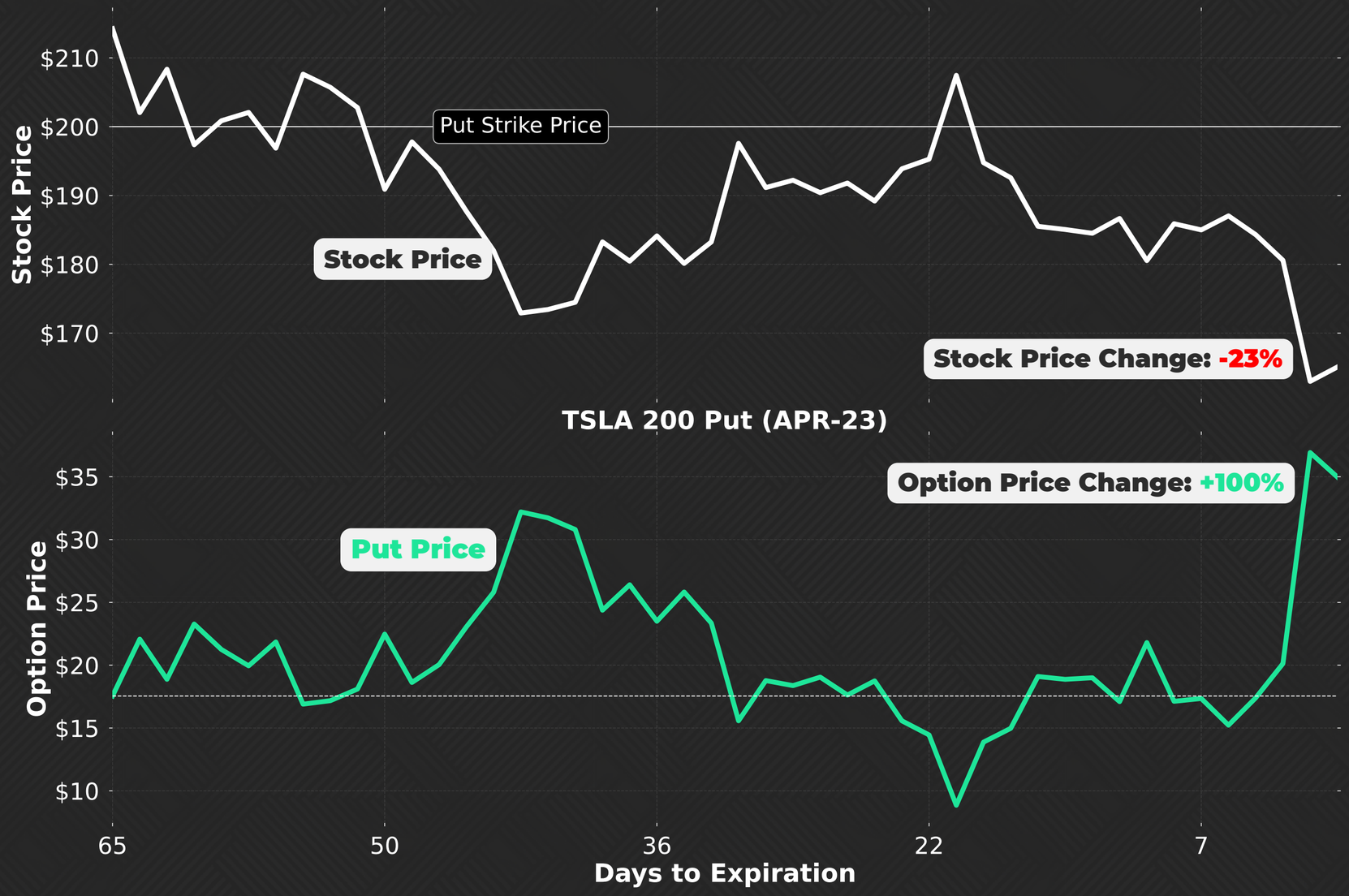
Exercise Put to Sell 100 Shares @ $250
Receive $25,000

Initial Option Cost: $656
Net P/L: +$25,000 - $656 = +$24,344

Buying a Put Option (Long Put)
Trade Examples

Let's look at a couple of examples of buying puts to see how they work!

Buying a Put (Long Put) Example



Initial Stock Price: $214
Put Strike: $200
Expiration: April 21, 2023
Days to Expiration (DTE): 65
Option Purchase Price: $17.55

In this example, TSLA shares begin at $214 on February 15th, 2023.

The put strike price was $200.

Note how the put price surged initially as the stock price plummeted towards $170.

Why? Because the ability to sell shares at $200 (via the put) grew in value as the shares fell further below $200.

The shares continued to whipsaw, causing wild swings in the put's value, inversely to the stock price.

Expiration: With the stock price at $165, the put was worth a final value of $35. A trader who bought the put for $17.55 could have sold the put at exp. for $35.

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Buying a Put (Long Put) Example

Initial Stock Price: $113.64
Put Strike: $100
Expiration: March 17, 2023
Days to Expiration (DTE): 72
Option Purchase Price: $8.83

In this example, TSLA shares begin at $113.64 on January 4th, 2023.

The put strike price was $100.

In this example, the stock price rallied hard over the entire period, and the put value declined steadily to zero.

As the stock got further above the put strike, and expiration got closer, it became less likely the put would become valuable by expiration.

Expiration: With the stock price at $180, the put was worth a final value of $0. A trader who bought the put for $8.83 initially and held to expiration would have lost the entire $883 premium paid (for each put).

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Losing Money Buying Put Options

If you buy a put option and the share price increases, the put value will fall.

If the stock price is above the put's strike price at expiration, the put option will "expire worthless" and **you will lose the entire premium you paid for the option.**

Put Options: What We've Learned

1. A put option is one of the two option types.
2. Puts give the buyer the ability to sell 100 shares of stock at the put's strike price.
3. Puts become more valuable as the share price **falls** because the ability to sell shares at the strike price can produce larger gains.
4. You don't have to exercise a put to realize profits. The put's price will always include any profit you can make by exercising it. We can take profits by simply selling the put option at a higher price than we paid for it.
5. Put options can provide far greater returns than the stock price return.

Buying Puts vs. Shorting Stock

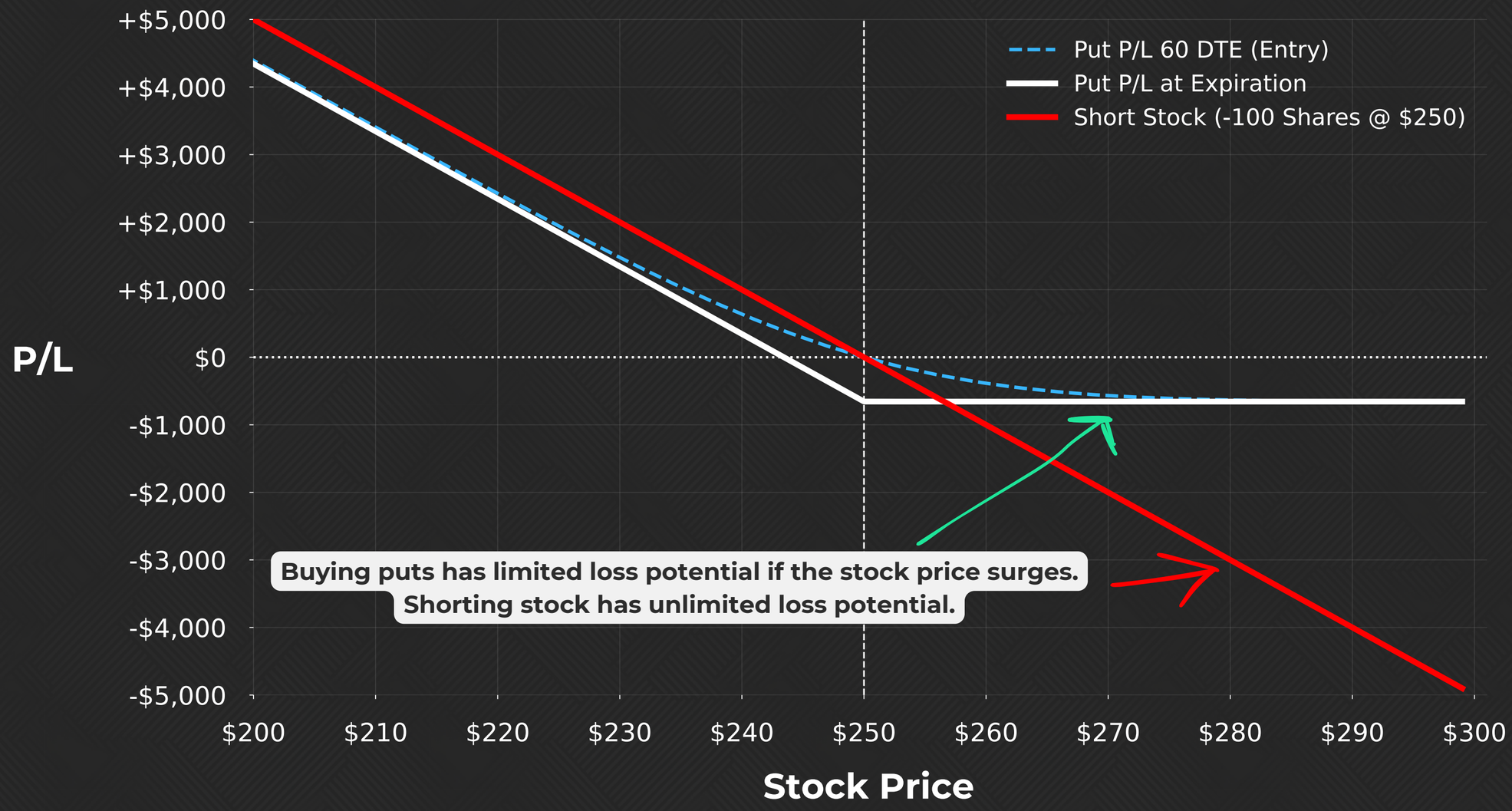
Buying Puts vs. Shorting Stocks:
The Huge Benefit

Since you have limited risk when buying put options, doing so is far safer than shorting 100 shares of stock.

When shorting stocks, you have theoretically unlimited risk, but you make money when the share price falls.

Therefore, buying puts to make money when the share price falls is much safer than shorting stock.

Note the uncapped loss potential when shorting stock.
If the stock price collapses, buying puts makes less than shorting stock,
but the loss potential to the upside is limited.



Intrinsic & Extrinsic Value Explained

Understanding Option Prices:

Intrinsic & Extrinsic Value

We've covered the basics of buying calls and puts, and how they make/lose money with some examples.

Now we need to dive deeper into understanding option prices.

Option prices are made up of two possible components:

Intrinsic Value and Extrinsic Value

Understanding Option Prices: Intrinsic Value

Intrinsic value is the part of an option's price that is explained by the gain it provides the owner if they were to exercise it.

TSLA Stock Price: $225
Call Strike Price: $100

Here, the call owner can buy TSLA stock $125 below the current share price.

The 100-strike call has $125 of intrinsic value.

Strike Price
$385

Call Owner Exercises Call:

Buy stock at **$385**

Sell stock at **$406.32**

+$21.32

The 385 call has $21.32 of "intrinsic" value.

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Understanding Option Prices: Intrinsic Value

Call options have intrinsic value when the stock price is **ABOVE** the call's strike price.

Think: is buying stock at the call's strike price a better deal than buying at the current stock price? If yes, the call has intrinsic value. If not, the call has no intrinsic value.

Call Option Intrinsic Value

Call Option Intrinsic Value

Understanding Option Prices: Intrinsic Value

If the stock price is $225...

Call Strike	Intrinsic Value
$125	$100
$150	$75
$200	$25
$225	$0
$250	$0

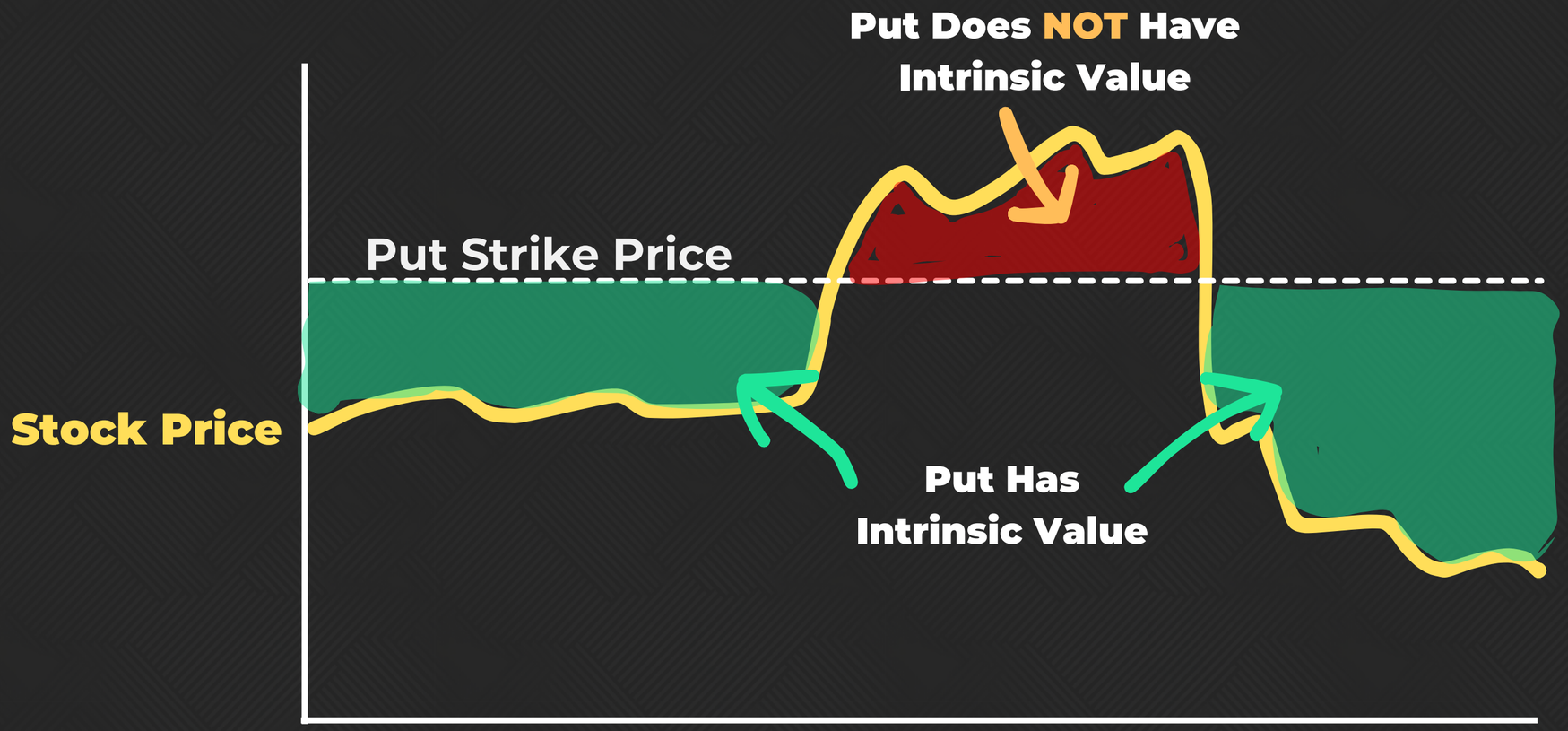
A call option has intrinsic value if the stock price is above its strike price because the call can buy shares below the current stock price.

Call's with strikes above the stock price have zero intrinsic value.

Understanding Option Prices: Intrinsic Value

Put options have intrinsic value when the stock price is **BELOW** the put's strike price.

Think: is selling stock at the put's strike price a better deal than selling at the current stock price? If yes, the put has intrinsic value. If not, the put has no intrinsic value.



Put Option Intrinsic Value

Put Option Intrinsic Value

Understanding Option Prices: Intrinsic Value

If the stock price is $100...

Put Strike	Intrinsic Value	
$80	$0	Puts with strikes below the stock price have zero intrinsic value.
$100	$0	
$120	$20	A put option has intrinsic value if the stock price is below its strike price because the put owner can sell shares above the current stock price.
$135	$35	
$140	$40	

Options with NO intrinsic value can still be valuable.

Extrinsic Value:

The part of an option's price that exceeds its intrinsic value.

Intrinsic Value: **$12.50**

Option Price: **$22.50**

+$10 of Extrinsic Value

But the put is worth $22.50.
The additional $10 of value above its intrinsic value is the **extrinsic value**.

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Where Does Extrinsic Value Come From?

Extrinsic value in option prices comes from the amount of time until expiration and expected stock volatility.

= Extrinsic Value

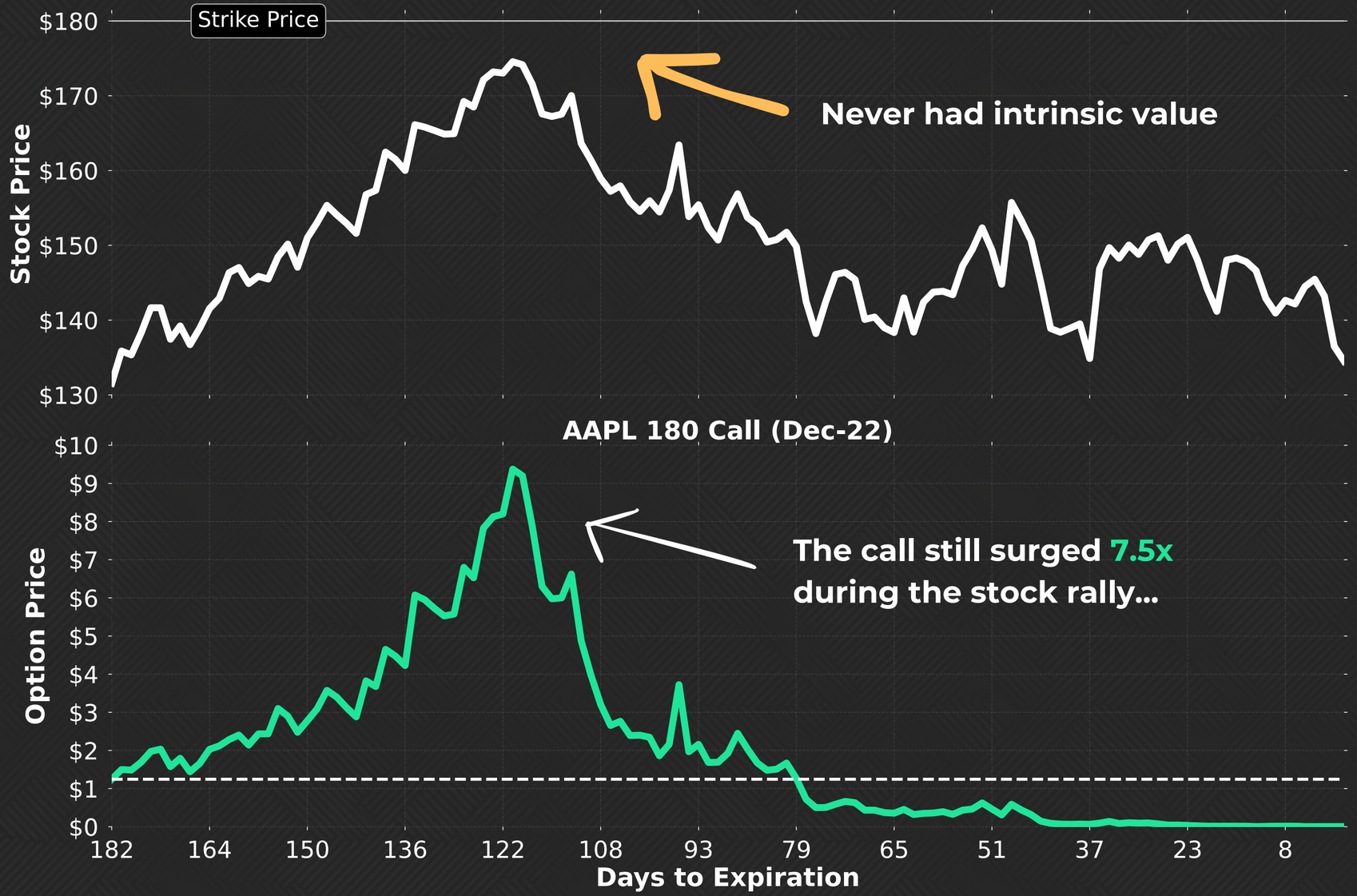
More specifically, the combination of time and volatility is what drives extrinsic value levels in options, as stock price changes happen over time.

Understanding Extrinsic Value:
AAPL Example

Let's look at a historical AAPL call option that was valuable despite never having any intrinsic value.

AAPL Call Example

($180-Strike Call Expiring Dec-2022; Entry June 17th, 2022)



Initial Stock Price: $131.56
Call Strike Price: $180
Expiration: December 16th, 2022
Days to Expiration (DTE): 182
Starting Call Price: $1.25

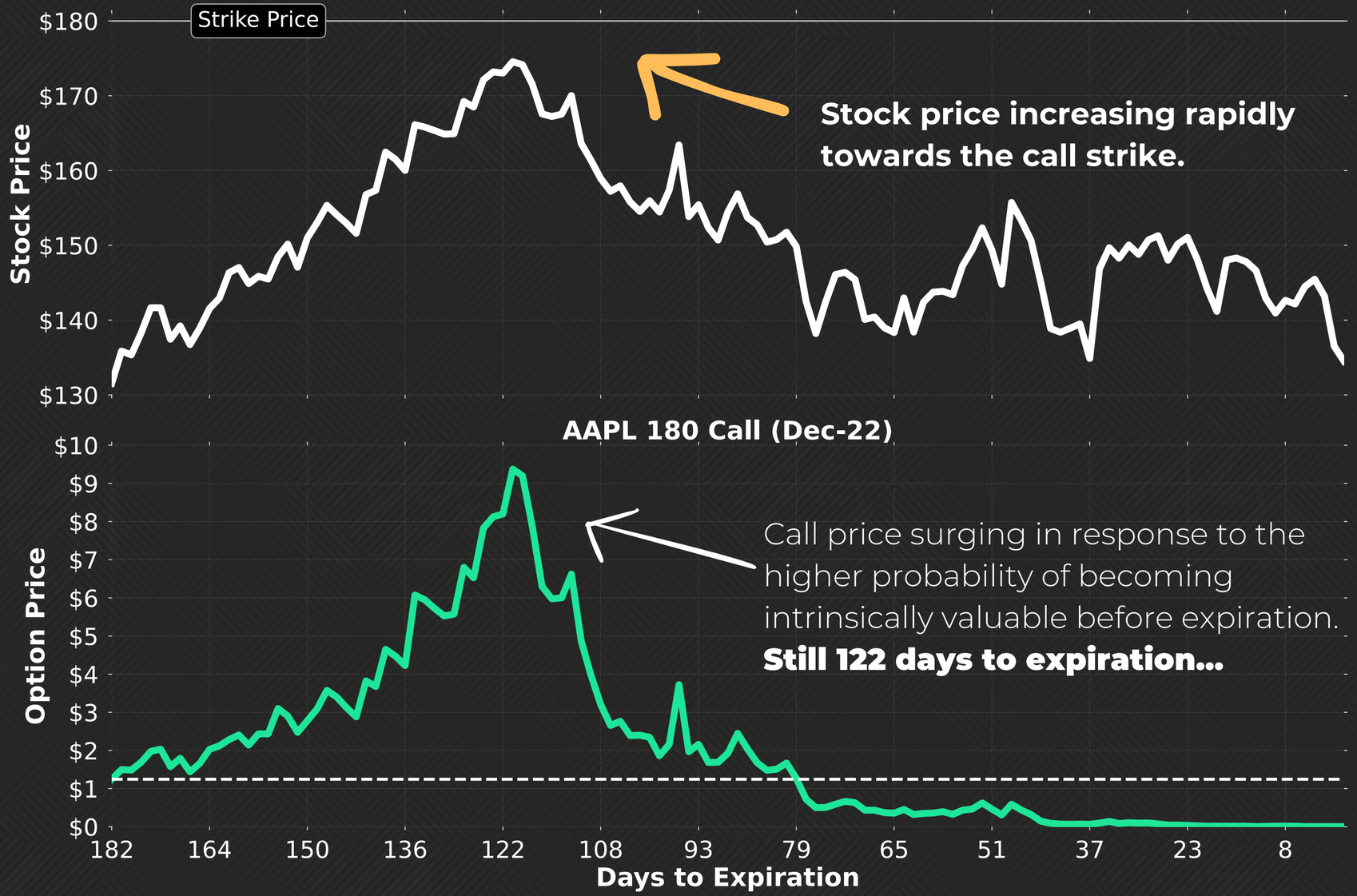
Knowing that call options only have intrinsic value when the stock price exceeds the strike price, this 180-strike call option never had any intrinsic value.

Despite having no intrinsic value, the call price went up 7.5x, from $1.25 to $9.40 at the high point when AAPL shares hit $175 when the call had about 122 days left until expiration.

Why?

AAPL Call Example

($180-Strike Call Expiring Dec-2022; Entry June 17th, 2022)



Initial Stock Price: $131.56
Call Strike Price: $180
Expiration: December 16th, 2022
Days to Expiration (DTE): 182
Starting Call Price: $1.25

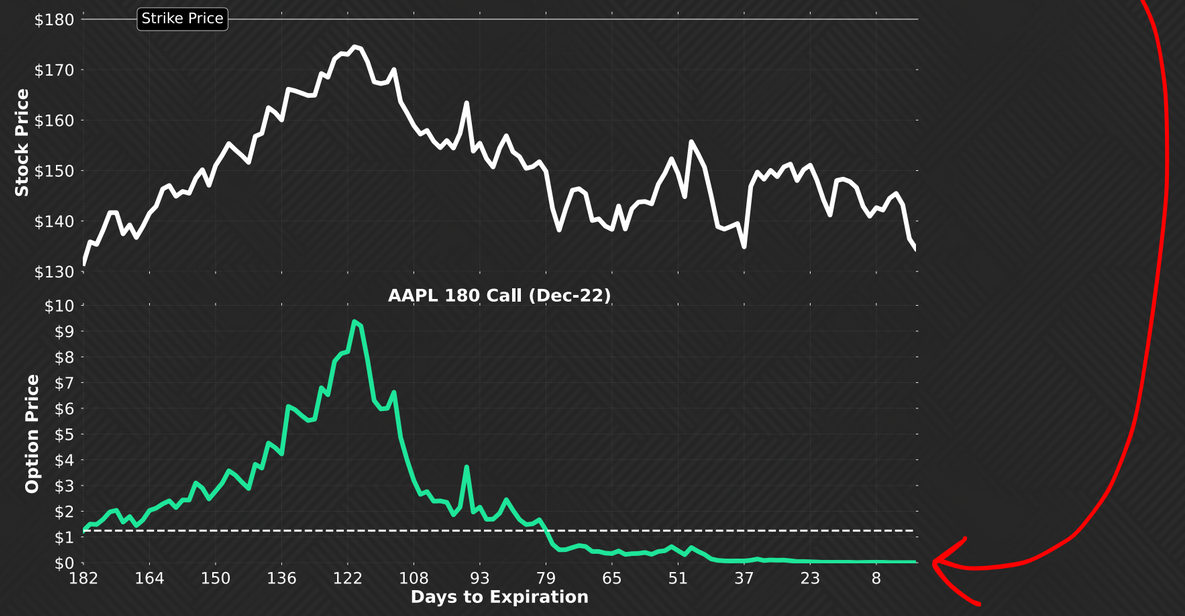
Because **the probability of the stock getting above the call's strike price increased** as the stock price went from $132 to $175.

Intrinsic Value is All That Remains at Expiration

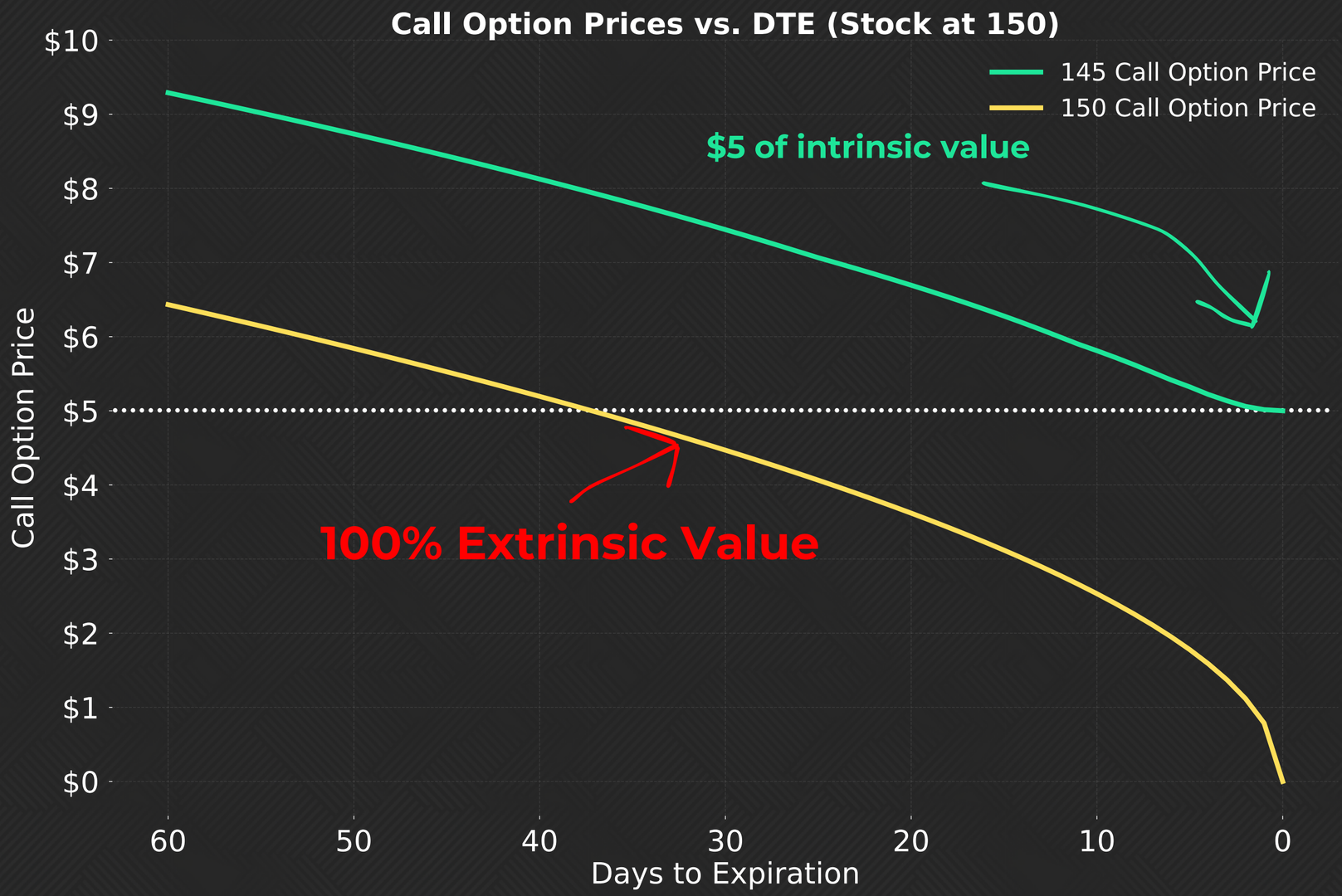
At expiration, an option will only be worth its intrinsic value.

If the option has no intrinsic value at expiration, it is worthless ($0.00).

As we saw in the AAPL example, the option's extrinsic value went up and down as its probability of expiring in-the-money (with intrinsic value) went up and down. **Ultimately, the option price trended toward its intrinsic value, which was zero.**



Intrinsic Value is All That Remains at Expiration

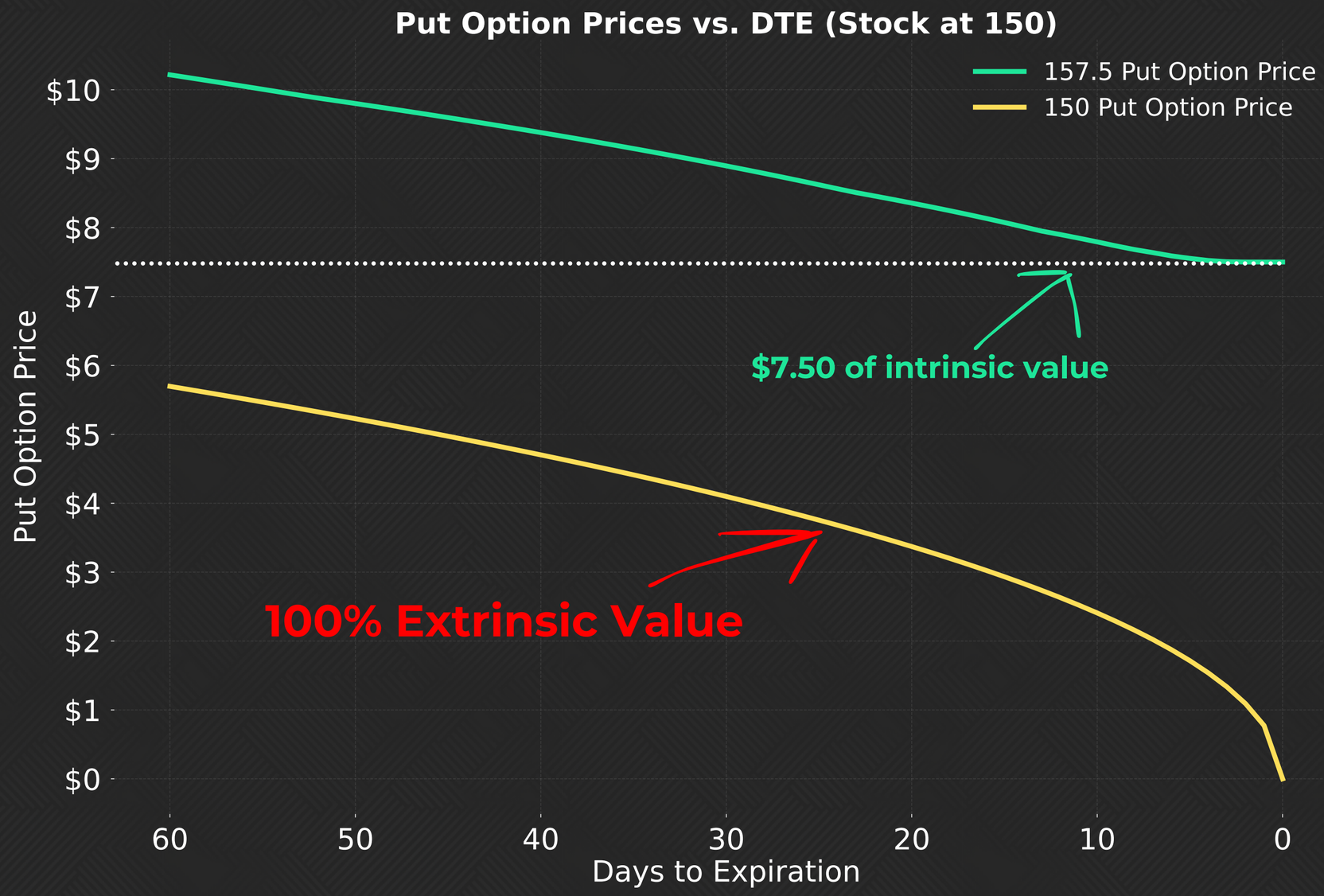


Stock Price = $150
Intrinsic of 145 Call: $5
Intrinsic of 150 Call: $0

The 145-strike call has $5 of intrinsic value with the stock at $150, while the 150 call's price is purely extrinsic.

As expiration approaches, each call's price trends towards its intrinsic value.

Intrinsic Value is All That Remains at Expiration



Stock Price = $150
Intrinsic of 157.5 Put $7.50
Intrinsic of 150 Put: $0

The 157.50-strike put has $7.50 of intrinsic value with the stock at $150, while the 150 put's price is purely extrinsic.

As expiration approaches, each put's price trends towards its intrinsic value.

Extrinsic Value Key Takeaways

Option prices consist of intrinsic value and extrinsic value.

Intrinsic value is the "tangible" price portion of an option - it represents the gain from exercising the option and closing the resulting stock position.

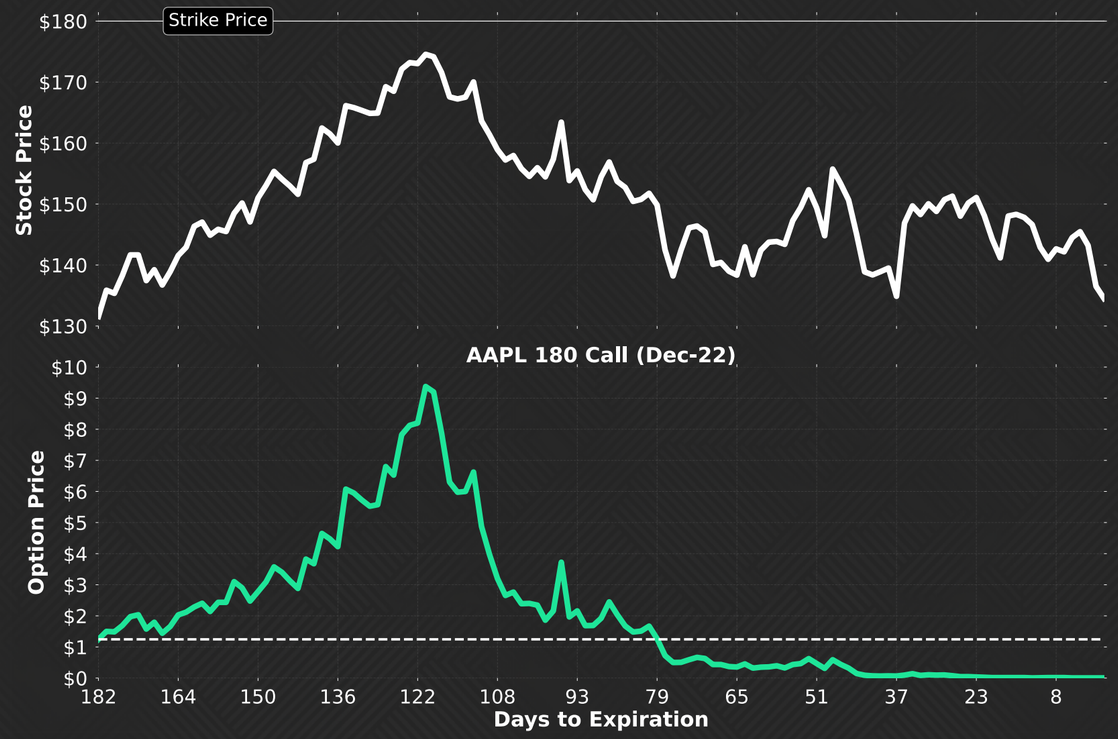
The call below has $15 of intrinsic value since the call owner can buy shares $15 below the current stock price by exercising the call, which could then be sold at the stock price of $150 to make a $15 gain per share.

Stock Price: $150
Call Strike: $135
Call Intrinsic Value: $15

Extrinsic Value Key Takeaways

But if an option has no intrinsic value, it can still be valuable via extrinsic value.

If there's lots of time left until expiration, and/or the stock has high volatility, there's still a chance the stock price can make a big move before the option expires and leave the option intrinsically valuable (as we saw in the AAPL call example).



Extrinsic Value Key Takeaways

At expiration, an option's price will ONLY consist of intrinsic value (if any).

Extrinsic value is lost over time, and will be gone entirely at expiration.

So if you buy options, you need the options you own to reach intrinsic value levels equal to or greater than your purchase price to not lose money **AT** expiration.

Call Purchase Price: $13
Call Strike Price: $200

You need the stock price to be *at* or *above* $213 at the time of expiration for the call to have $13+ of intrinsic value.

Before expiration, you can still make money on the trade and exit it profitably if the option price increases from your purchase price (again, see AAPL call example).

Option Moneyness Explained

Option "Moneyness" Explained

(ITM, ATM, OTM)

There are three "moneyness" options trading terms that describe an option's strike price in relation to the stock price.

In-the-Money (ITM)

An option that has intrinsic value.

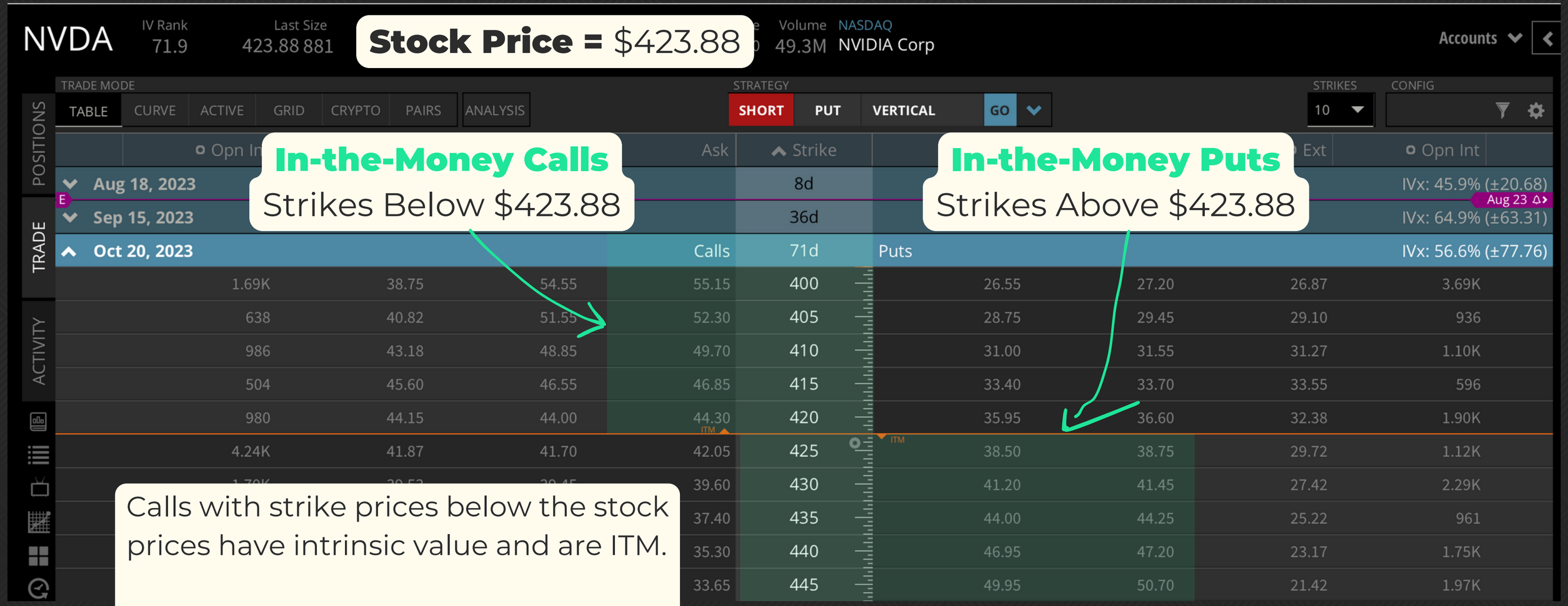
At-the-Money (ATM)

An option with a strike price at/near the stock price.

Out-of-the-Money (OTM)

An option with no intrinsic value. OTM options consist of 100% extrinsic value.

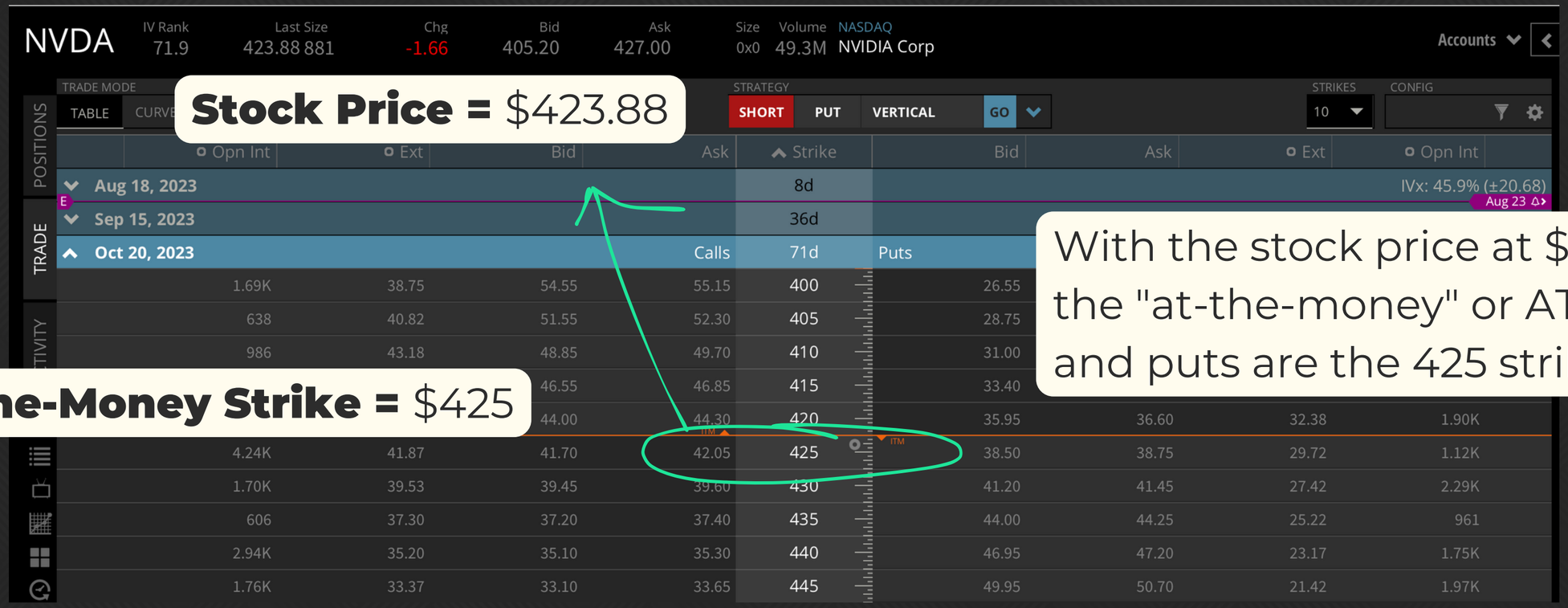
In-the-Money (ITM) Options



Calls with strike prices below the stock prices have intrinsic value and are ITM.

Puts with strikes above the stock price have intrinsic value and are ITM.

At-the-Money (ATM) Options

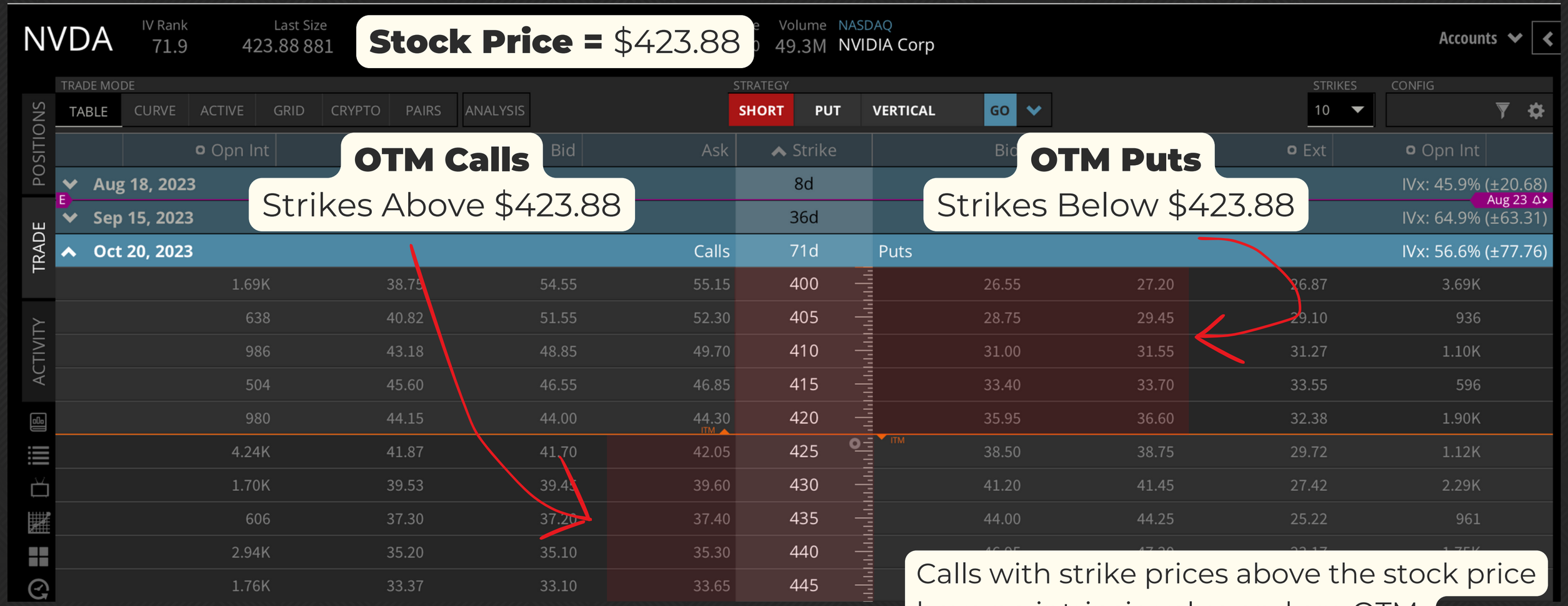


Stock Price = $423.88

At-the-Money Strike = $425

With the stock price at $423.88, the "at-the-money" or ATM calls and puts are the 425 strike.

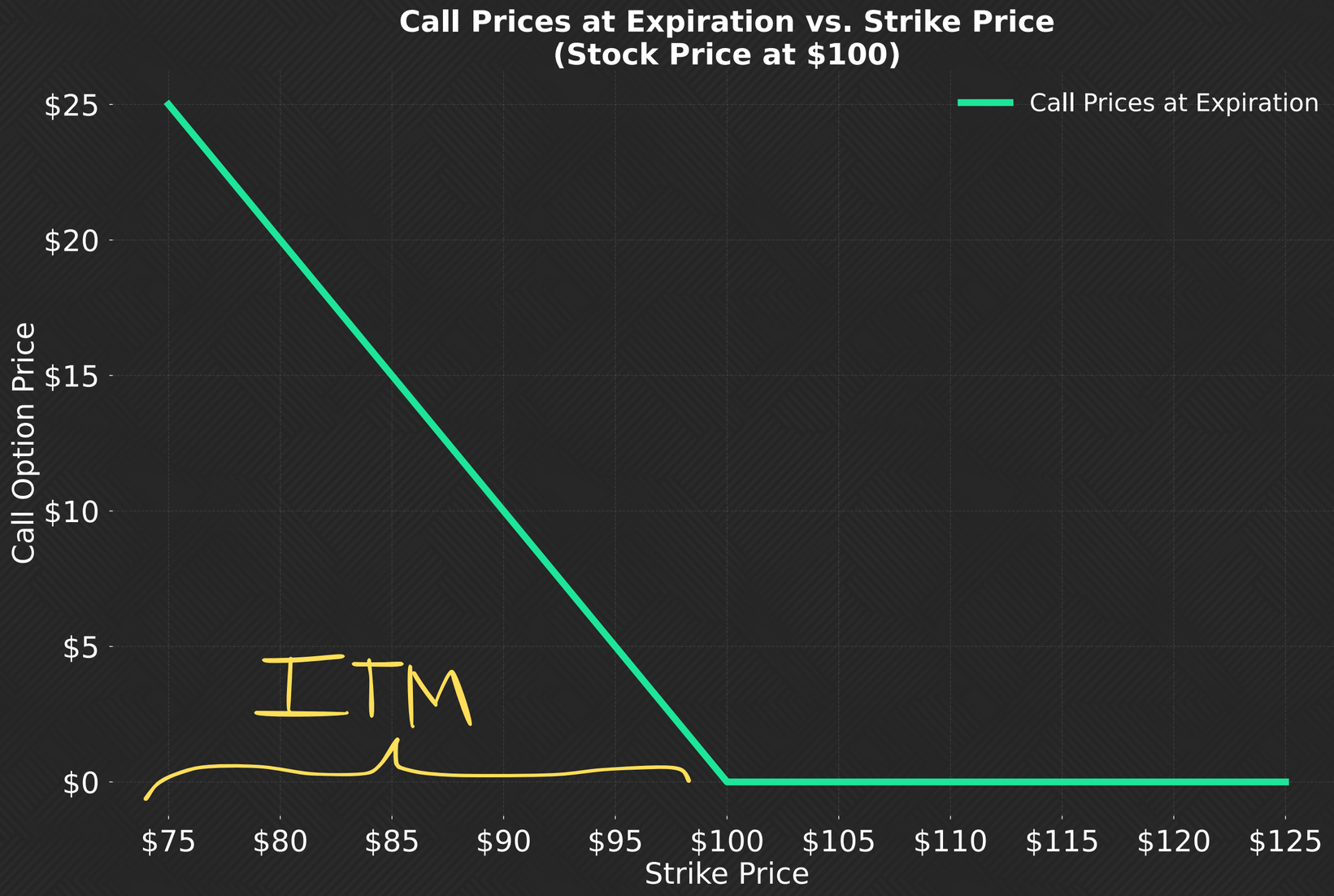
Out-of-the-Money (OTM) Options



Calls with strike prices above the stock price have no intrinsic value and are OTM.

Puts with strikes below the stock price have no intrinsic value and are OTM.

Call Prices at Expiration



Since options at expiration will have no extrinsic value remaining, only ITM options will be valuable at expiration.

With the stock price at $100, only ITM call options (strike prices below $100) will be valuable at expiration.

Put Prices at Expiration

Since options at expiration will have no extrinsic value remaining, only ITM options will be valuable at expiration.

With the stock price at $100, only ITM put options (strike prices above $100) will be valuable at expiration.

How Shorting Options Works

How Shorting Options Works

Thus far, we've talked exclusively about buying calls and puts.

But for every buyer, there is a seller.

Trader can "**short**" stocks, which means to sell shares of stock they don't own.

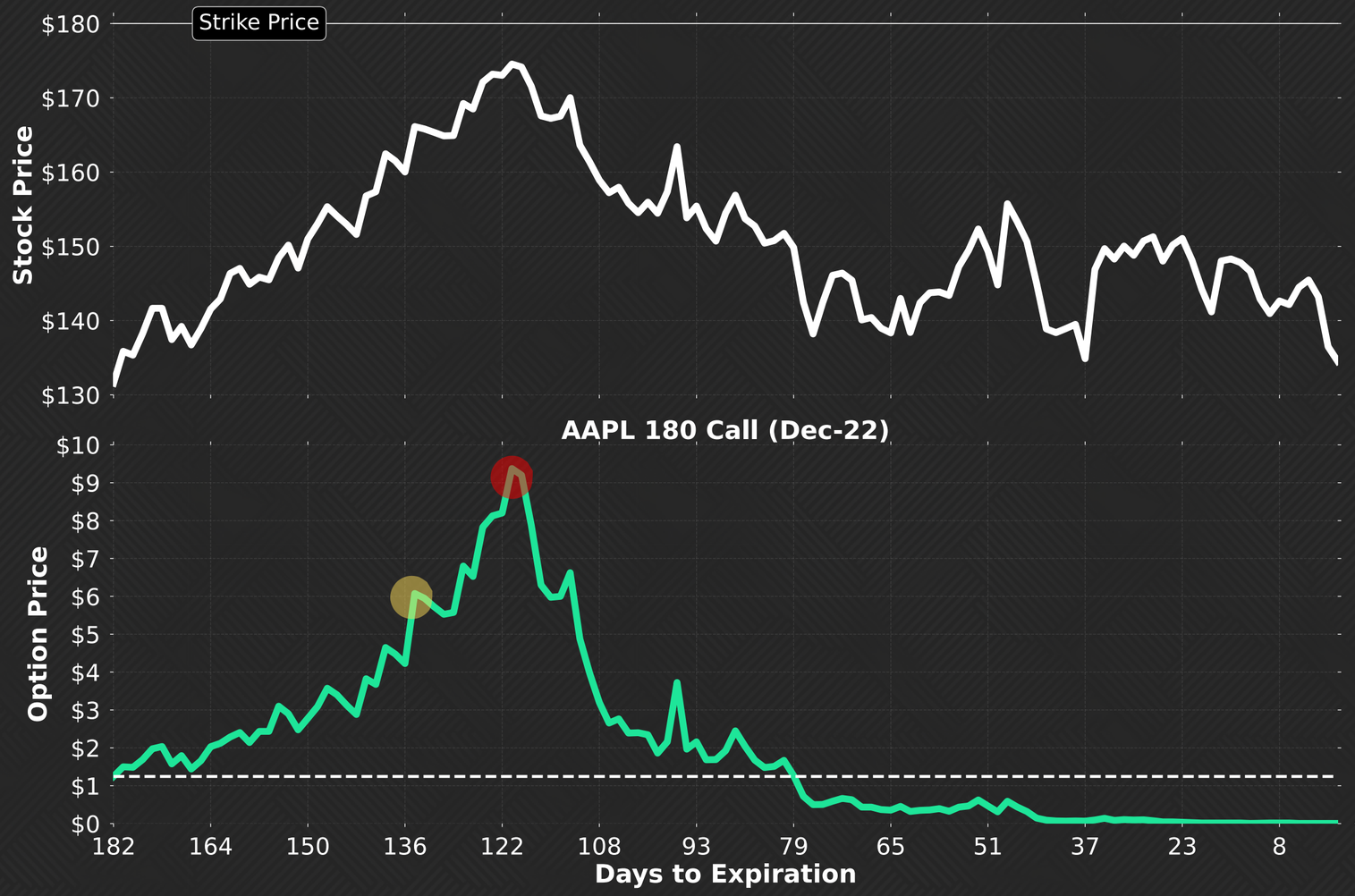
Traders can "**short**" options, which means to sell an option without owning it first.

Short traders are betting against the price of the asset they short.

If I short a stock, I make money if the stock price falls because I can then buy it back for a lower price.

If I short an option, I make money if the option price falls because I can then buy it back for a lower price (or let it expire worthless).

How Shorting Options Works



Imagine a trader who wanted to bet against the AAPL stock price rally in the previous call option example.

The trader could have SHORTED a call option.

Let's say the trader shorted the 180-strike call option at the highlighted entry point.

They would have collected **$600** into their account for shorting the option.

The call's value increase to $9 would have dealt them with an unrealized loss of **$300** per contract.

The call ended up trading towards **$0** in the final months before the expiration, at which point the trader could have bought back the call for pennies on the dollar, making **$600** on the trade.

How Shorting Options Works

Short Call Trade Math

Shorted Call at $6

+$600 Into Account

Call Price Rises to $9

-$300 Unrealized Loss on Position

If I short a call for $600 and I buy it back for $900, **I lose $300**.

Call Price Falls to $0

+$600 Unrealized Profit on Position

If I short a call for $600 and I can buy it back for $10, **I make $590**.

If the call expires worthless, I make $600.

Shorting Calls Explained

Shorting Call Options Explained

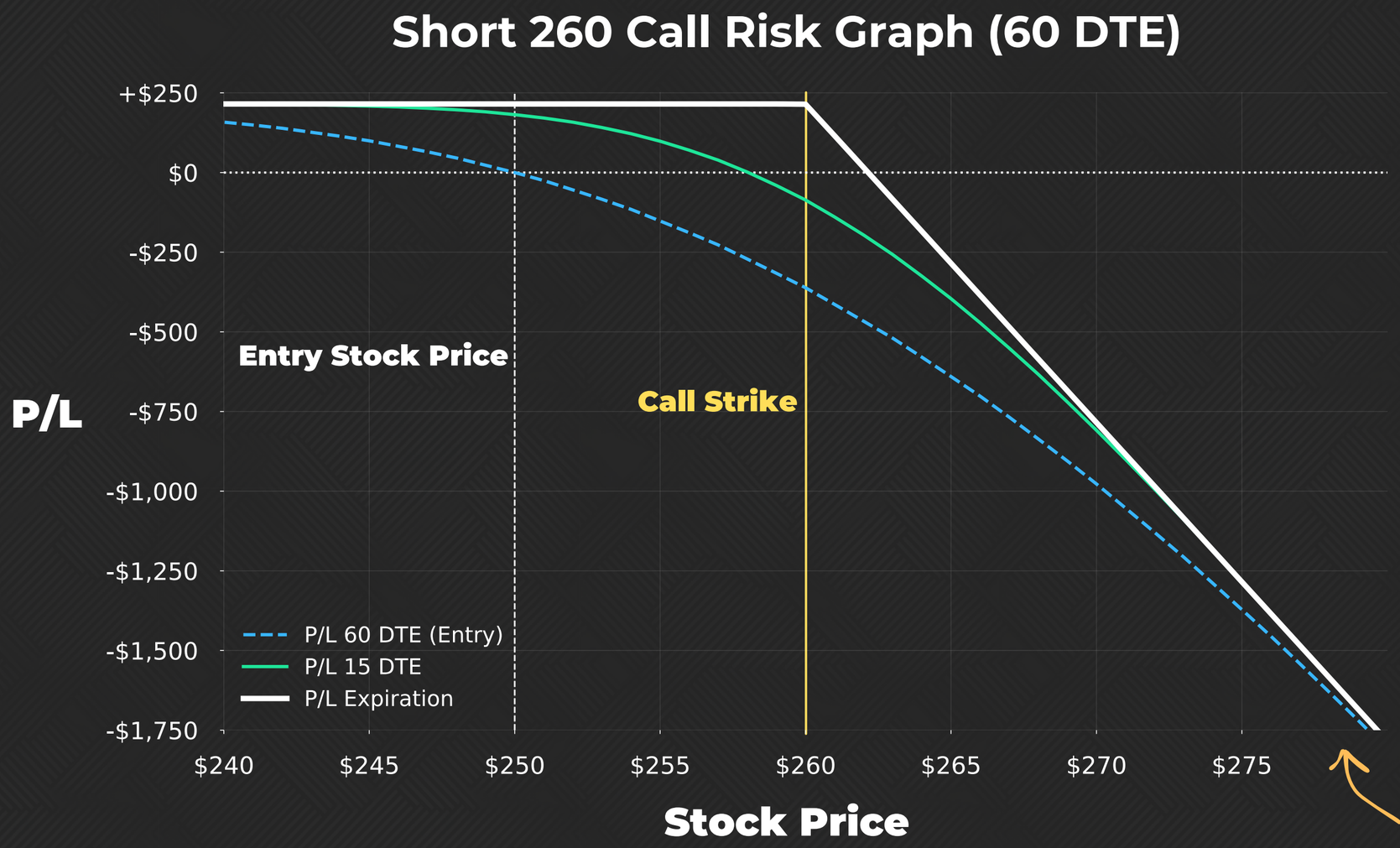
Shorting call options is an options strategy where you sell call options you do not own.

Because call option prices fall as the stock price falls, **shorting a call option is a bearish strategy**.

When shorting calls, you make money over time if the stock price remains below the strike price of the call you sell.

The strategy has **theoretically unlimited risk** to the upside because there is no limit to how high a stock's price can go.

Short Call Risk Graph Example



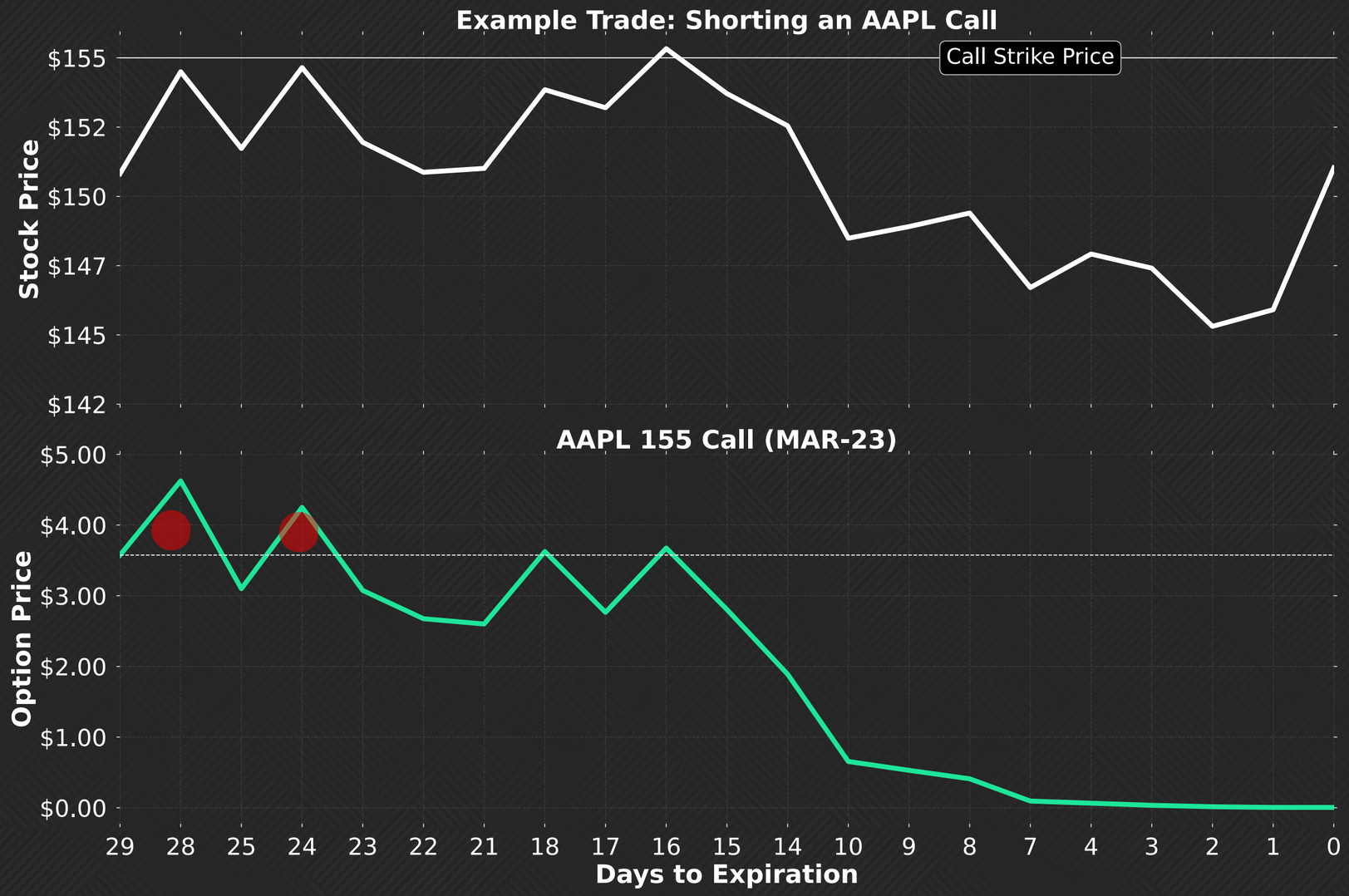
Entry Stock Price: $250
Call Strike: $260
Entry Call Price: $2.15
Entry DTE: 60 Days

In this simulation, we're looking at shorting a 60-day, 260-strike call with the stock price at $250.

The position profits when the stock price falls, and/or is below the call's strike of $260 at expiration.

The short call strategy has theoretically unlimited loss potential to the upside.

Short Call Trade Example



Entry Stock Price: $150.82
Call Strike: $155
Entry Call Price: $3.58
Entry DTE: 29 Days

In this simulation, we're looking at shorting a 29-day, 155-strike call with AAPL shares at $150.82.

The short call position loses money initially as the stock heads higher, but ultimately the stock price fails to breach the 155 price level over time.

At expiration, the 155 call expires worthless. The short call trade makes a **final profit of +$358** per call shorted.

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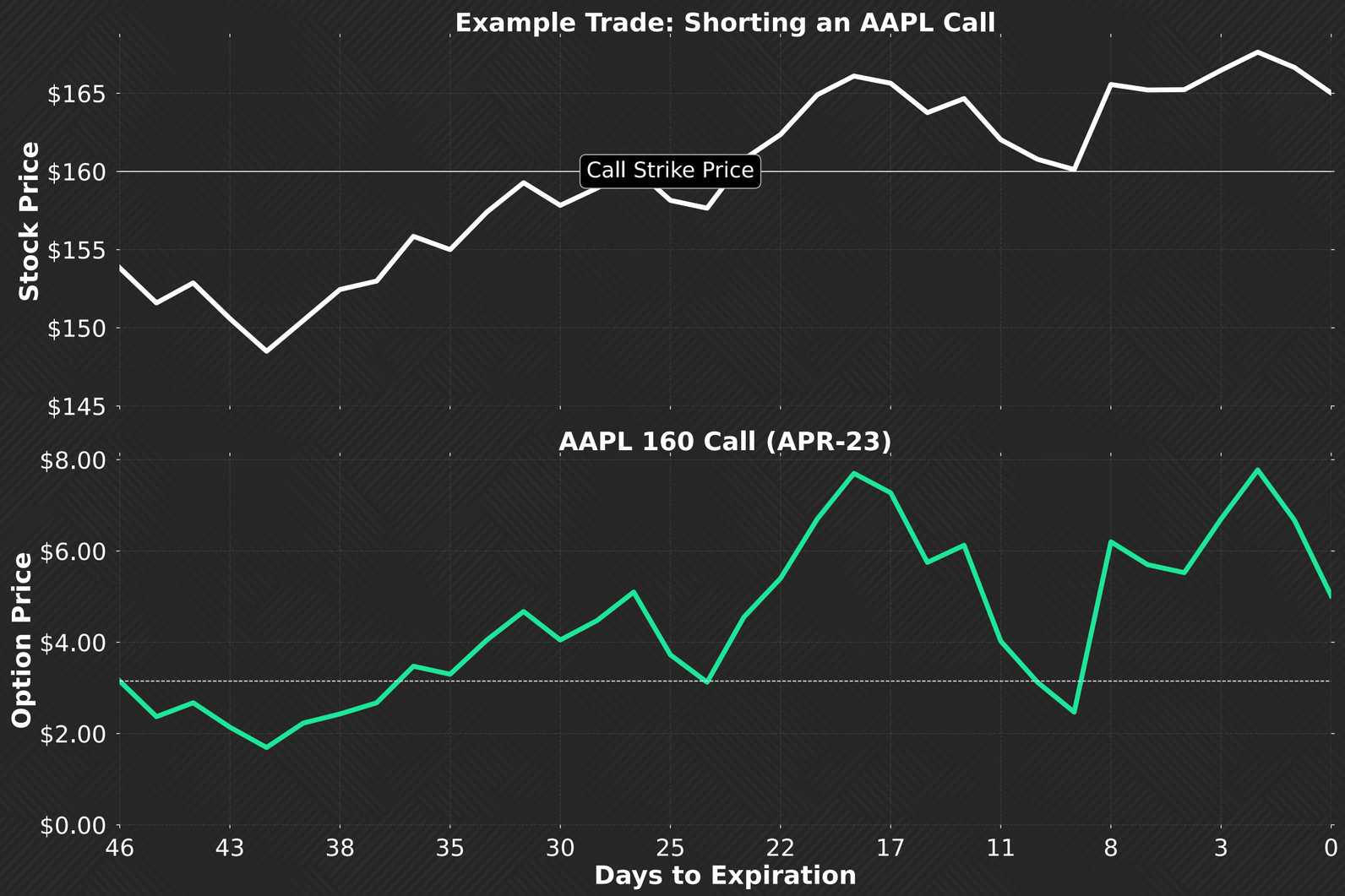
Short Call Trade Example



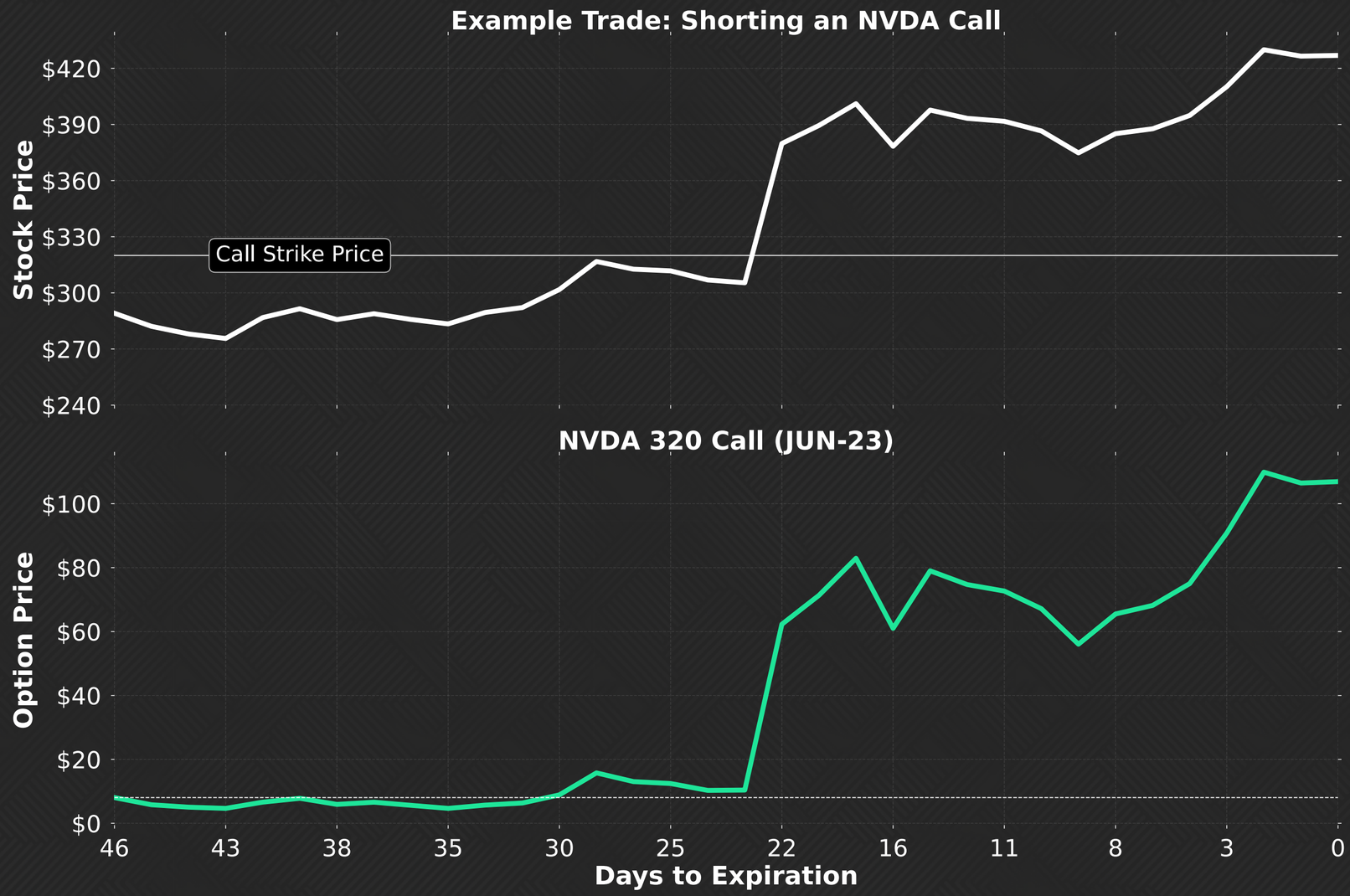
Entry Stock Price: $153.83
Call Strike: $160
Entry Call Price: $3.15
Entry DTE: 46 Days

In this simulation, we're looking at shorting a 46-day, 160-strike call with AAPL shares at $153.83.

The short call position profits initially as the stock heads lower, but ultimately the stock price heads higher than the 160 strike.

At expiration, the 160 call is worth its intrinsic value of $5.02. The short call trade makes a **final loss of -$187** per call shorted.

Short Call Trade Example



Entry Stock Price: $289.10
Call Strike: $320
Entry Call Price: $8.05
Entry DTE: 46 Days

The NVDA short call position struggles out of the gates with the stock price trending higher. Halfway through the trade, NVDA shares blast higher and run up to $426.92.

At expiration, the 320 call is worth its intrinsic value of $106.92.

The short call trade experiences a **final loss of -$9,887** per call shorted.

Shorting Puts Explained

Shorting Put Options Explained

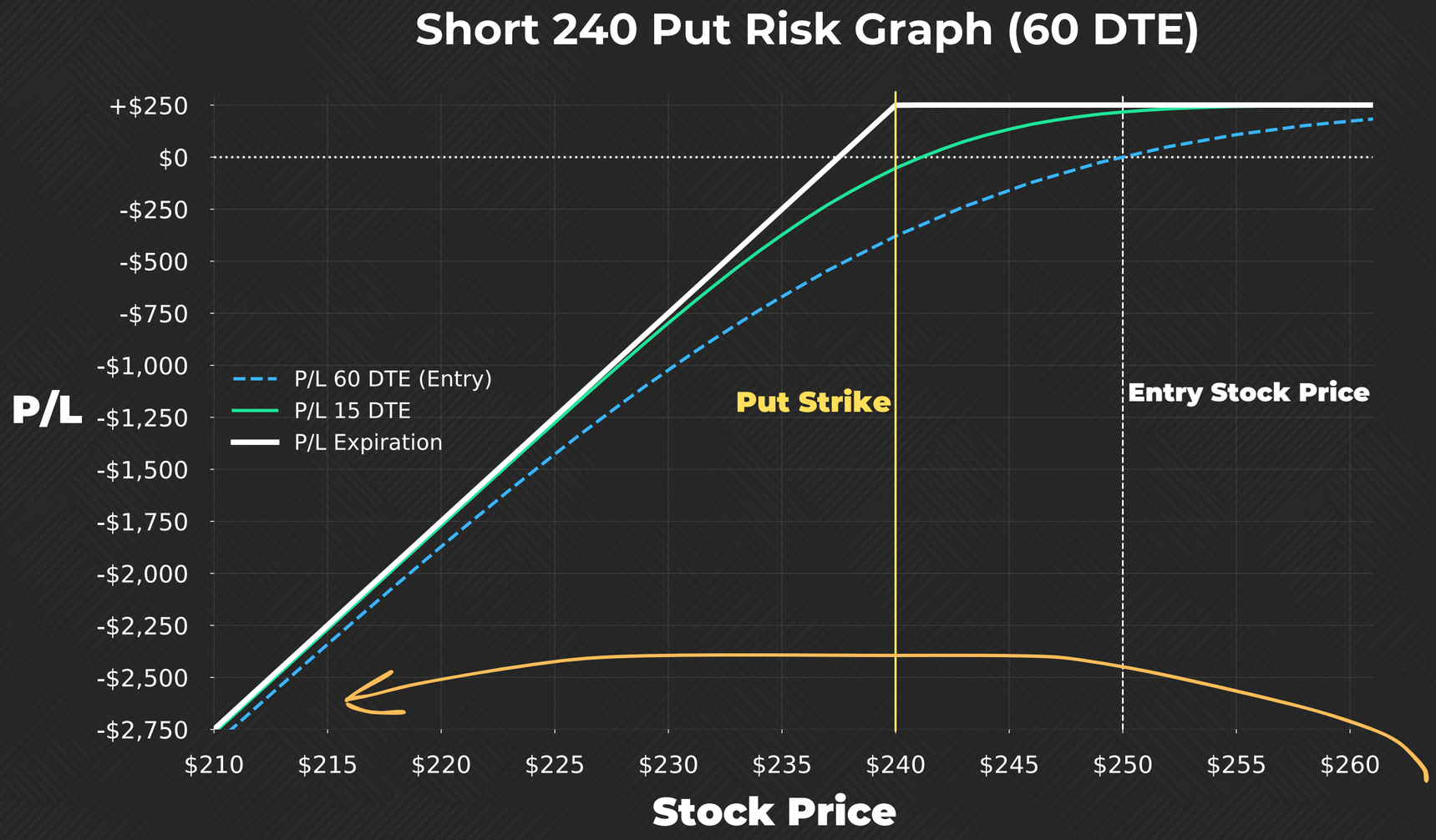
Shorting put options is an options strategy where you sell put options you do not own.

Because put option prices fall as the stock price rises, **shorting a put option is a bullish strategy**.

When shorting puts, you make money over time if the stock price remains above the strike price of the put you sell.

The strategy has **significant loss potential** to the downside.

Short Put Risk Graph Example



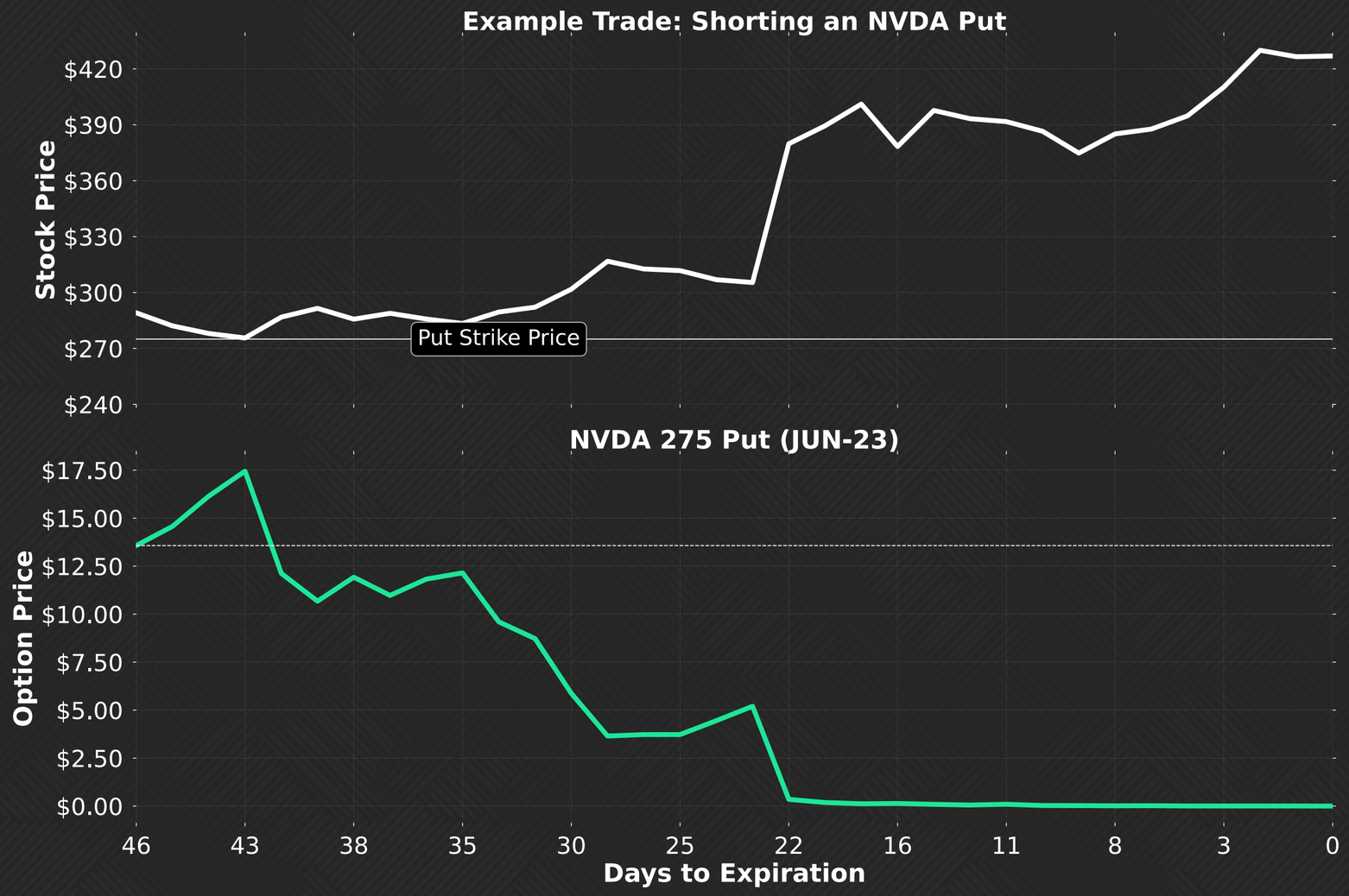
Entry Stock Price: $250
Put Strike: $240
Entry Put Price: $2.50
Entry DTE: 60 Days

In this simulation, we're looking at shorting a 60-day, 240-strike put with the stock price at $250.

The position profits when the stock price rises, and/or is above the put's strike of $240 at expiration.

The short put strategy has significant loss potential to the downside.

Short Put Trade Example



Entry Stock Price: $289.10
Put Strike: $320
Entry Put Price: $8.05
Entry DTE: 46 Days

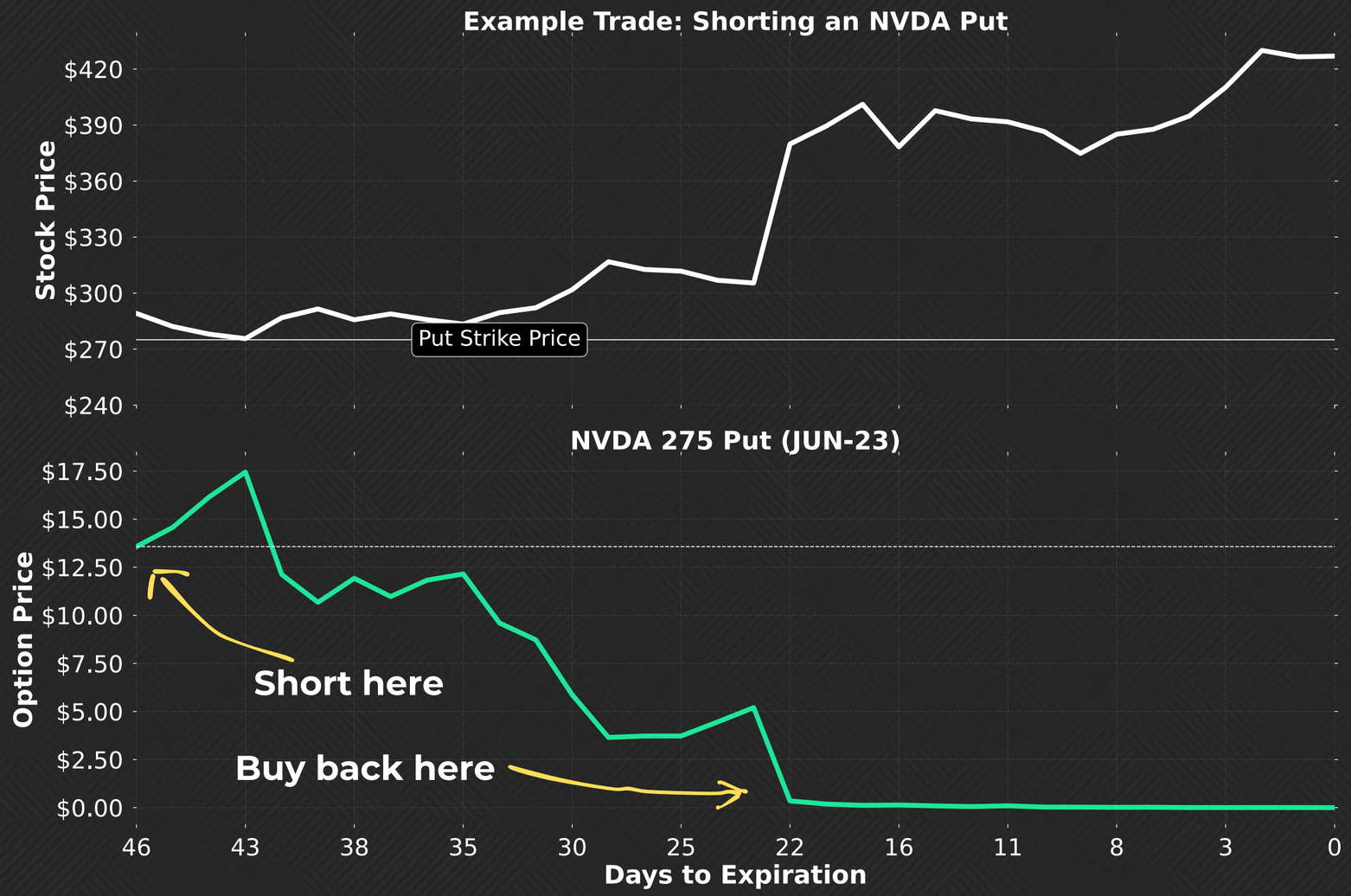
The NVDA short put position experienced some small early losses as the share price fell, but the losses were short-lived.

The stock price rallied hard and the put price collapsed as it became further OTM and time passed.

At expiration, the 275 put was worth its intrinsic value of $0.

The short put trade experienced a **final profit of +$805** per put shorted.

Short Put Trade Example

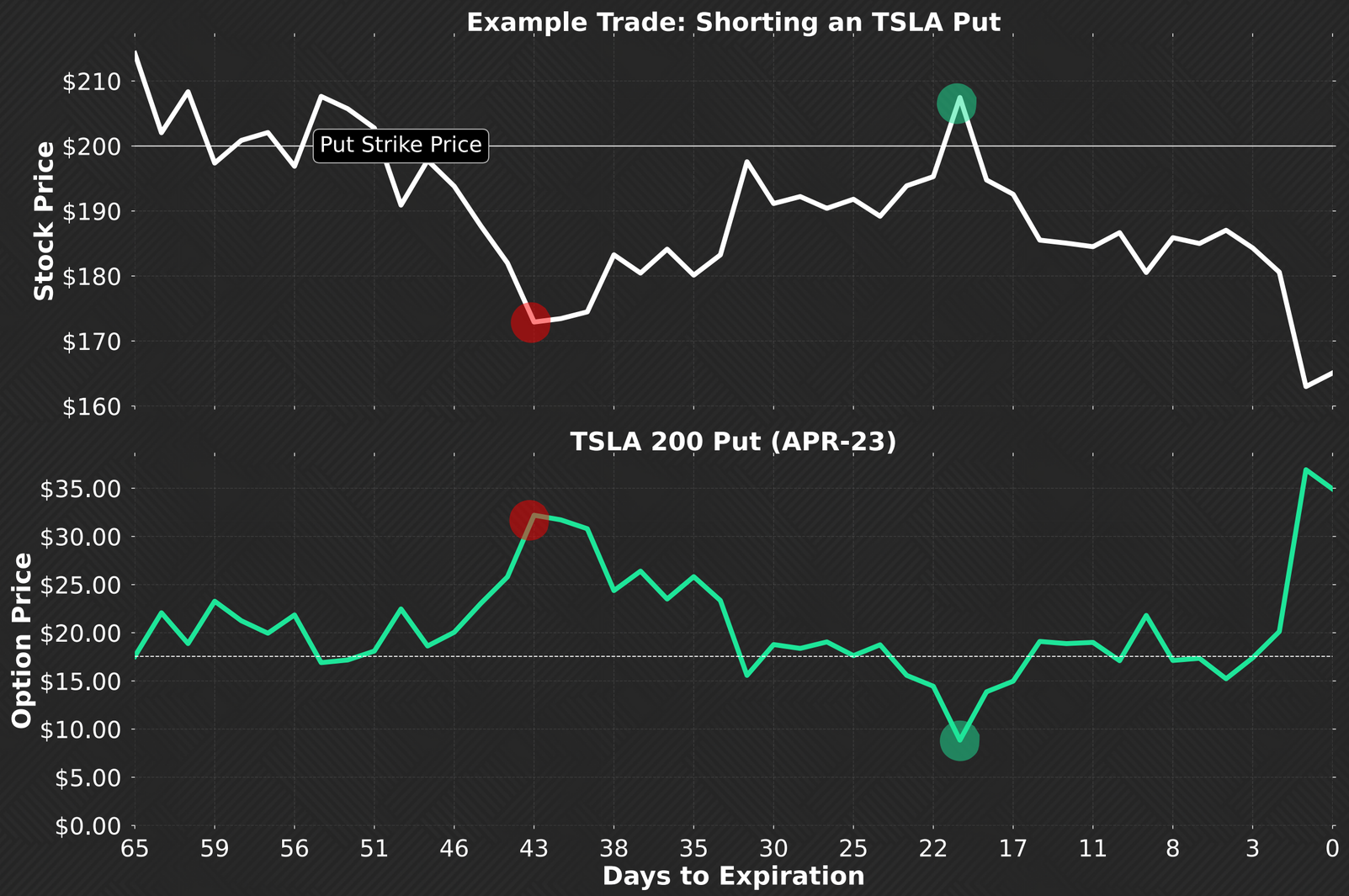


Keep in mind that option positions can be closed at any time.

The 275 put was nearly worthless well before expiration.

A trader who shorted the put for $8.05 at entry could have bought the put back (closed) for pennies weeks before expiration, securing a near full profit on the trade.

Short Put Trade Example



Entry Stock Price: $214.24
Put Strike: $200
Entry Put Price: $17.55
Entry DTE: 65 Days

The TSLA short put position experienced losses right away as the share price fell.

The trade recovered as TSLA shares rallied hard, presenting the short put trade with some profits.

At expiration, the stock price was $165.08 and the 200 put was worth its intrinsic value of $34.92.

The short put trade experienced a **final loss of -$1,737** per put shorted.

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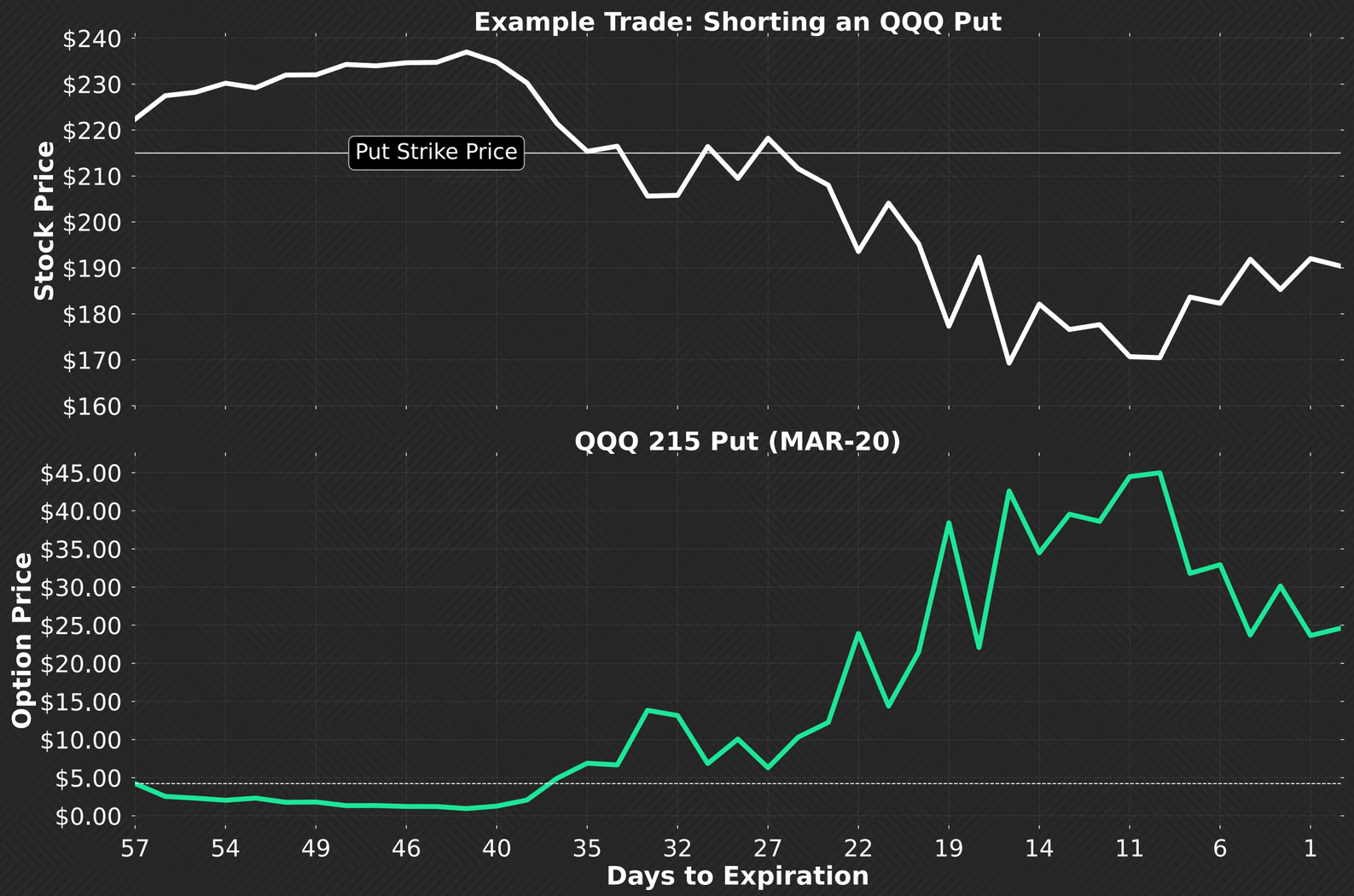
Short Put Trade Example



Entry Stock Price: $222.38
Put Strike: $215
Entry Put Price: $4.23
Entry DTE: 57 Days

This QQQ short position experienced healthy profits during the initial rally, presenting an opportunity for the short put trade to take big profits.

Unfortunately, QQQ cratered during the 2020 market crash, resulting in a massive increase in the put price. At the high, the put was worth $45, or 10x the put sale price (**unrealized loss of ~$4,100**).

At expiration, the put was worth its intrinsic value of $24.60.

The short put trade experienced a **final loss of -$2,037** per put shorted.

Exercise & Assignment

Explained Further

Exercise & Assignment Explained Further

What Happens When an Option is Exercised?

Now that we're talking about shorting options, it's time to talk more about **exercise and assignment**.

Exercising an option is when the option owner (buyer) "uses" the option and buys/sells 100 shares of stock (per option) at the option's strike price.

Exercising the option effectively converts the option into a stock position with an entry price equal to the strike price.

150-Strike Call Exercised
Call converted into +100 shares with a purchase price of $150/share.

125-Strike Put Exercised
Put converted into -100 shares with a sale price of $125/share.

Exercise & Assignment Explained Further

What Happens When an Option is Exercised?

It is important to note that **any option that is in-the-money by $0.01 or more and is held through expiration will be automatically exercised**.

Call Strike Price: $150
Stock Closing Price at Expiration: $150.01 or higher
Result: You buy 100 shares (per call) at $150/share

Put Strike Price: $90
Stock Closing Price at Expiration: $89.99 or lower
Result: You sell/short 100 shares (per put) at $90/share

Recommendation: Always close option positions before expiration.

Exercise & Assignment Explained Further

What Happens When an Option is Exercised?

Each option contract corresponds to +/- 100 shares of stock, so the stock position scales with the number of contracts exercised.

Exercise 5x Calls

Buy 500 Shares @ Strike

Exercise 13x Puts

Sell 1,300 Shares @ Strike

In most examples I am using 1x contract, which is why I only talk about 100 shares. The P/L also scales with the number of contracts. All trade examples in this presentation can be sized up by multiplying the P/Ls by the number of contracts bought/shorted.

Exercise & Assignment Explained Further

What Happens When an Option is Exercised?

125-Strike Put Exercised

Put converted into -100 shares with a sale price of $125/share.

If a trader has **NO** stock position and exercises a put option on the stock, they will effectively **SHORT** shares at the put's strike price.

Stock Position: Zero Shares
Exercise Put (1x Contract): -100 Shares at the Put's Strike Price
New Stock Position: -100 Shares

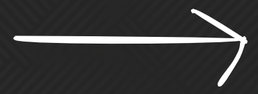
Exercise & Assignment Explained Further

What Happens When an Option is Exercised?

When you short an option, you're taking on an obligation. If the person who bought that option decides to exercise it, you are "**assigned**." **This means:**

Call Owner Exercises

Buys 100 Shares @ Strike



Short Call Trader Assigned

Sells 100 Shares @ Strike

Put Owner Exercises

Sells 100 Shares @ Strike

Short Put Trader Assigned

Buys 100 Shares @ Strike

Early Assignment: Should You Worry?

Many traders worry about early assignment, or having a short option that gets assigned because a trader on the other side exercised their option before expiration.

In many cases, the worry is unnecessary because option owners forfeit the extrinsic value in an option when they exercise it.

Stock Price: $166
Call Strike: $160
Call Price: $10 ($6 Intrinsic + $4 Extrinsic)
Call Value: $1,000 ($600 Intrinsic + $400 Extrinsic)

If the call owner exercises the call, they will forfeit the call option ($1,000 value) and buy 100 shares at $160/share.

They can then sell the shares for $166, making $600 on the transaction, but they gave up the $1,000 option to do so. So by exercising the option, they gave up $400 in value for no reason.

Early Assignment: Should You Worry?

Stock Price: $166
Call Strike: $160
Call Price: $10 ($6 Intrinsic + $4 Extrinsic)
Call Value: $1,000 ($600 Intrinsic + $400 Extrinsic)

Exercise Call

Buy 100 Shares @ $160
Sell 100 Shares @ $166
Net +$600 into Account

Sell Call

+$1,000 into Account

If the call owner wants to buy shares, they are better off selling the call and buying shares instead of exercising the call.

Therefore, a trader that is short this call option is very unlikely to be assigned.

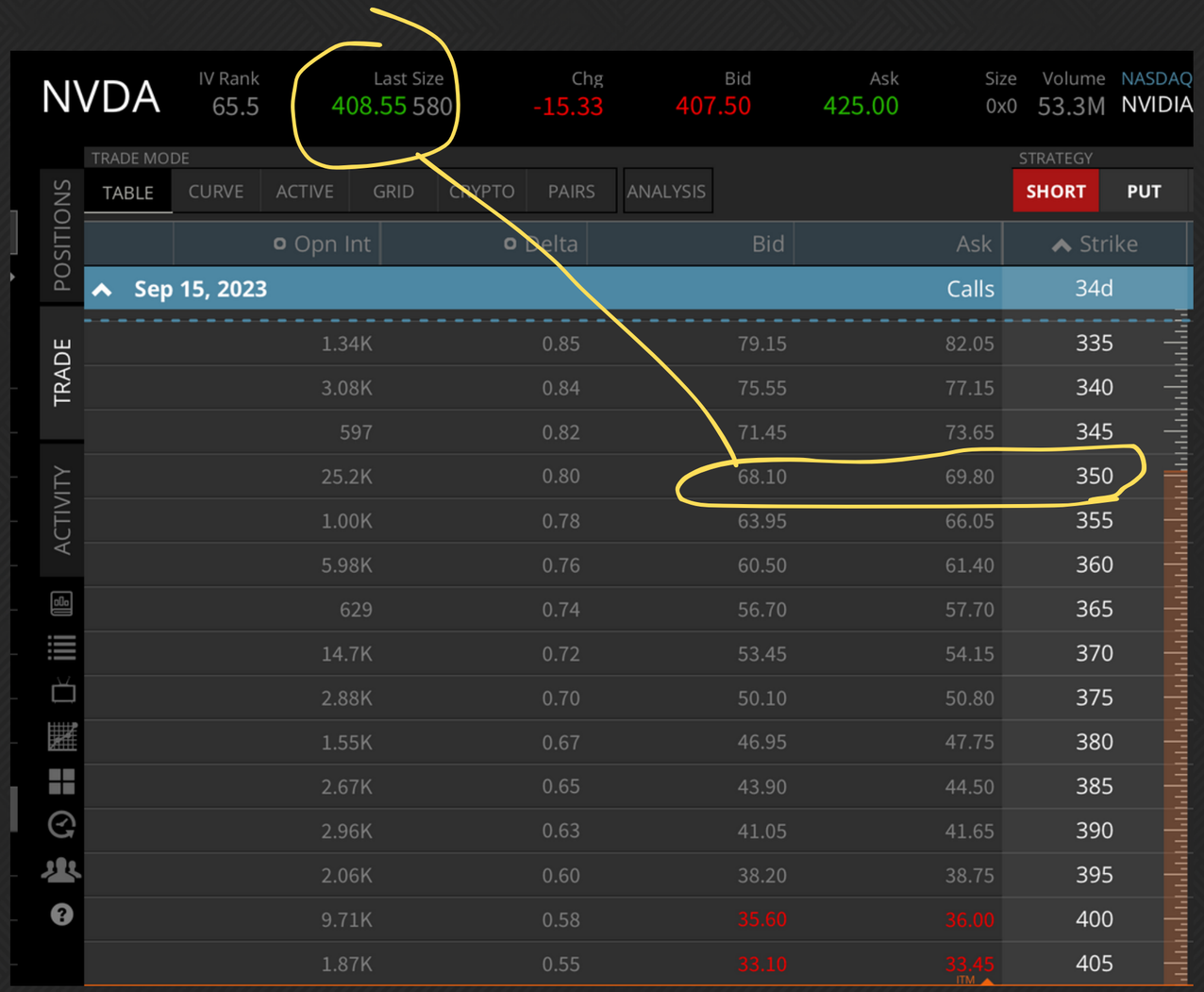
Early Assignment: Should You Worry?

To gauge early assignment on a short option, look at the extrinsic value.

An ITM option with little to no extrinsic value is at high risk of assignment since there is little to no forfeiture of value if the owner exercises it.

An ITM option with lots of extrinsic value ($0.50+) is at low risk of assignment since there is a lot of value forfeited unnecessarily if the owner exercises it.

Early Assignment: Should You Worry?



Stock Price: $408.55
350 Call Mid-Price: $69.00
350 Call Intrinsic: $58.55
350 Call Extrinsic: $10.45

If a trader exercised the 350 call given these prices, they would sacrifice $1,045 in value for no reason.

A trader short this call has virtually zero risk of assignment despite the call being $58.55 in-the-money.

Early Assignment: Should You Worry?

What conditions result in an option being in-the-money with little to no extrinsic value?

1) The option is **very** deep ITM before expiration (the more time to expiration, the further ITM the option needs to be to reach close to zero extrinsic value).

2) The option is ITM with little to no time left before expiration.

Early Assignment: Should You Worry?

The main scenario to beware of early assignment is when you are short an ITM call option on a stock that is paying a dividend before your expiration date.

If the dividend is greater than the extrinsic value in your short ITM call, you are likely to be assigned right before the ex-dividend date.

Dividend: $0.58
Short ITM Call Extrinsic: $0.30
Incentive to Exercise: +$0.28/share

In this scenario, the call owner will exercise the option (giving up $0.30 in extrinsic value) to purchase stock before the ex-dividend date in order to collect the $0.58 dividend.

Early Assignment: Should You Worry?

Section Summary

Options are rarely exercised because they often carry a lot of extrinsic value in their prices.

Extrinsic value is sacrificed by the owner when they exercise the option.

The more extrinsic value an ITM short option has, the less likely it is to be exercised (reducing assignment risk).

From the OIC Website:

"Historically, more than 72% of all option contracts are closed out in the market prior to expiration. Additionally, another 22% expire without value while the remaining 6% get exercised."

Mastering Implied Volatility:

What Every Options Trader Should Know

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What is Implied Volatility?

Implied

Hinted

Suggested

Inferred

Volatility

Price Movement

Fluctuations

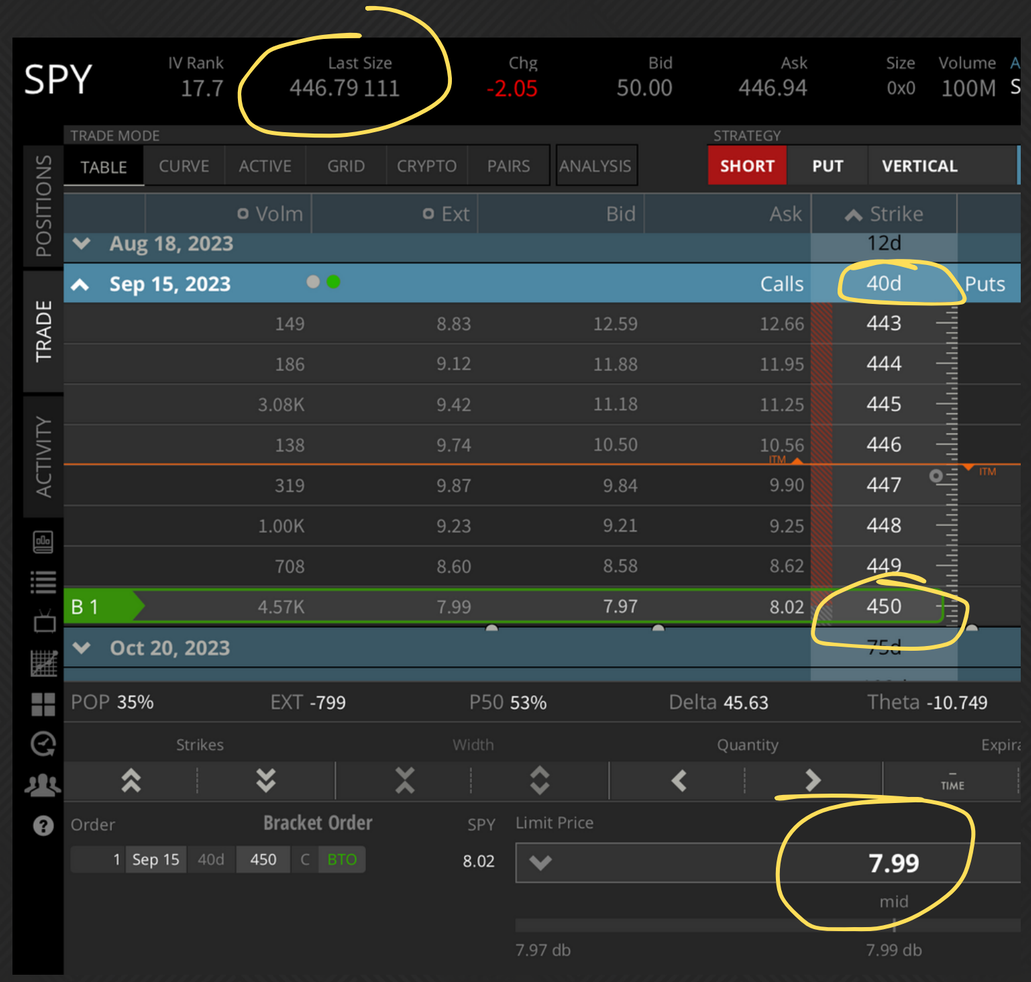
Uncertainty

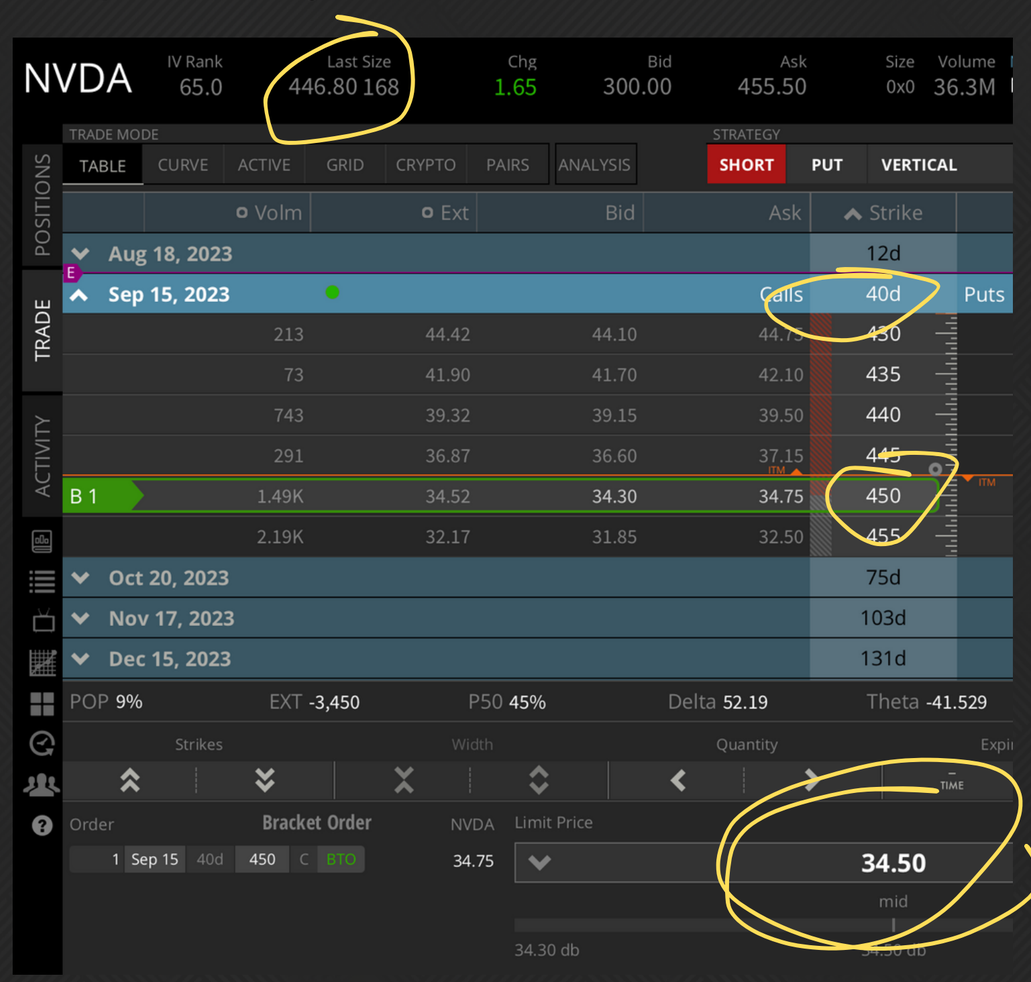
What is Implied Volatility (IV)?

The expected magnitude of a stock's price changes in the future, as ***implied*** by the stock's option prices:

Stock	40-Day 450 Call Price	Implied Volatility
SPY ($447)	$8.00	17%
NVDA ($447)	$34.50	60%

Same stock price.
Same time to expiration.
Same strike price.
NVDA option = 4x more expensive
NVDA Implied Volatility > SPY Implied Volatility





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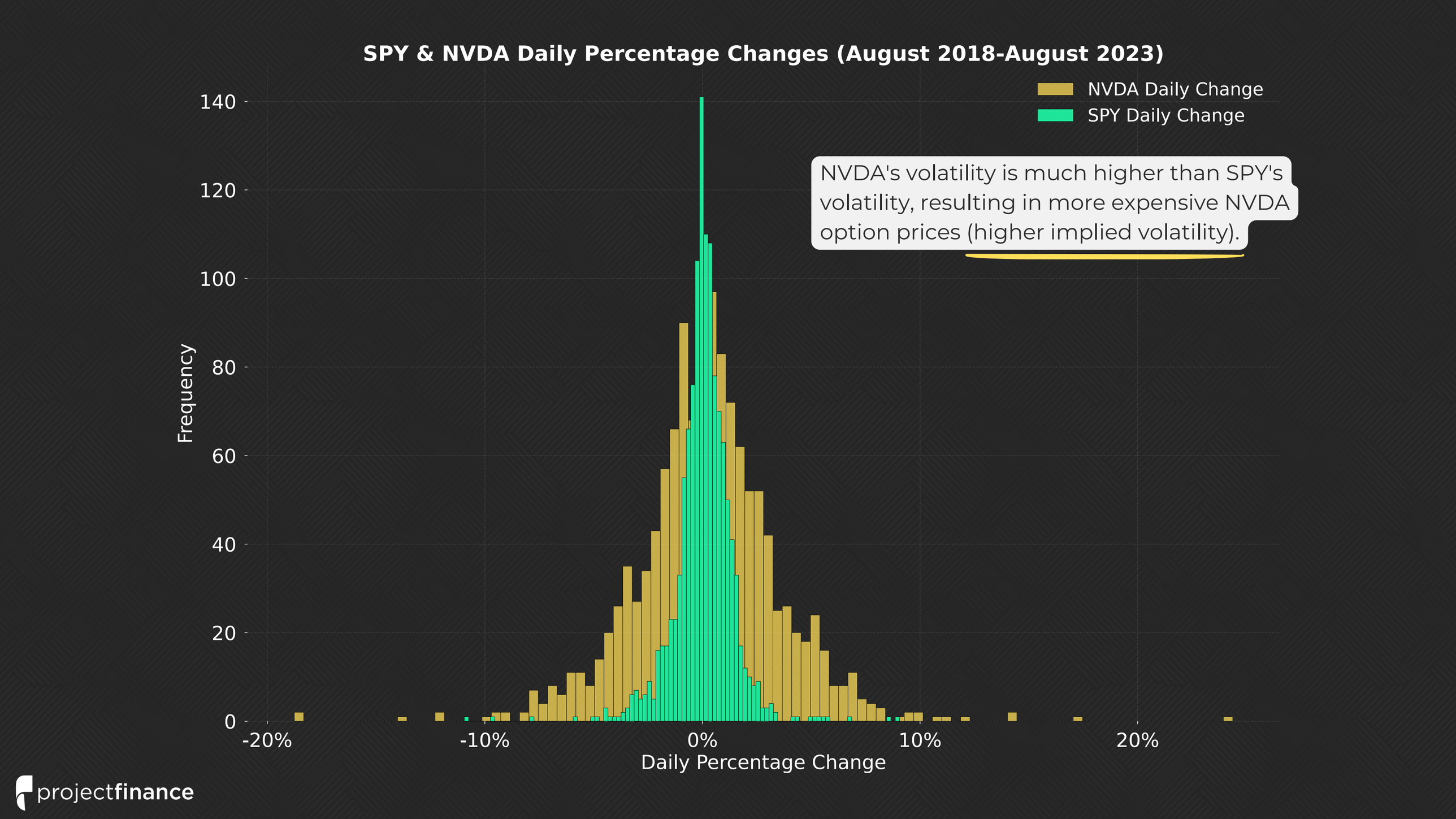
SPY & NVDA Daily Percentage Changes (August 2018-August 2023)
NVDA Daily Change
SPY Daily Change
NVDA's volatility is much higher than SPY's volatility, resulting in more expensive NVDA option prices (higher implied volatility).
Frequency
0
20
40
60
80
100
120
140
-20%
-10%
0%
10%
20%
Daily Percentage Change
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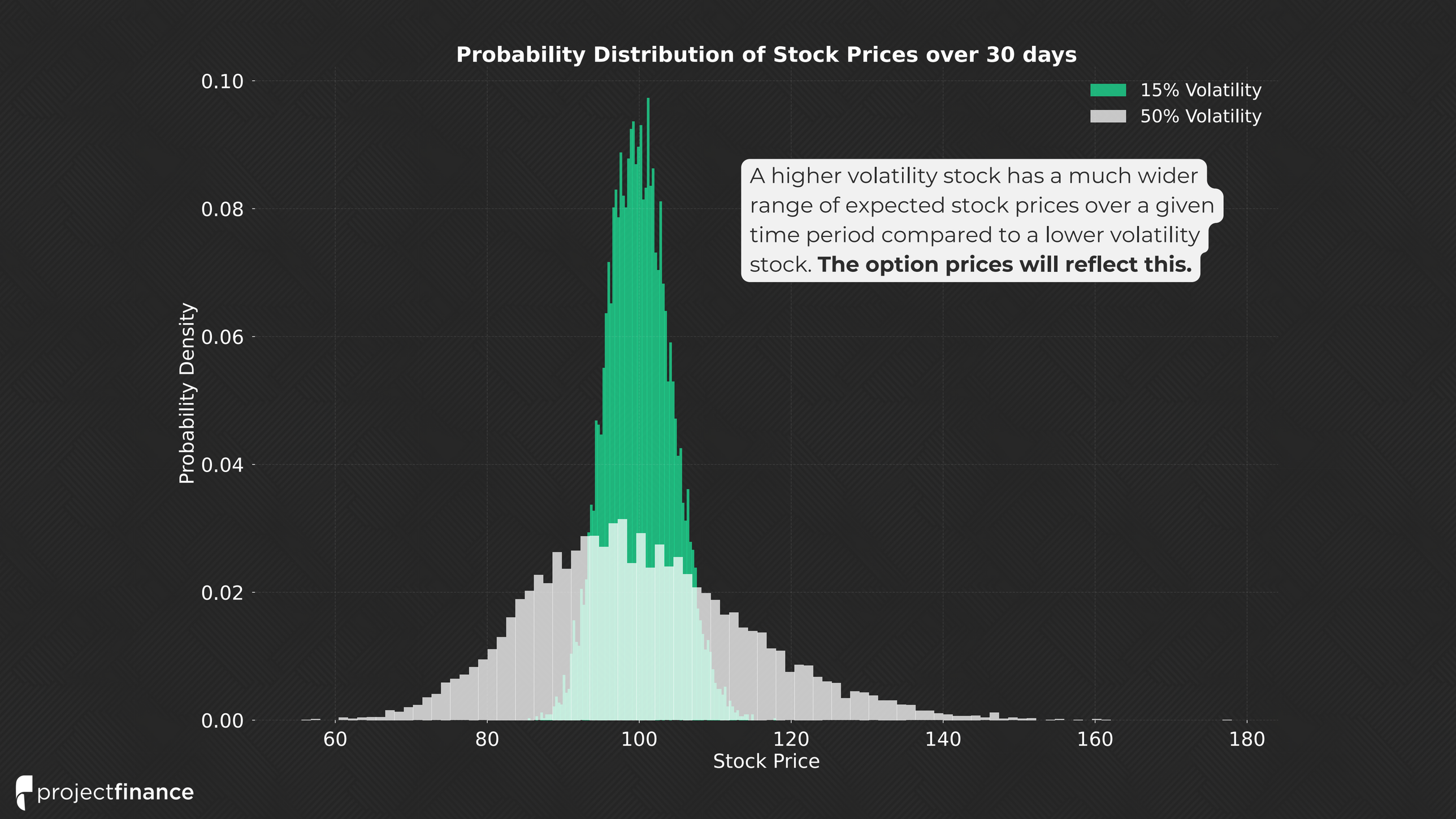
Probability Distribution of Stock Prices over 30 days
15% Volatility
50% Volatility
A higher volatility stock has a much wider range of expected stock prices over a given time period compared to a lower volatility stock. The option prices will reflect this.
Probability Density
0.10
0.08
0.06
0.04
0.02
0.00
60
80
100
120
140
160
180
Stock Price
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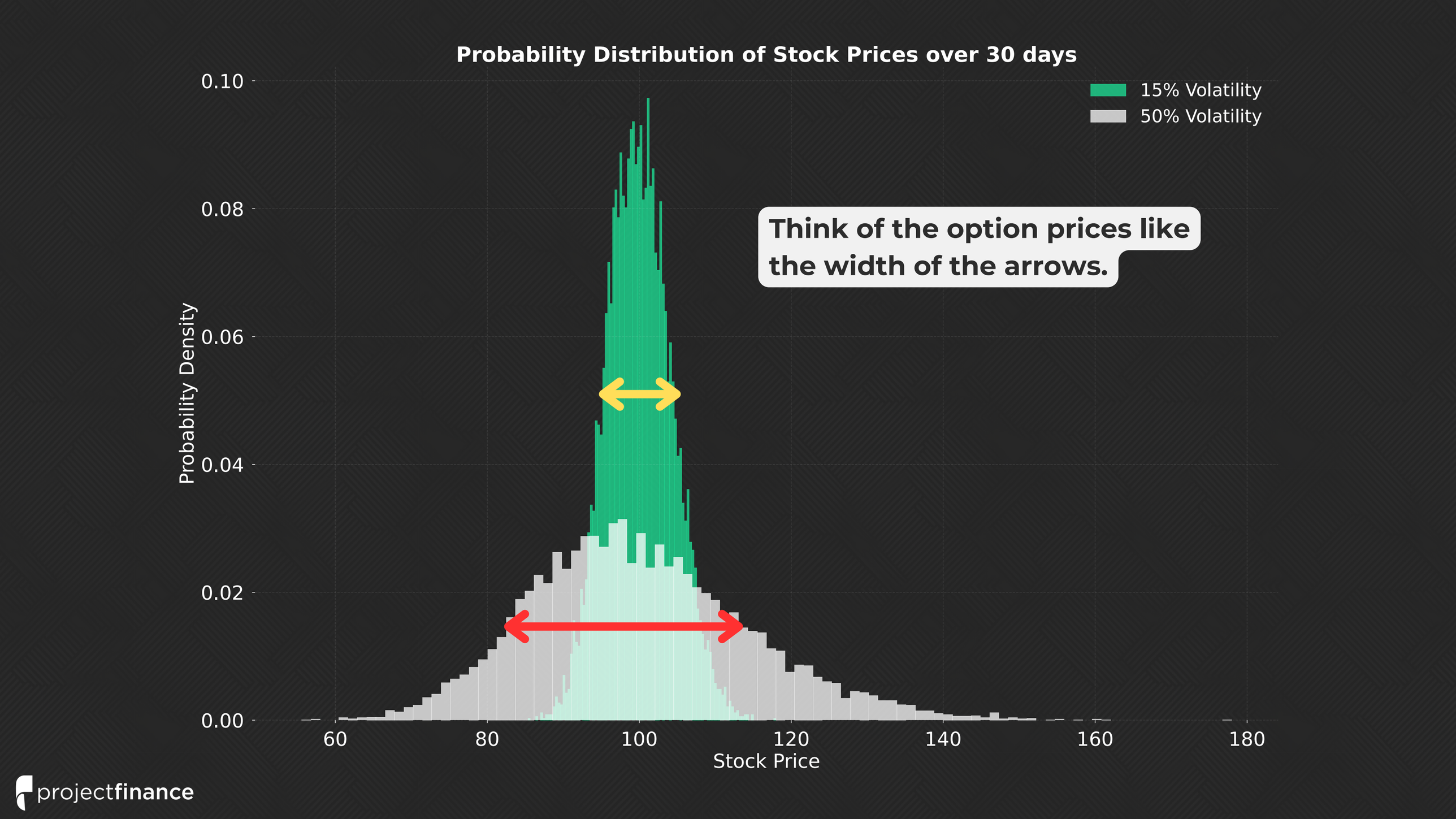
Probability Distribution of Stock Prices over 30 days
15% Volatility
50% Volatility
Think of the option prices like the width of the arrows.
Probability Density
0.10
0.08
0.06
0.04
0.02
0.00
60
80
100
120
140
160
180
Stock Price
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Why Implied Volatility Matters

Changes in expected stock volatility will have an impact on option prices (implied volatility) and therefore trade profitability.

Option Strategy P/L vs. Implied Volatility Changes

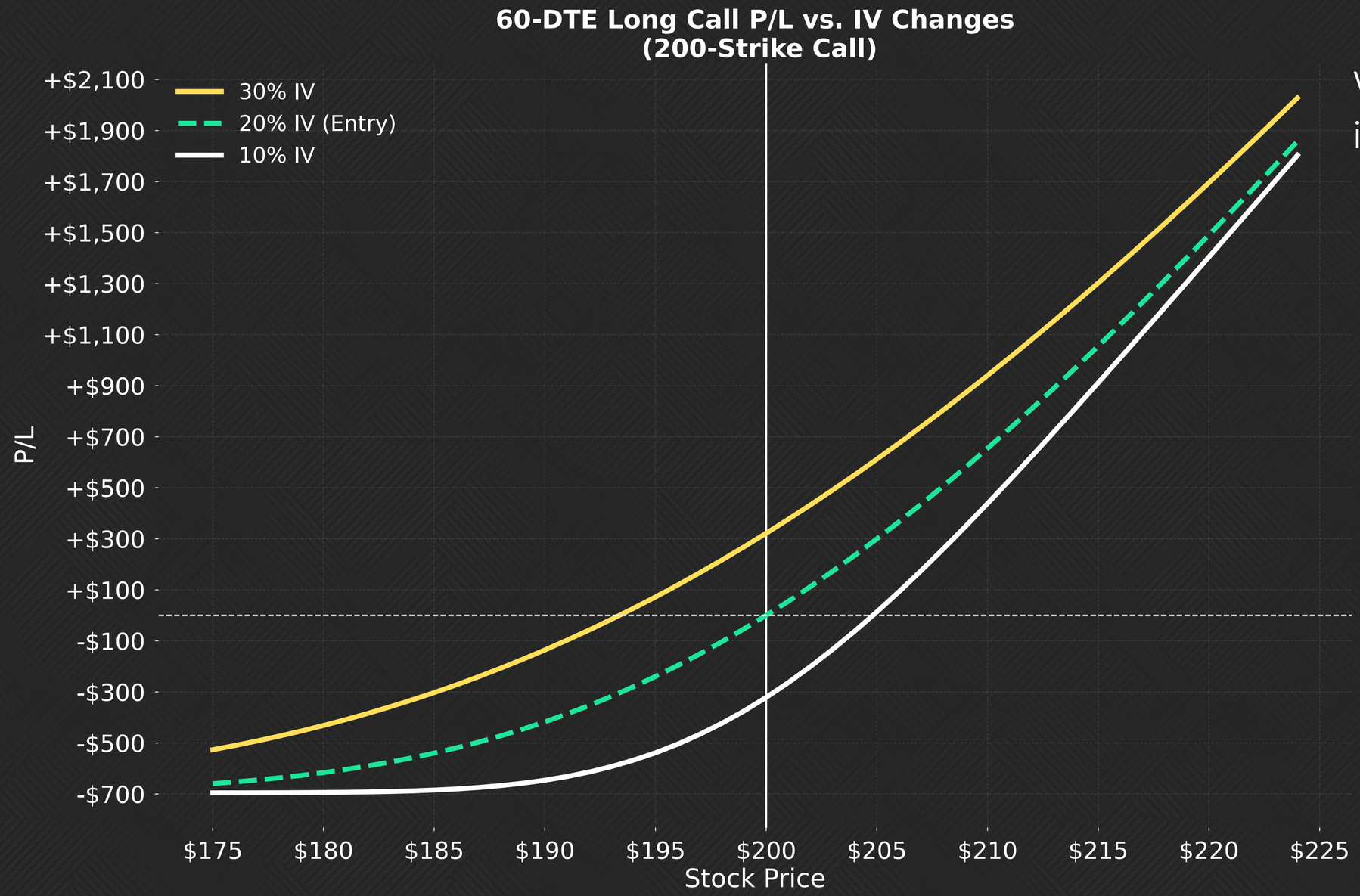
Let's explore how popular options strategies perform when implied volatility changes so we know exactly what we want IV to do when we trade each options strategy.

Option Strategy P/L vs. Implied Volatility Changes

In the following graphs, we're going to look at simulated option strategy profits/losses based on the following inputs:

Entry Implied Volatility: 20%
IV Changes: 10% and 30% (**-10%** and **+10%** IV Changes)
Days to Expiration: 60
Stock Prices: Varying

Buying Calls (Long Calls)



When buying calls, we want implied volatility to increase.

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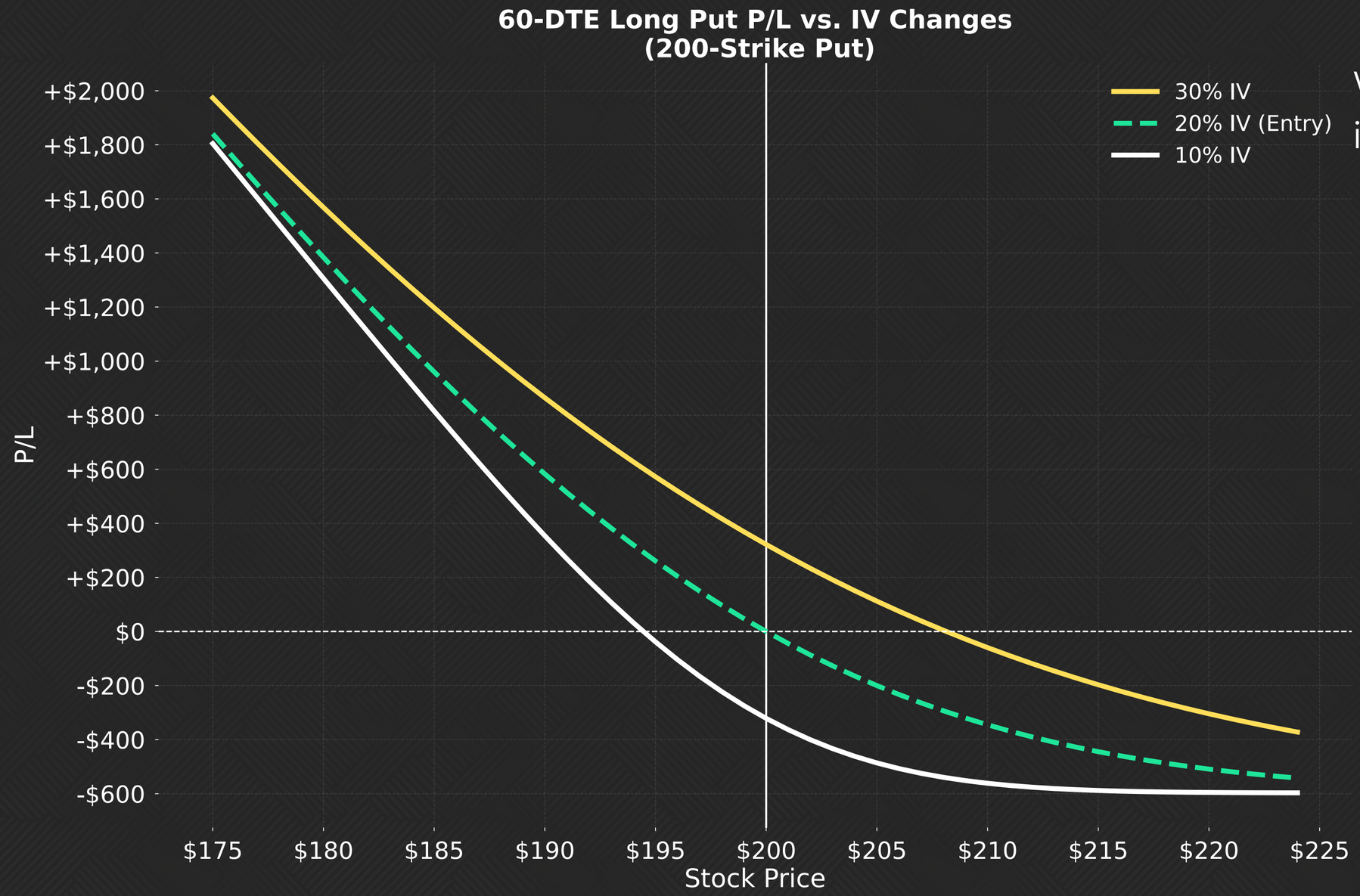
Buying Puts (Long Puts)



When buying puts, we want implied volatility to increase.

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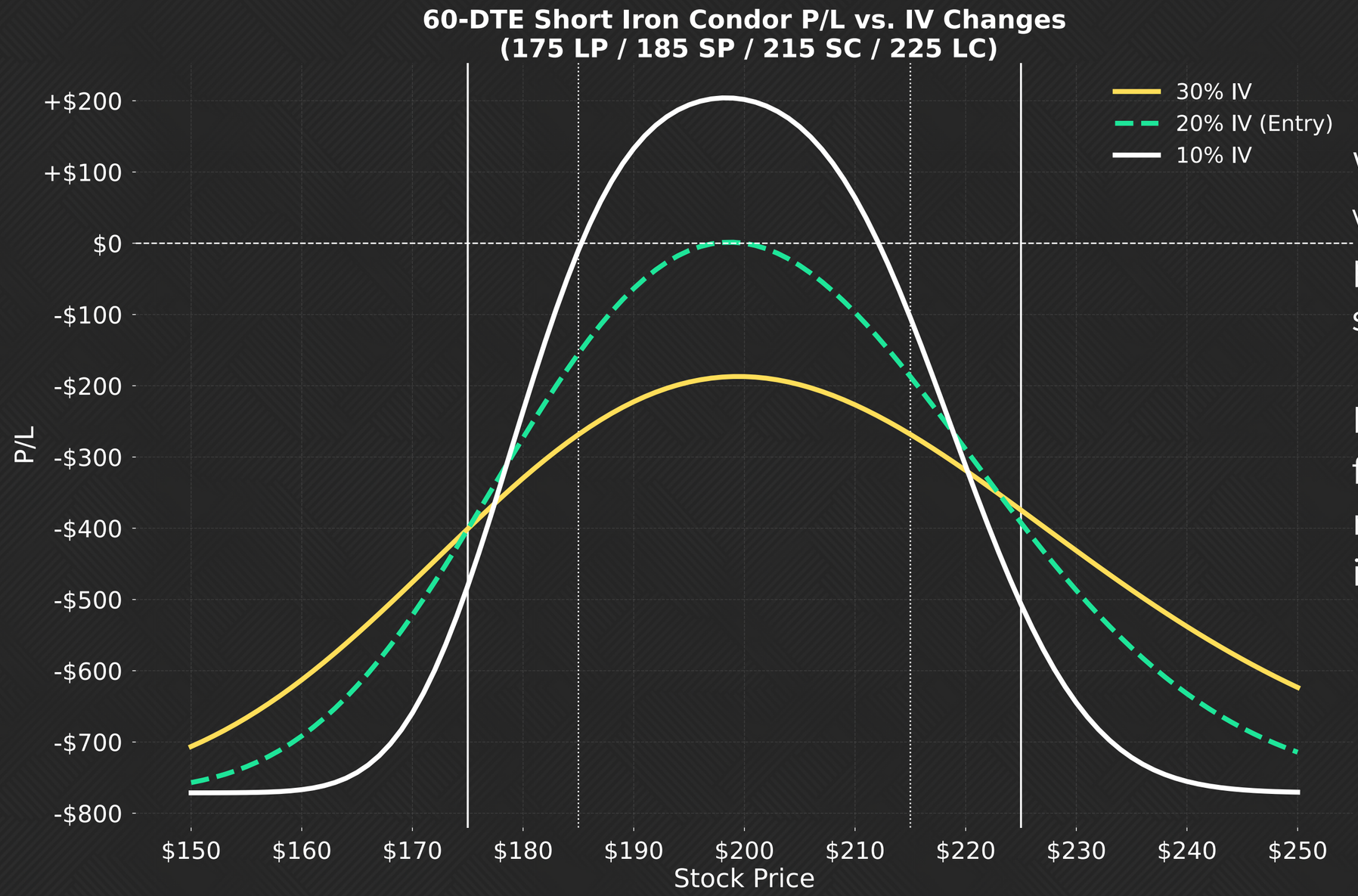
Short Iron Condor



When shorting iron condors, we want IV to fall if the stock price is in-between our short strikes.

If one of our spreads becomes fully in-the-money (stock moves big), we want IV to increase.

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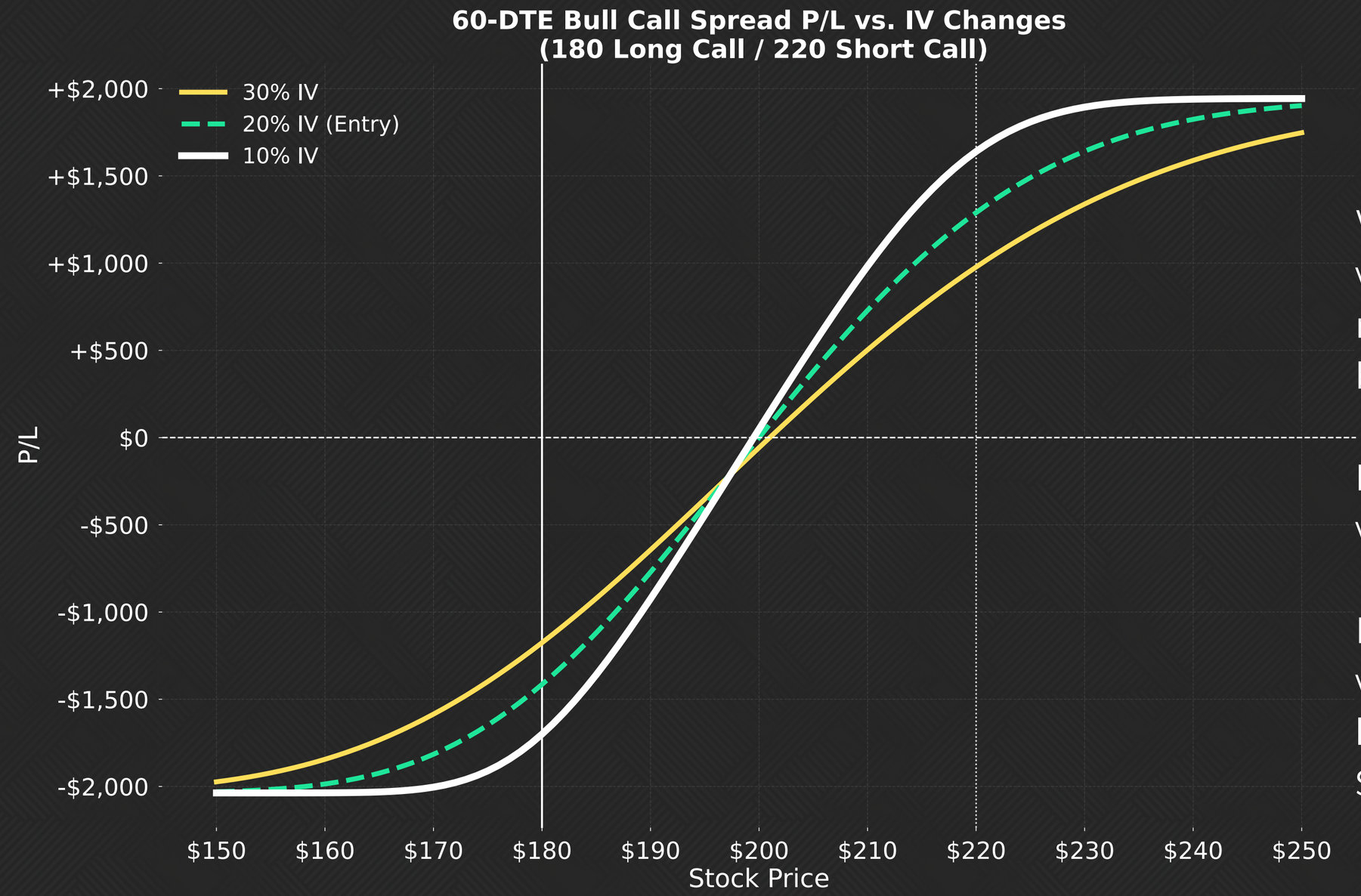
Buying Call Spreads (Bull Call Spread)



When buying call spreads, we want IV to fall if the stock moves higher and the spread becomes fully ITM.

If the stock price collapses, we want IV to increase.

Fortunately, IV typically falls when the stock price rises, at least for stock indices like the S&P 500.

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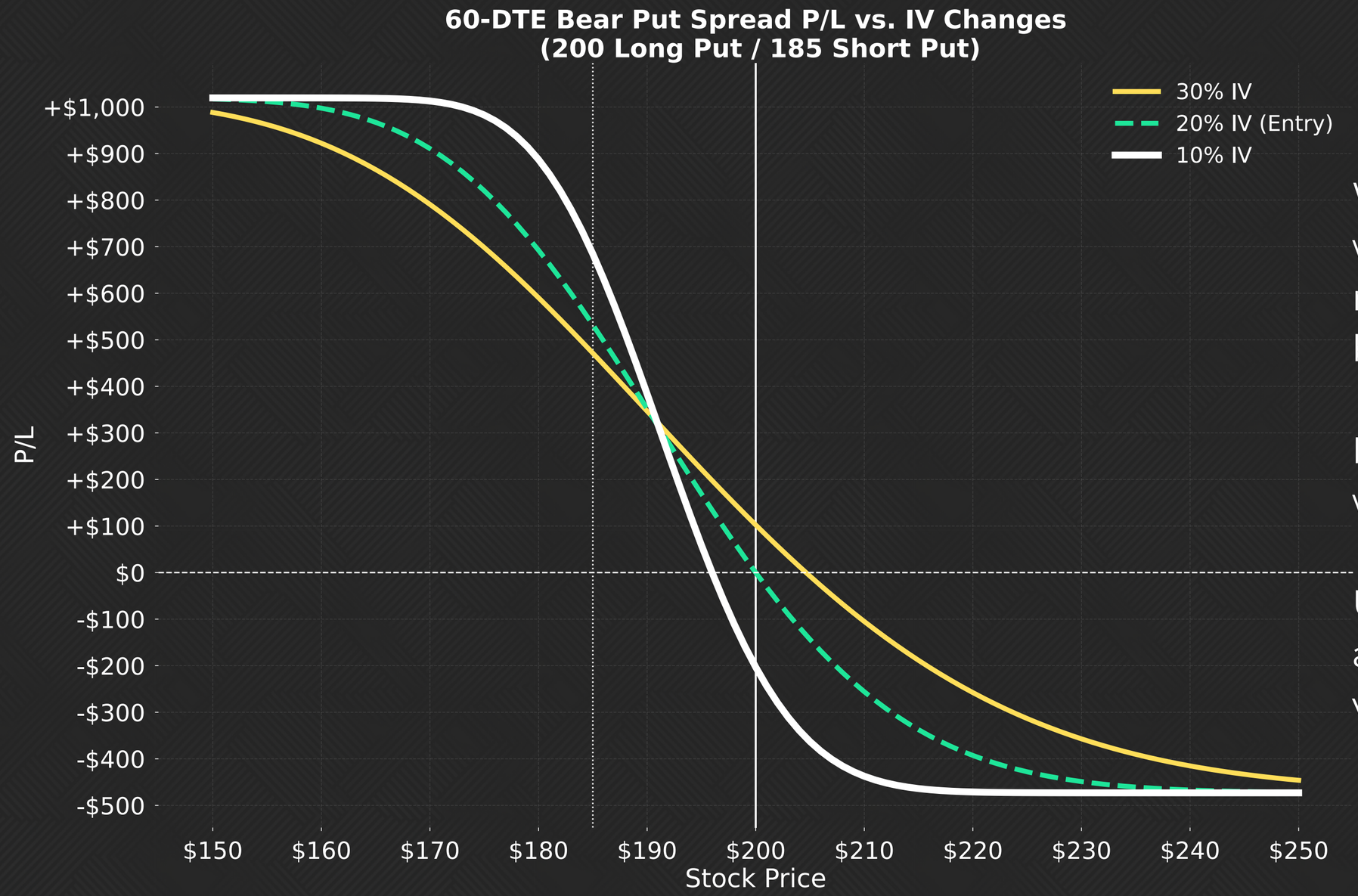
Buying Put Spreads (Bear Put Spread)



When buying put spreads, we want IV to fall if the stock moves lower and the spread becomes fully ITM.

If the stock price rises, we want IV to increase.

Unfortunately, IV typically rises as the stock price falls, and vice versa.

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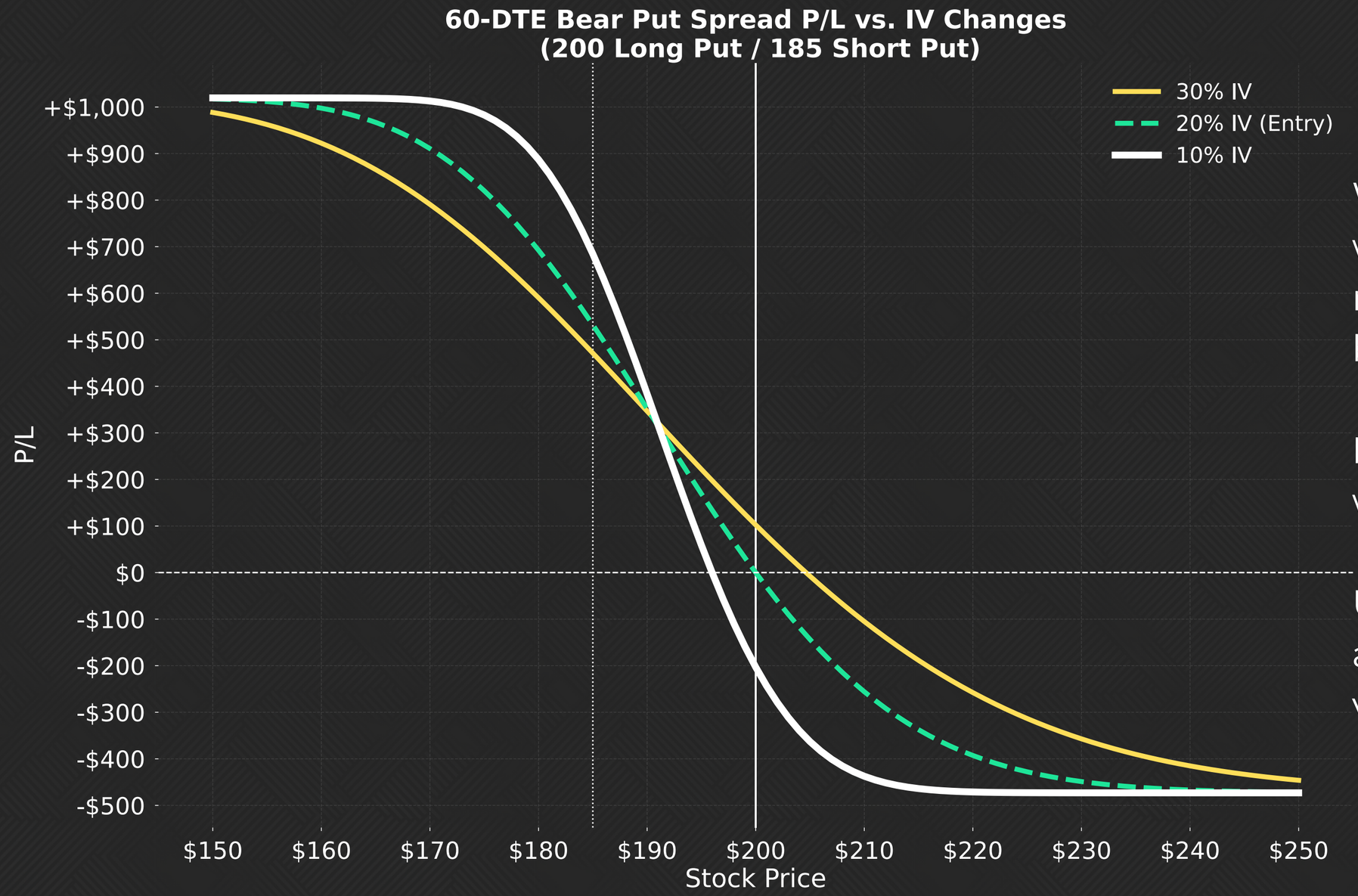
Buying Put Spreads (Bear Put Spread)



When buying put spreads, we want IV to fall if the stock moves lower and the spread becomes fully ITM.

If the stock price rises, we want IV to increase.

Unfortunately, IV typically rises as the stock price falls, and vice versa.

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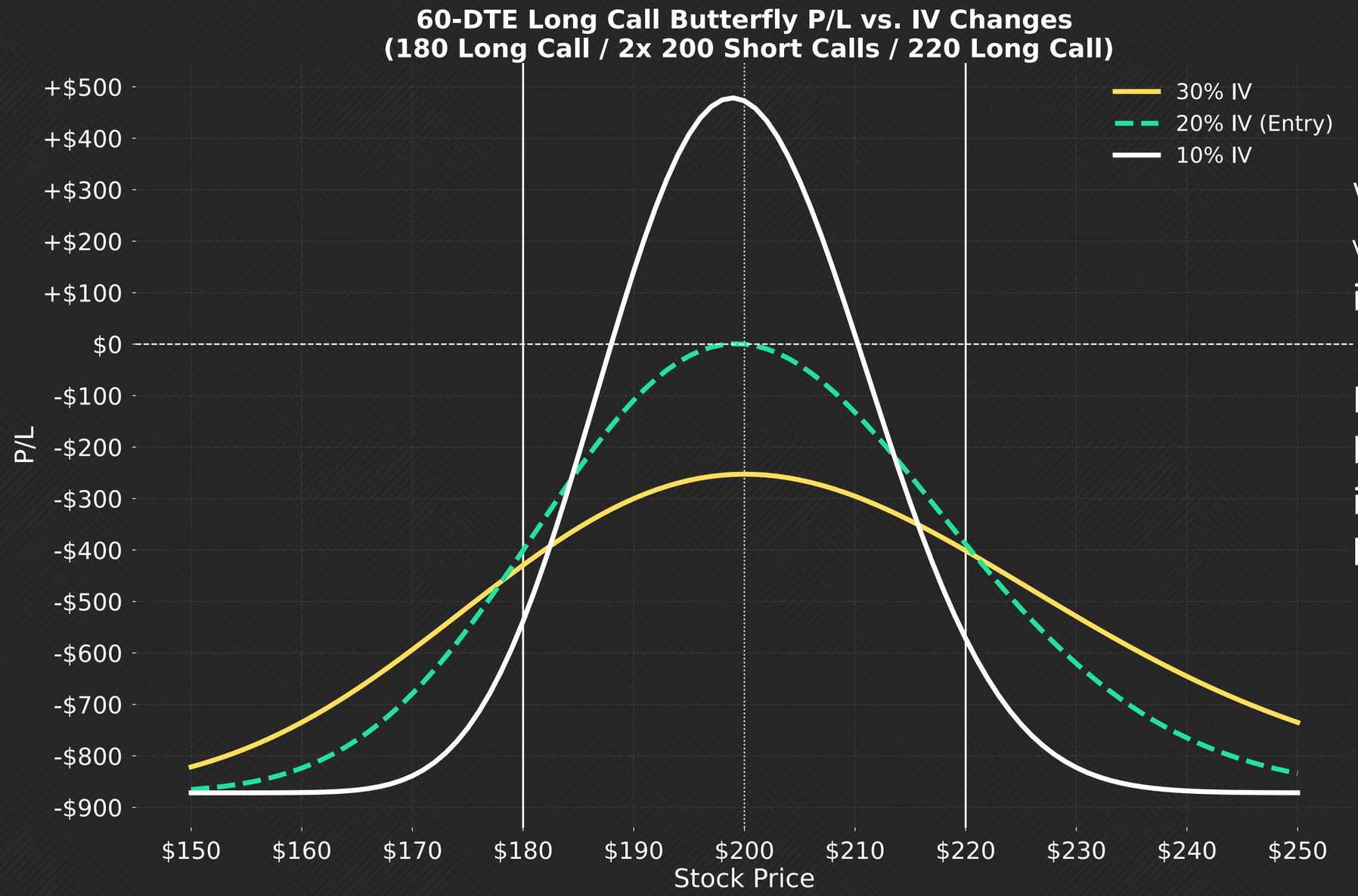
Buying Call Butterflies (Long Call Butterfly)



When buying butterflies, we want IV to fall if the stock price is around the short strike.

If the stock makes a big move beyond either long strike, an increase in IV will soften the losses.

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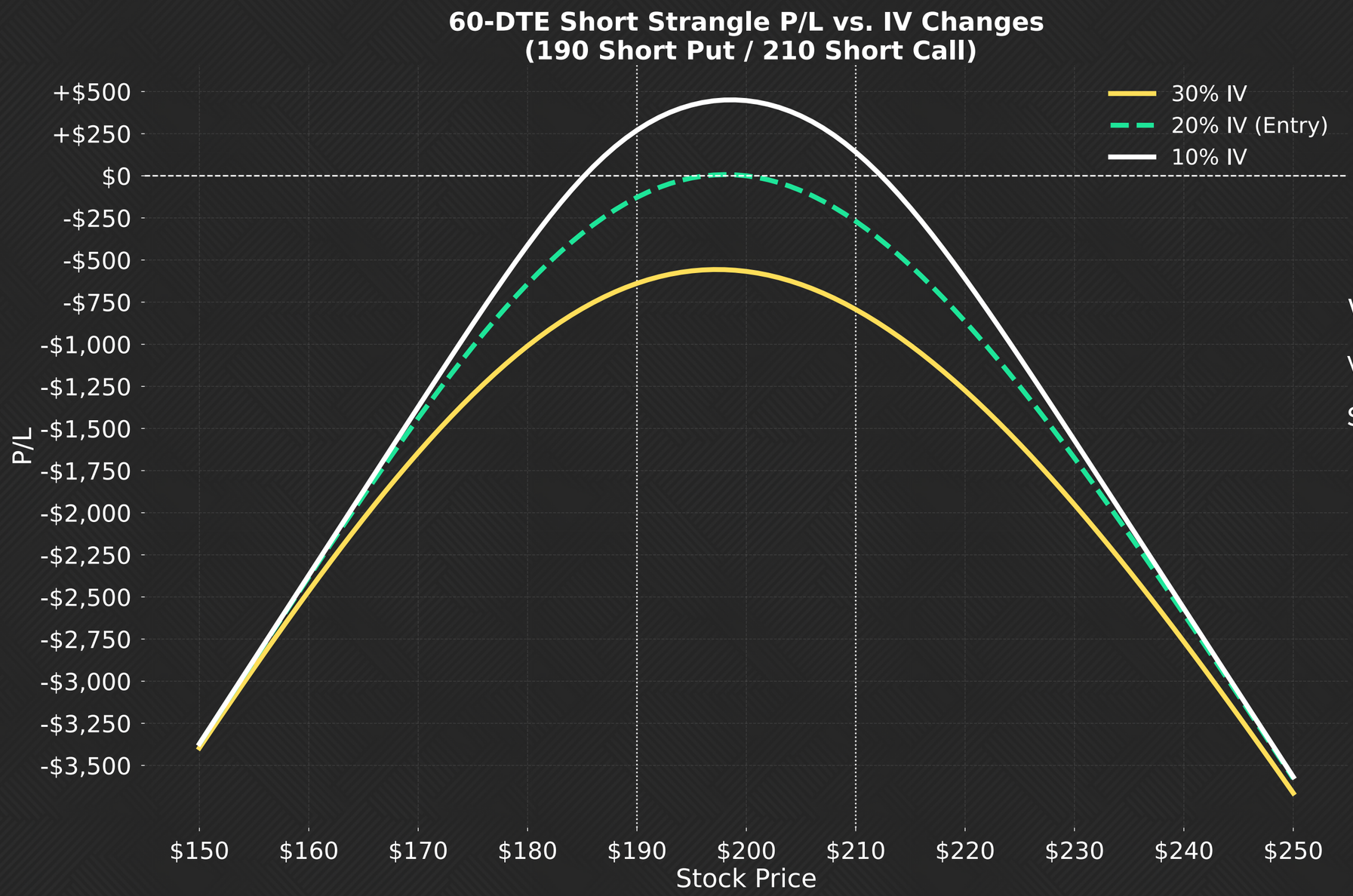
Short Strangle



When shorting strangles, we want IV to fall regardless of the stock price movement.

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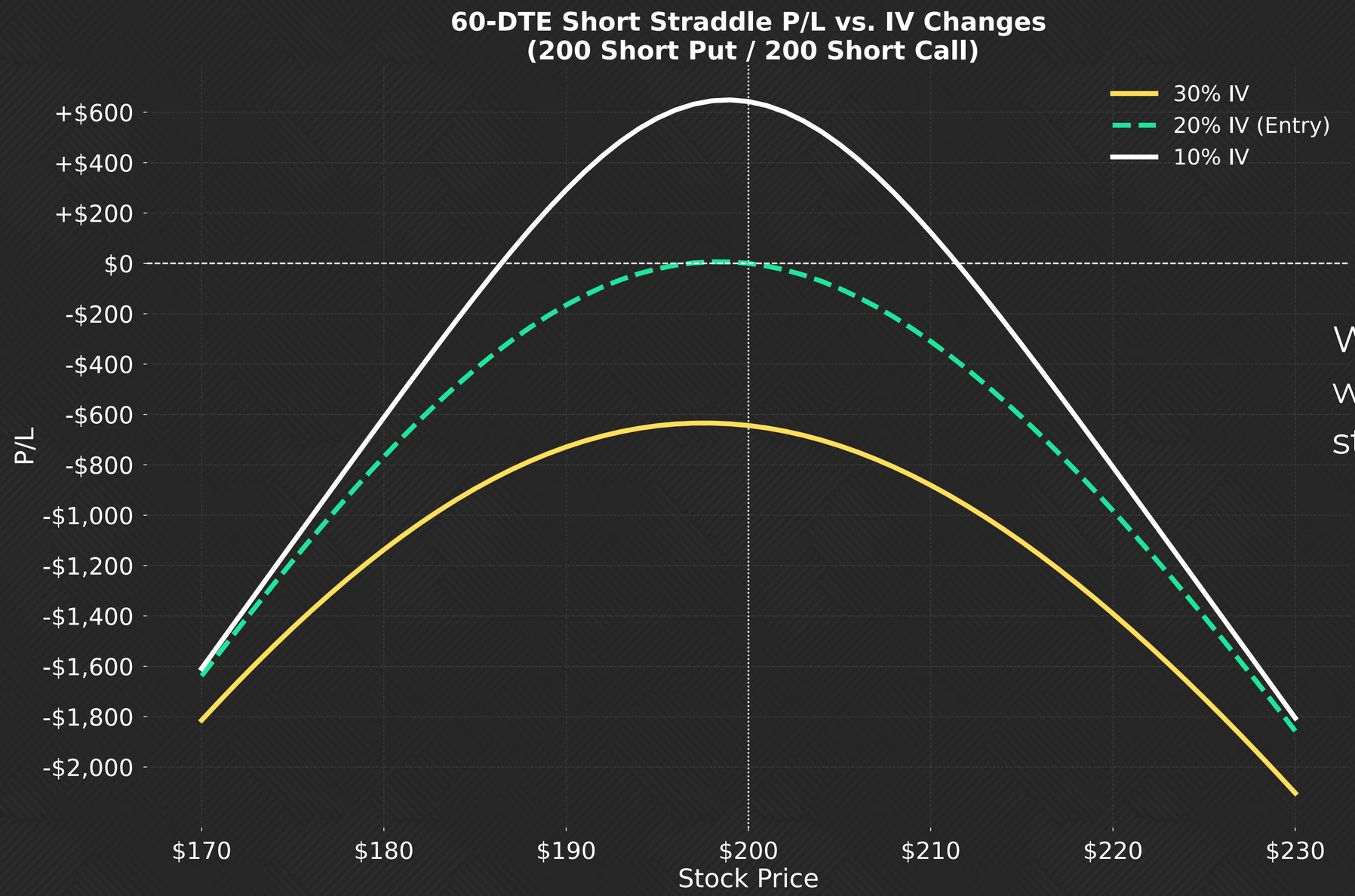
Short Straddle



When shorting straddles, we want IV to fall regardless of the stock price movement.

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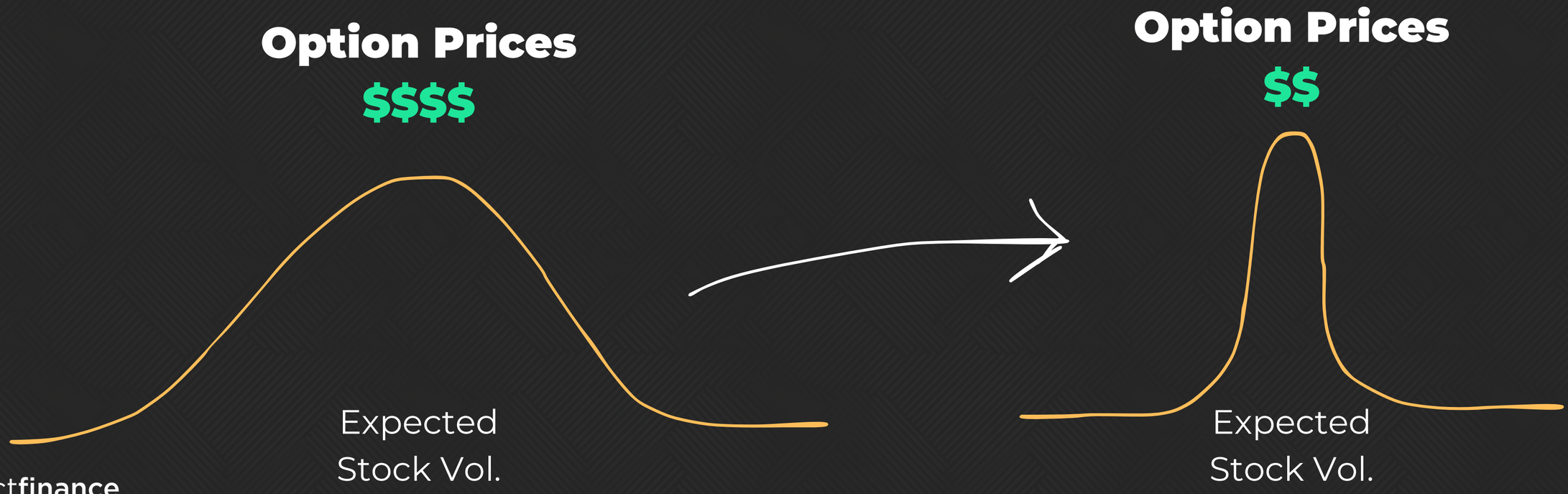
Understanding IV Changes and Options Strategy Performance

What does a decrease in implied volatility mean?

It means option prices have fallen (all else equal). Option prices deflating means the market expects less volatility going forward.



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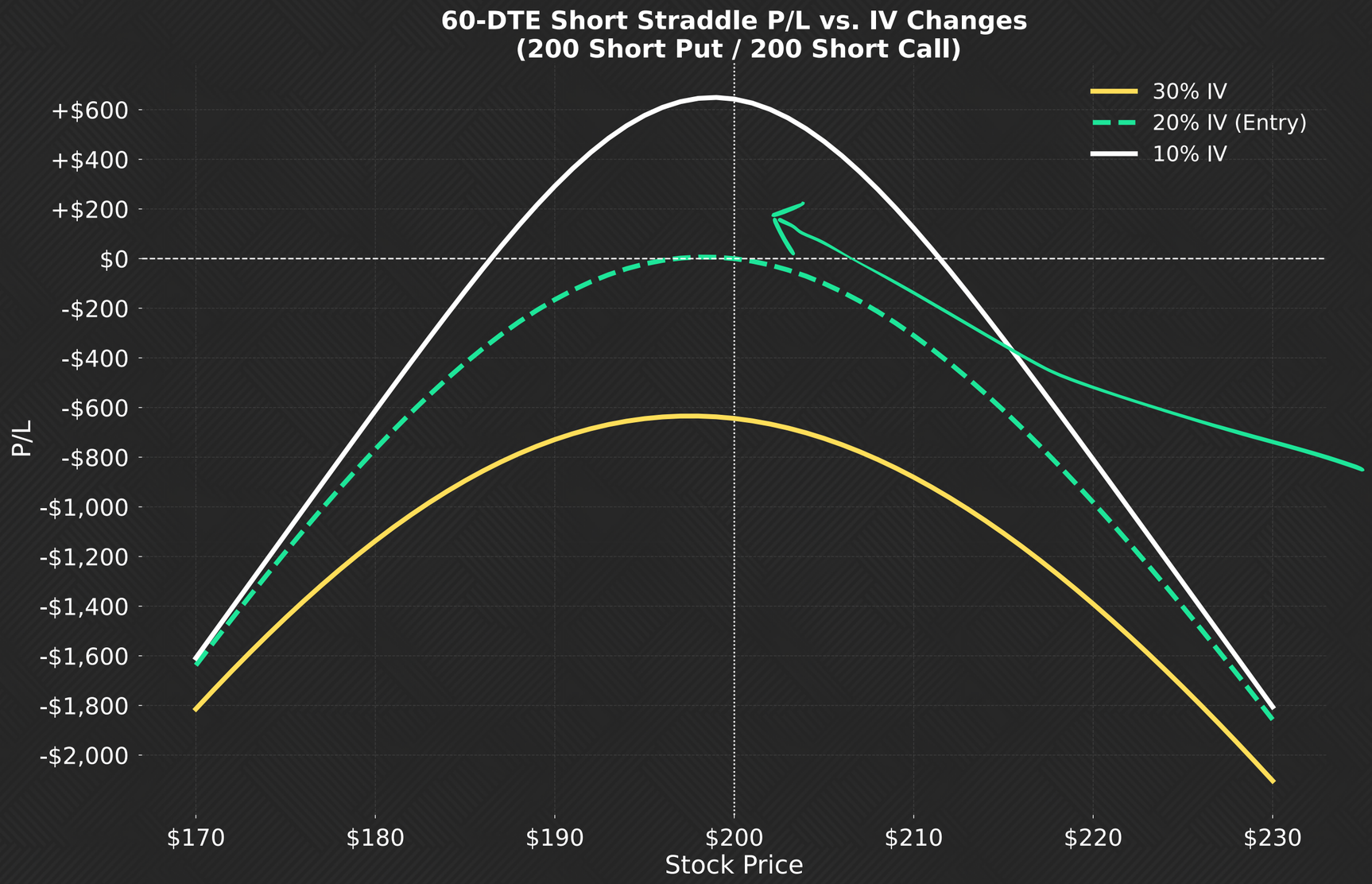
Understanding IV Changes and Options Strategy Performance

What does a decrease in implied volatility mean?

It means there's less uncertainty about the stock's future price movements

=> A higher probability the stock will be around its current price in the future.

Short Straddle



If **IV falls**, the options are telling us that the stock price has a higher probability of being closer its current price in the future (compared to higher IV).

If I'm short the 200 straddle and IV collapses with the stock at $200, the options are saying there's a higher probability the stock price will be around $200 in the future.

Option prices fall => short straddle profits.

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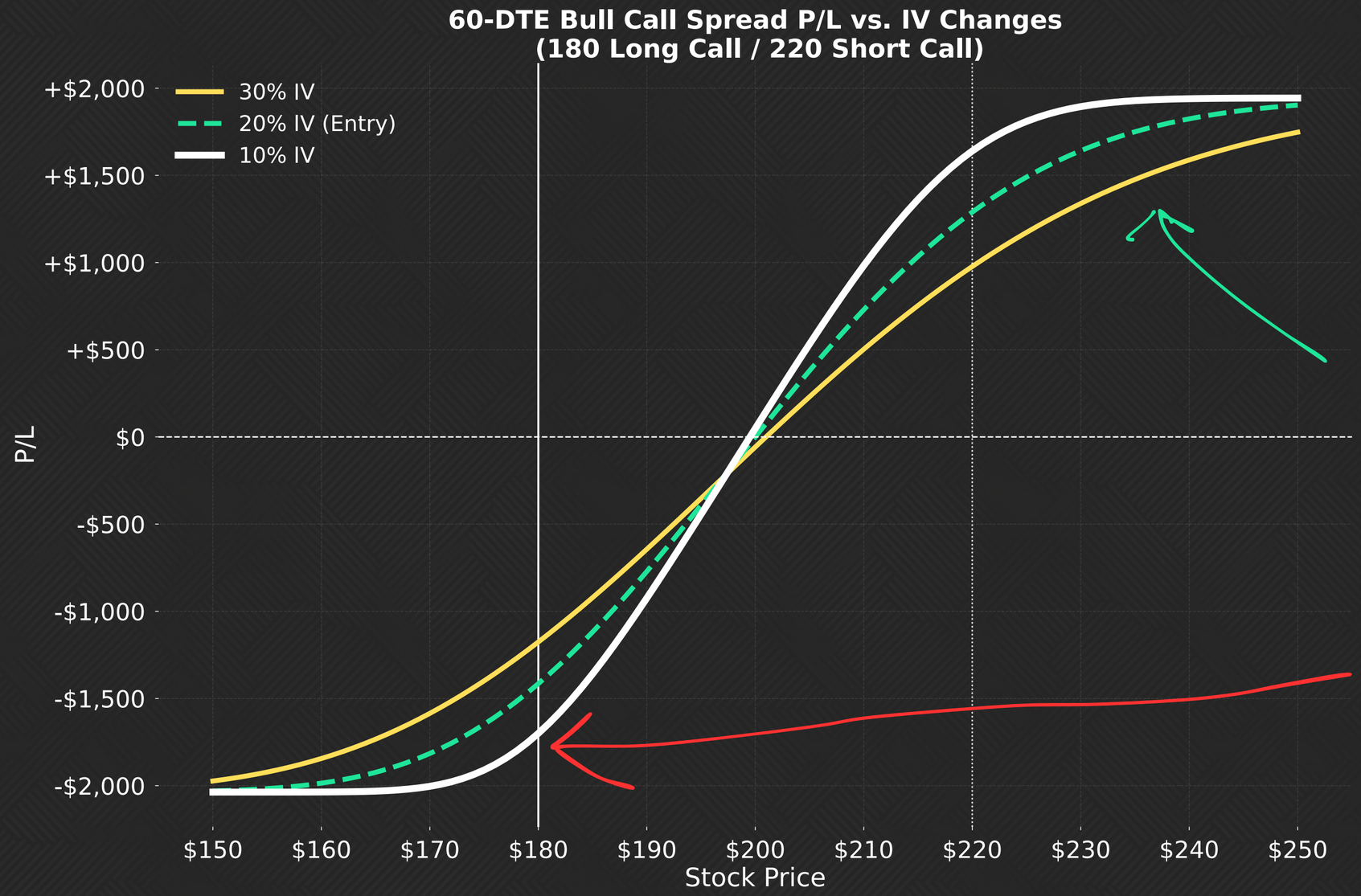
Buying Call Spreads (Bull Call Spread)



If **IV falls**, the options are telling us that the stock price has a higher probability of being closer its current price in the future (compared to higher IV).

If I own a call spread that's fully ITM, that means my spread has a higher probability of expiring fully ITM and the spread price increases (my position gains value).

If the spread is OTM and IV falls, the probability of expiring worthless increases, and the spread price falls (my position loses value).

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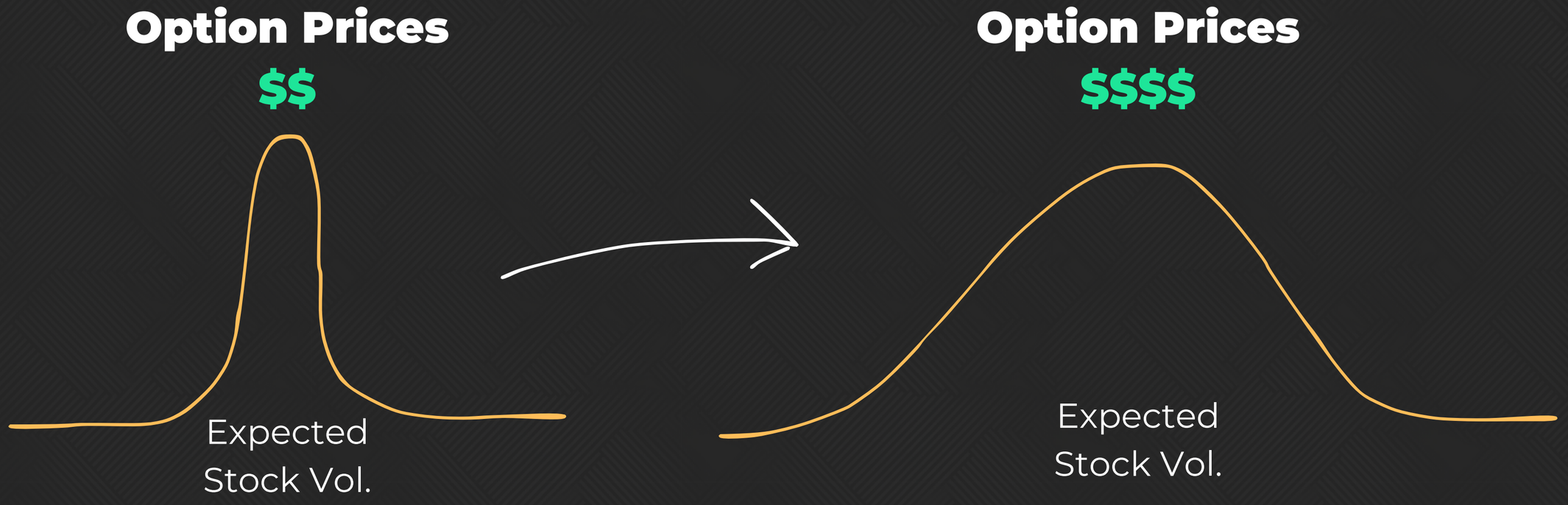
Understanding IV Changes and Options Strategy Performance

What does an increase in implied volatility mean?

It means option prices have risen (all else equal). Option prices inflating means the market expects more volatility going forward.



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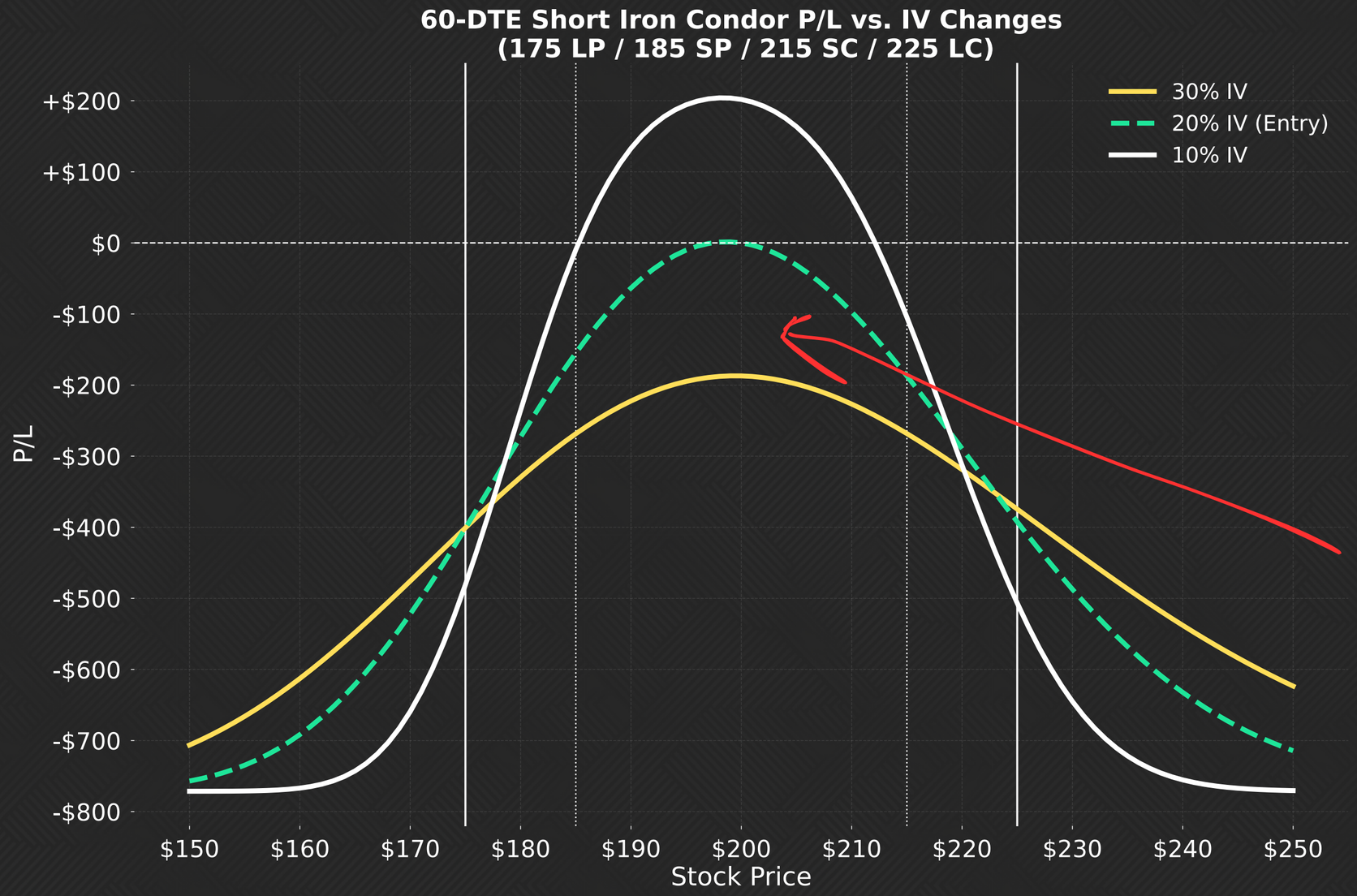
Understanding IV Changes and Options Strategy Performance

What does an increase in implied volatility mean?

It means there's more uncertainty about the stock's future price movements

=> A lower probability the stock will be around its current price in the future.

Short Iron Condor



If **IV increases**, the options are telling us that the stock price has a *lower* probability of being closer its current price in the future (compared to lower IV).

If I'm short an iron condor and IV surges with the stock price in-between my short strikes, the probability of the stock staying there is now lower.

The Iron Condor increases in value and I lose money as the short trader.

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Implied Volatility (Option Price) Behavior on Meme Stocks (Bonus Section)

Let's say a trader wanted to short the GME pump by purchasing put options.

They timed the trade perfectly, purchasing slightly OTM puts at the top of the rally on March 22nd, 2023.

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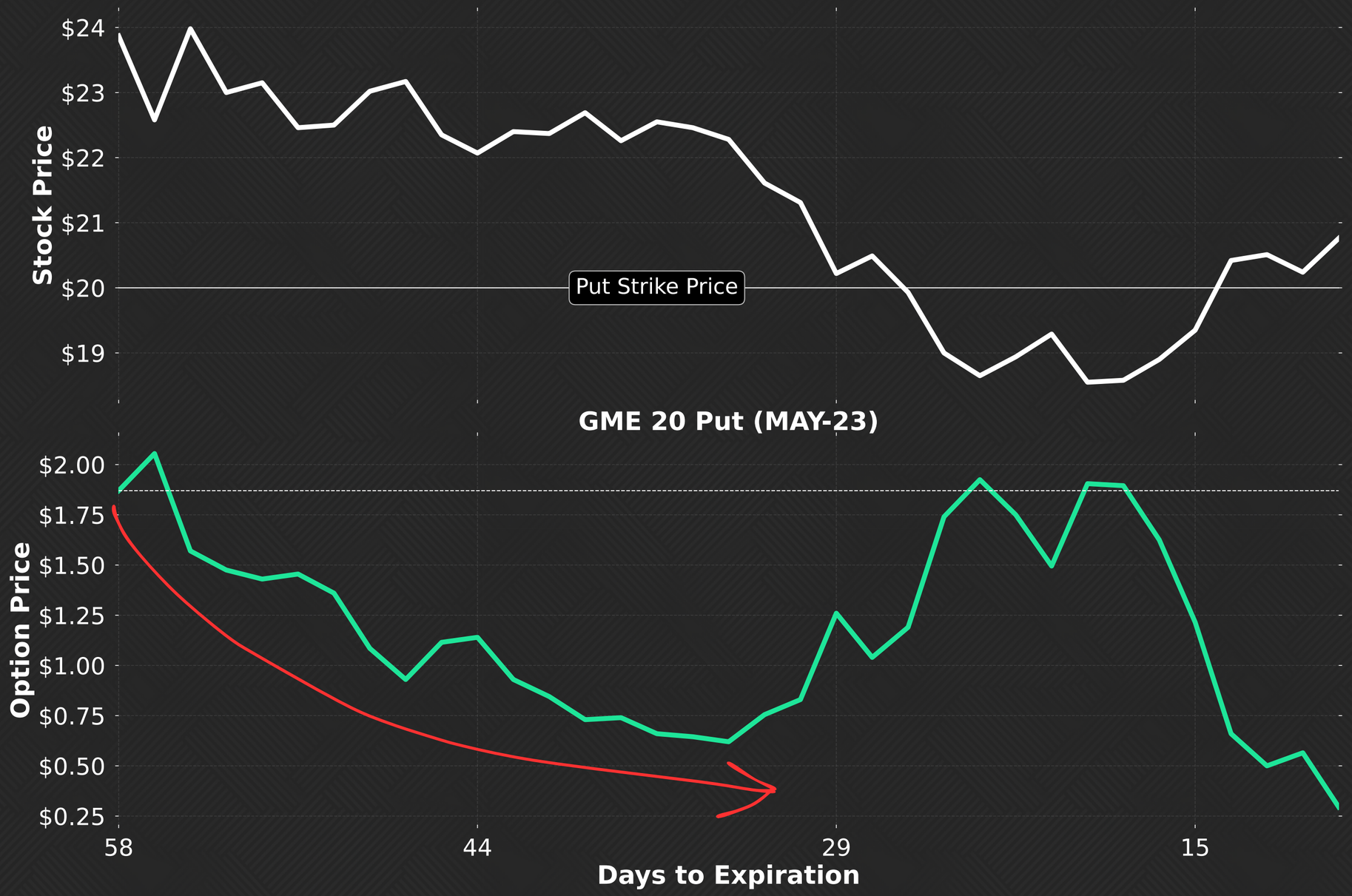
GME Stock Price vs. Put (March 22nd - May 10th, 2023)



The stock price fell towards and through the put's strike price of $20, **yet the put option FELL in value.**

This is a perfect example of how you can be right directionally on an option purchase, yet lose money because IV drove the trade performance.

Let's look at what IV did over the same period.

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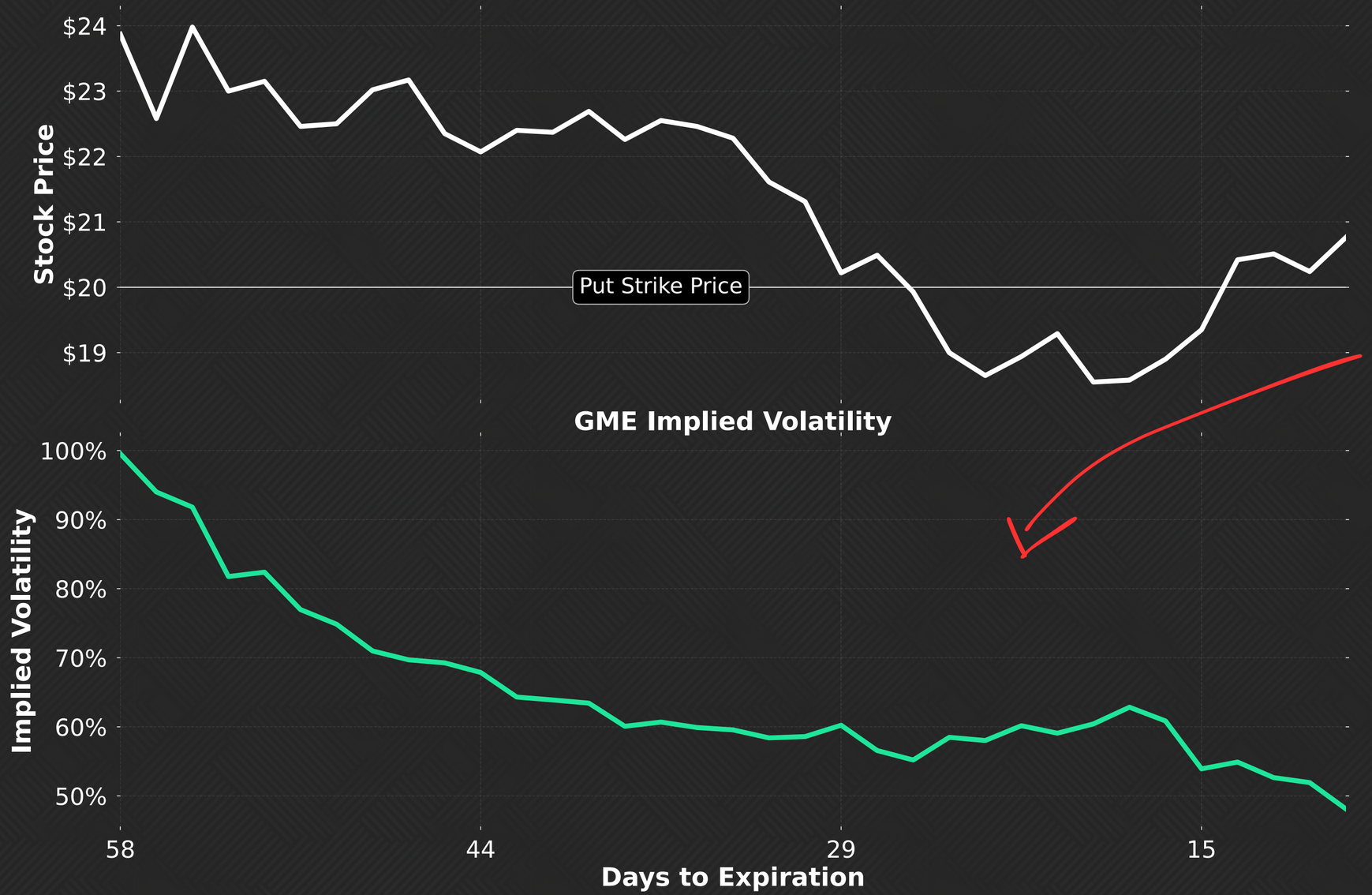
GME Stock Price vs. Implied Volatility (March 22nd - May 10th, 2023)



The stock price fell and implied volatility (which is measuring option prices) collapsed.

The collapse in IV / option prices is what caused the put purchase to lose money even though the trade was right directionally.

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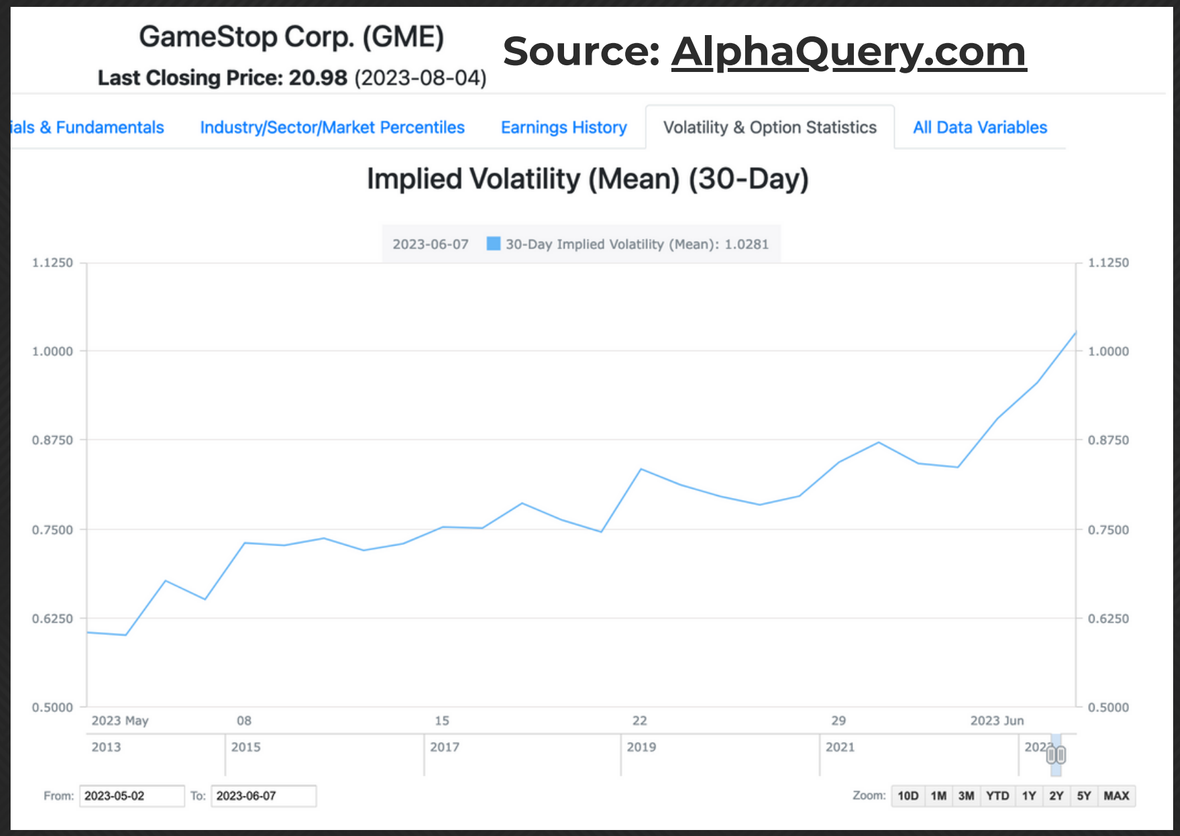
IV on "Meme" Stocks is Positively Correlated with the Stock Price



Stock Price

$18 to $27

Implied Volatility

60% to 100%+

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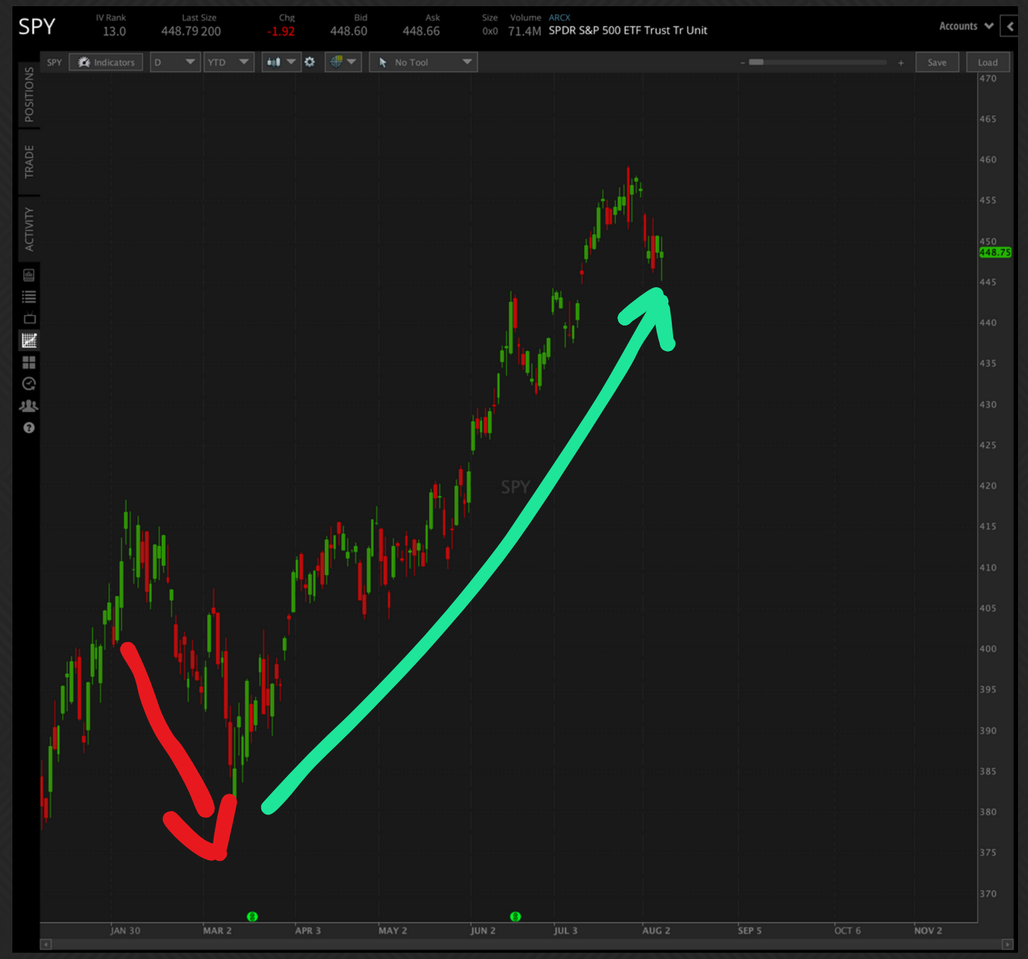
IV on Stock Indices (Like the S&P 500) is Usually Negatively Correlated with the Stock Price. As the S&P 500 goes down, the VIX goes up, and vice versa.



S&P 500 ETF (SPY)

S&P 500 Implied Vol. (The VIX)

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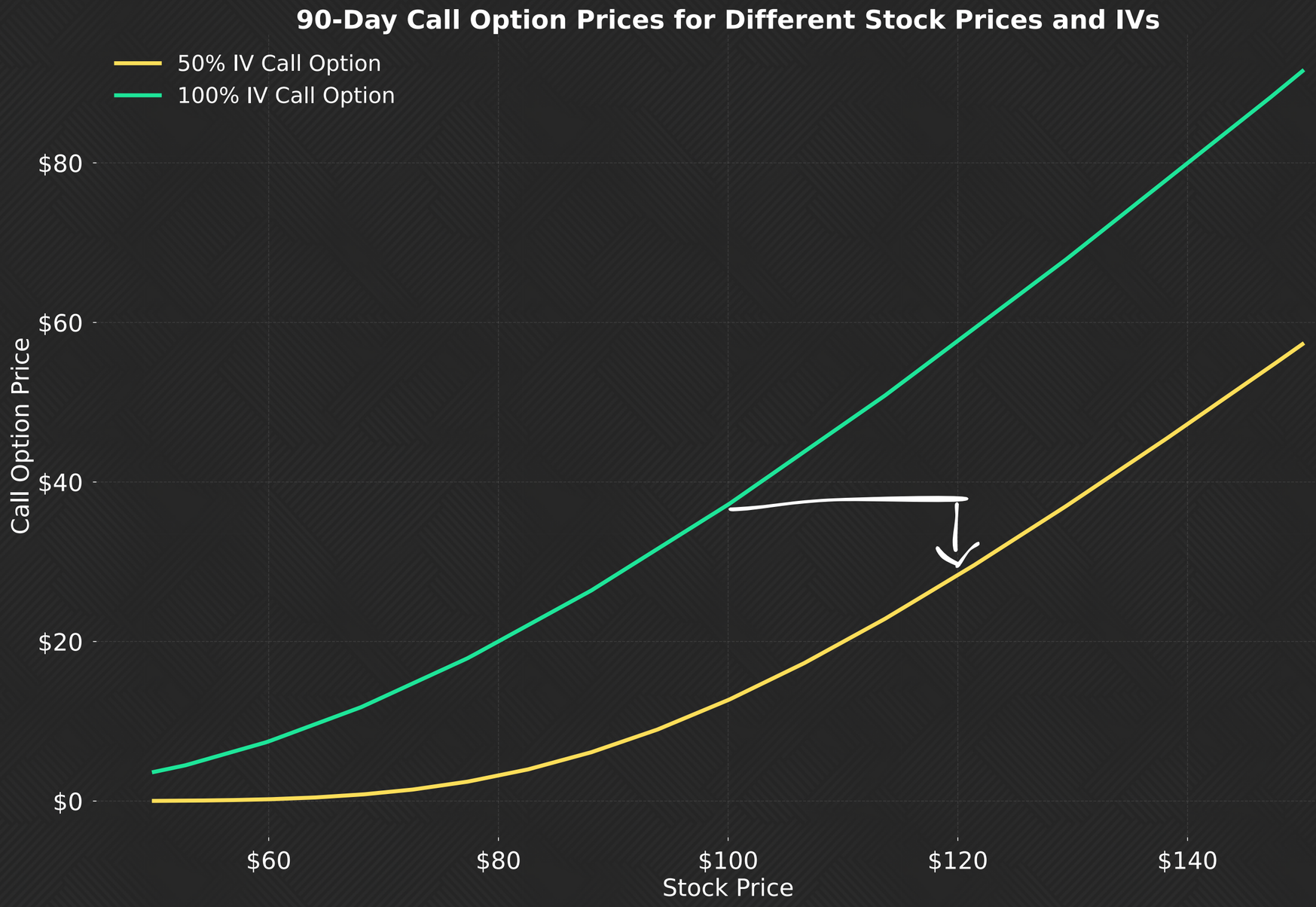
Call Prices (100 Strike) vs. Implied Volatility Changes (Simulation)



Imagine buying a call when the IV is 100% and seeing IV collapse to 50%...

You'd lose money even with a massive stock price increase.

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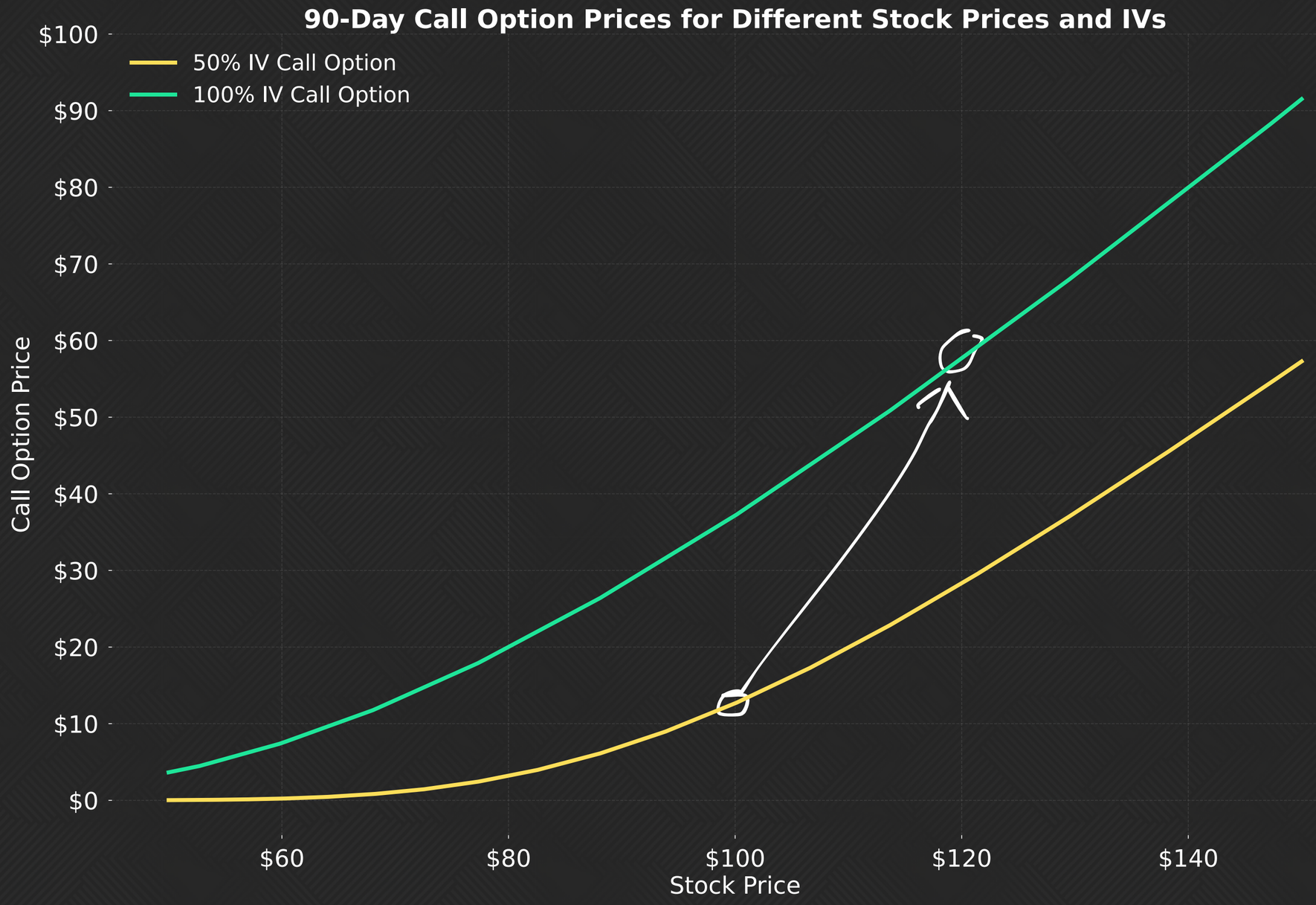
Call Prices (100 Strike) vs. Implied Volatility Changes (Simulation)



Imagine buying calls on a meme stock with IV at 50% and then seeing IV surge to 100% as the stock moons.

This type of IV change is what we saw when GME went UP, which is why buying calls on meme stocks *can* lead to super profits when the stock price moons.

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Coming Soon:

- How to Read an Options Chain
- The Greeks
- Library of Options Strategies & Examples (10+ Strategies)

Options Strategy Explanations & Examples

The following descriptions and explanation assume **1x contract** per trade.

Formulas and P/Ls can be scaled up to larger trades by multiplying figures by the number of contracts.

Long Calls

Strategy: Long Call

Description: The "Long Call" is buying a call option.

Outlook: Bullish (Profits from Stock Price Increases)

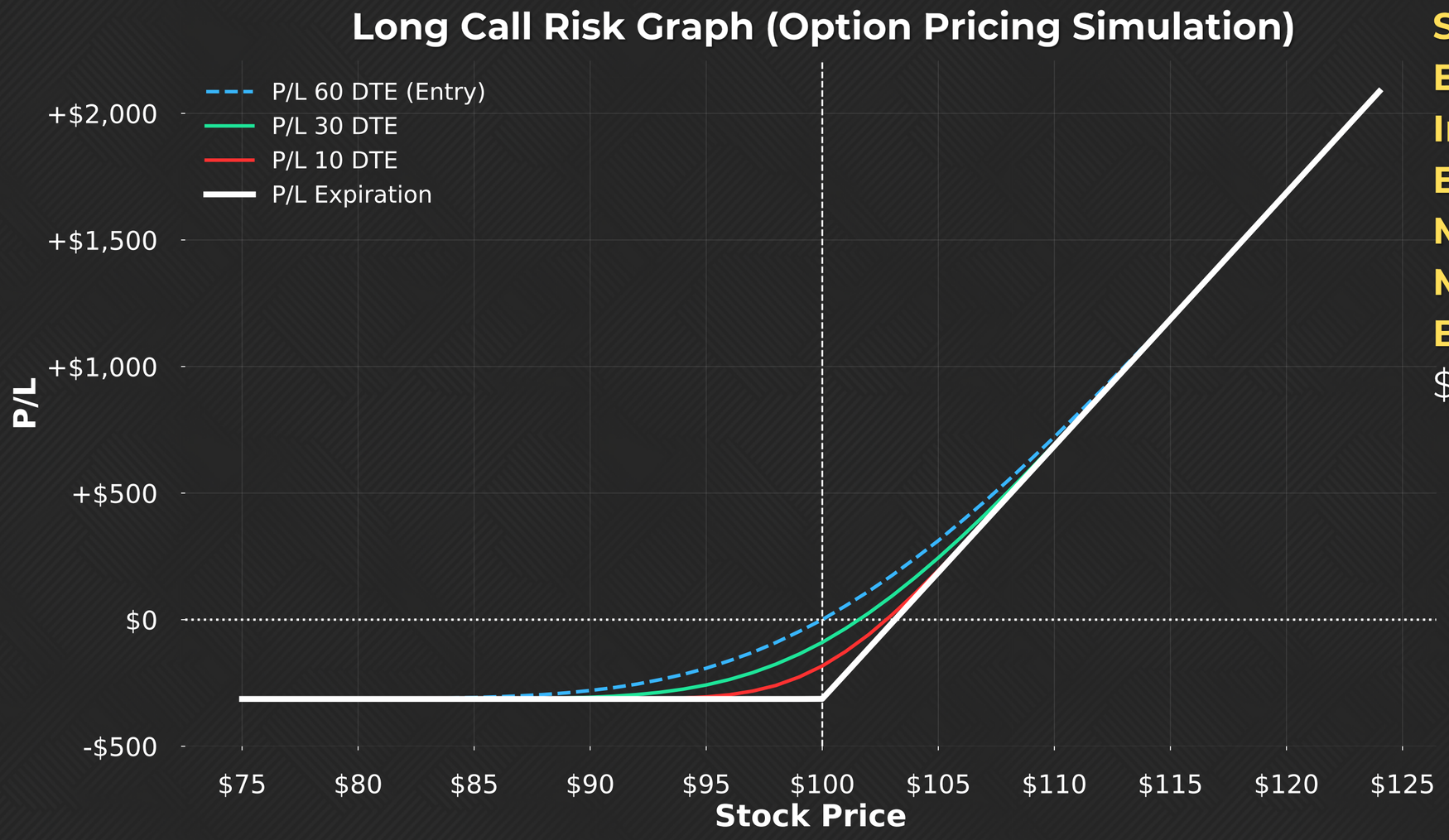
Max Profit: Unlimited

Max Loss: Premium paid for option.

+/- $0 **Expiration Breakeven Stock Price:**
Call Strike Price + Call Purchase Price

Long Call Risk Graph and Key Numbers

(One Contract)



Strike Price: $100
Entry Stock Price: $100
Implied Volatility: 20%
Entry Cost: $3.13
Max Profit: Unlimited
Max Loss: -$313
Breakeven Stock Price @ Exp: $103.13

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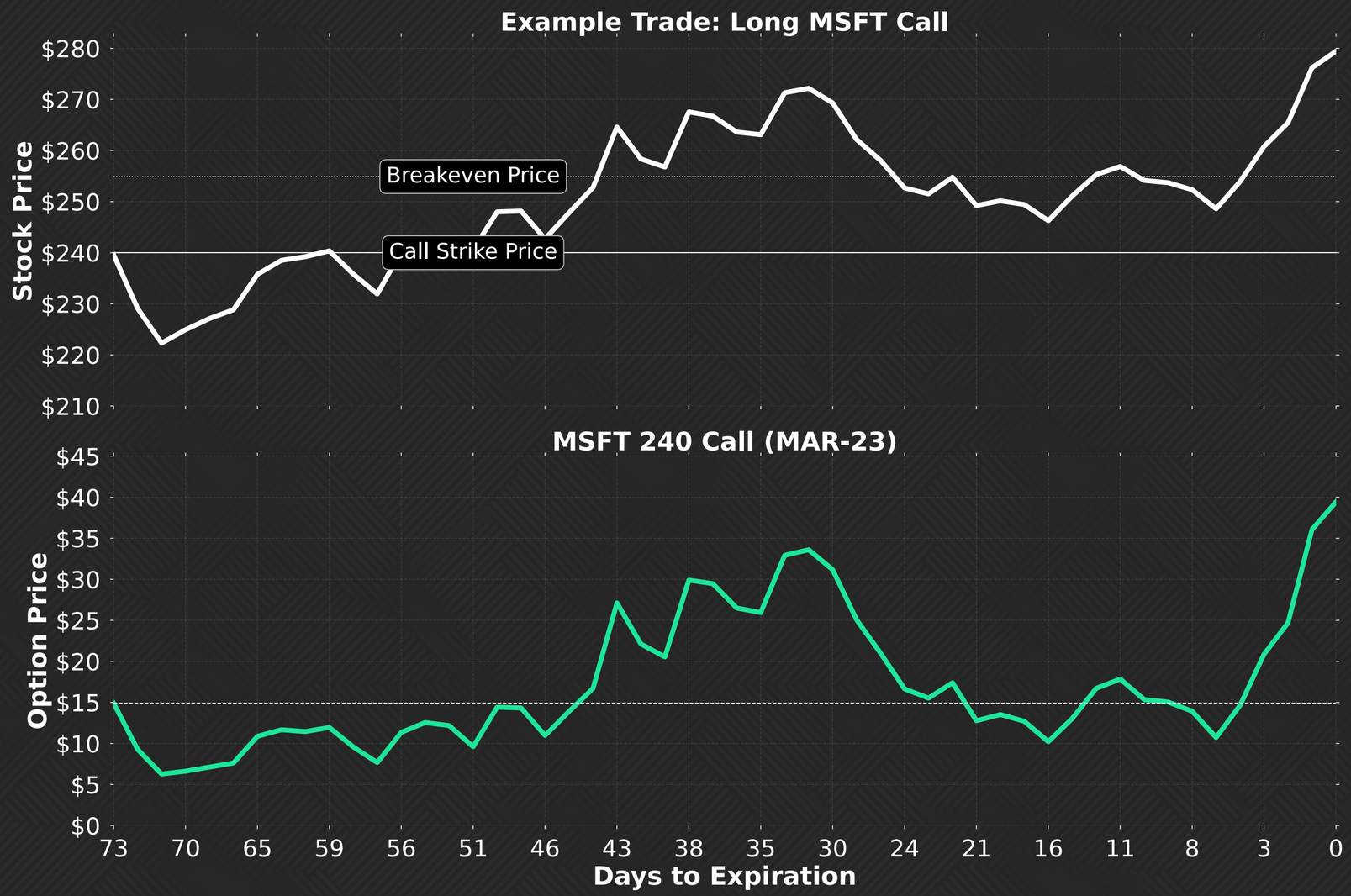
Profitable Long Call Example



Entry Stock Price: $239.58
Call Strike: $240
Call Purchase Price: $14.90
Expiration: March 17, 2023 (73 DTE)

The 240 call experienced early losses as MSFT shares fell.

The call price surged along with MSFT shares, presenting a 100%+ gain on the purchase price halfway through the trade.

At expiration, the stock price was $279.43 and the 240 call was worth its intrinsic value of $39.43.

The long call trade ended with a profit of **+$2,453 (+164%)** per contract.

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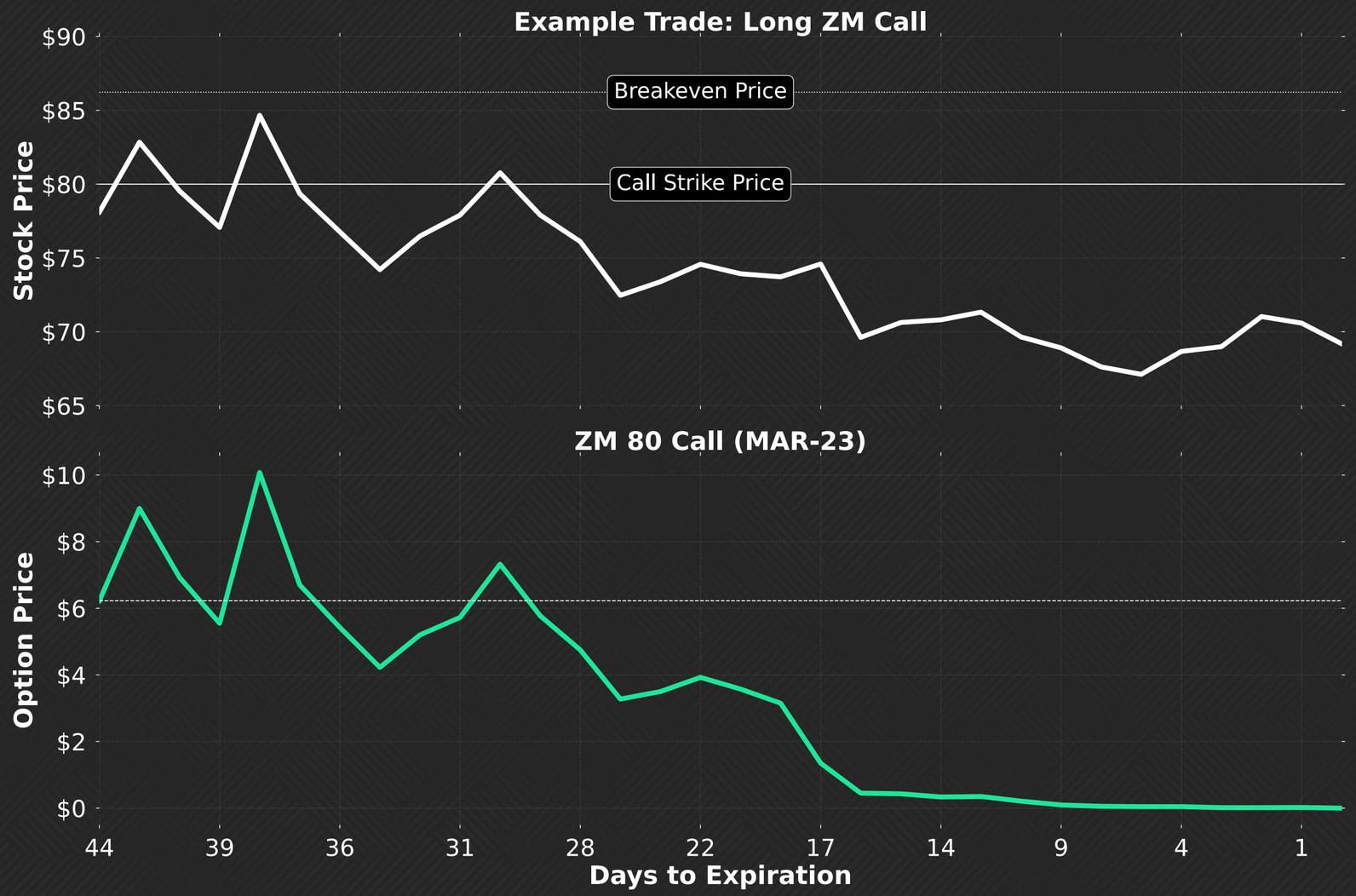
Unprofitable Long Call Example



Entry Stock Price: $78.11
Call Strike: $80
Call Purchase Price: $6.23
Expiration: March 17, 2023 (44 DTE)

The 80 call rallied 50% early in the trade as ZM shares pushed higher.

However, the stock rally was short-lived and the stock began to slide from its high of $85 down to $65 - $70.

At expiration, the stock price was well below the strike price of $80 and the call expired worthless.

The long call trade ended with a loss of **-$623 (-100%)** per contract.

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Short Calls

Strategy: Short Call

Description: The "Short Call" is shorting a call (selling a call a trader doesn't own).

Outlook: Bearish

Max Profit: Total premium received for shorting call.

Max Loss: Theoretically unlimited.

+/- $0

Expiration Breakeven Stock Price:
Call Strike Price + Call Sale Price

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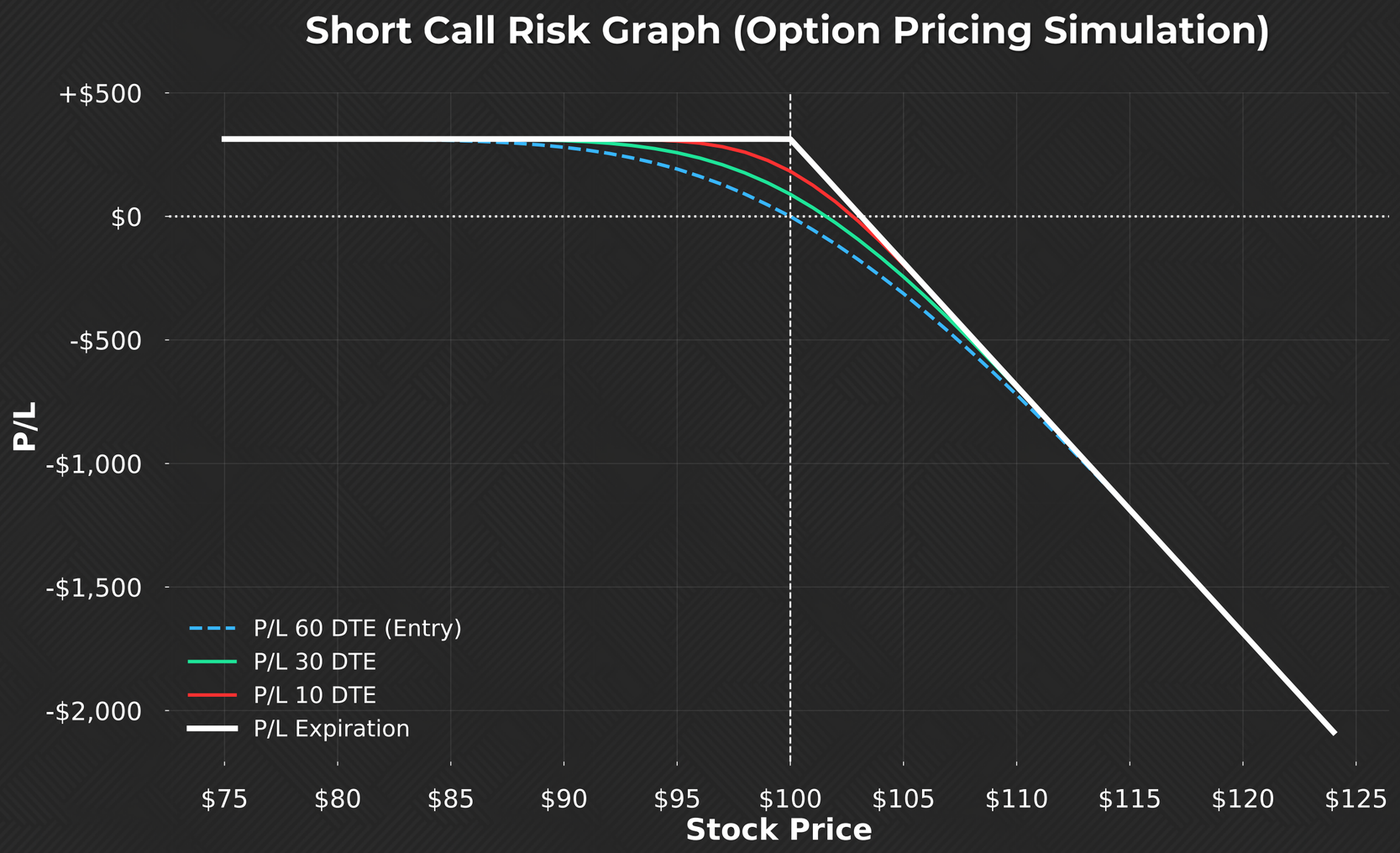
Short Call Risk Graph and Key Numbers

(One Contract)



Strike Price: $100
Entry Stock Price: $100
Implied Volatility: 20%
Call Sale Price: $3.13
Max Profit: $313
Max Loss: Unlimited
Breakeven Stock Price @ Exp: $103.13

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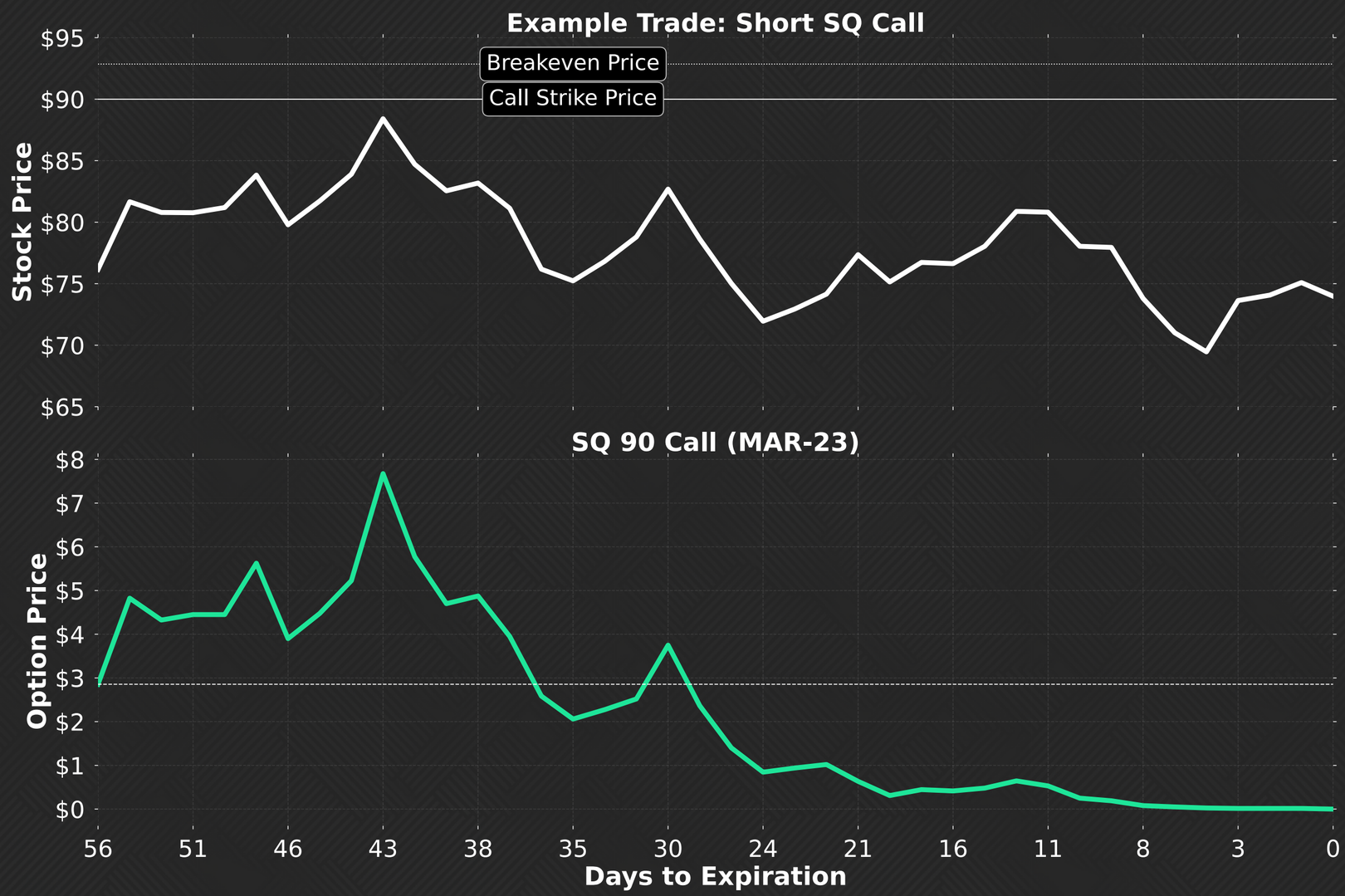
Profitable Short Call Example



Entry Stock Price: $76.16
Call Strike: $90
Call Sale Price: $2.86
Expiration: March 17, 2023 (56 DTE)

The 90 call experienced early losses as SQ shares rallied up to the short strike of $90, increasing the call's probability of expiring ITM and its value along with it.

The call price running from around $3 to $8 represented an unrealized loss of $500 per contract at the worst point.

The stock reversed course and remained below the short call strike, rendering the call worthless at expiration.

The short call trade ended with a profit of **+$286 (+100%)** per contract.

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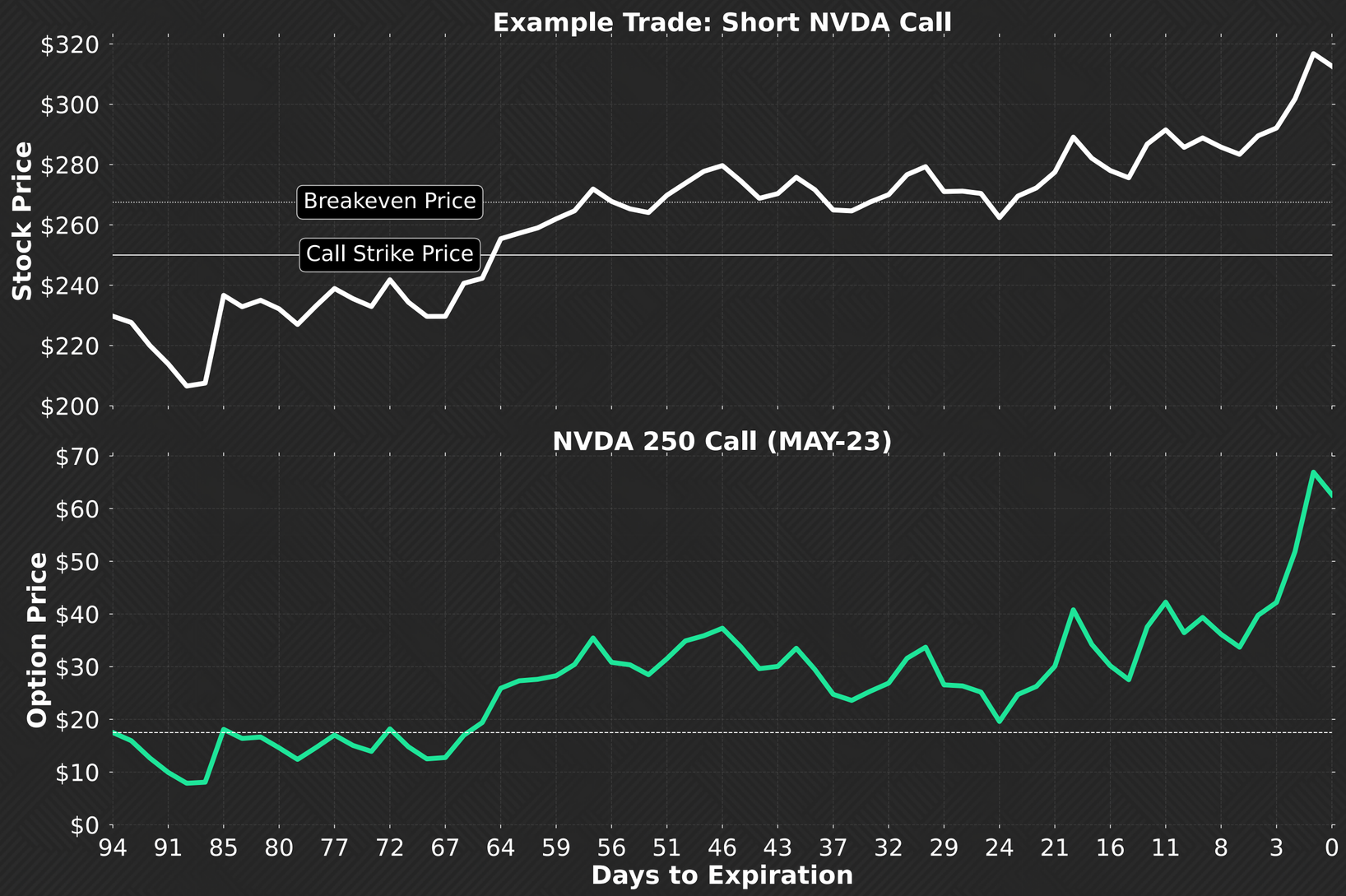
Unprofitable Short Call Example



Entry Stock Price: $229.71
Call Strike: $250
Call Sale Price: $17.50
Expiration: May 17, 2023 (94 DTE)

The short 250 call experienced healthy profits in the first few days of the trade, falling from the entry price of $17.50 to $7.80, a near $1,000 profit per short call.

However, the stock began a vicious rally from $200 to $320 over the coming months, dealing heavy losses to the short call trade.

At expiration, the stock price was $312.64, leaving the 250 short call with its intrinsic value of $62.64.

The long call trade ended with a loss of **-$4,514 (-258%)** per contract.

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Long Puts

Strategy: Long Put

Description: The "Long Put" is buying a put option.

Outlook: Bearish

Max Profit: (Put Strike - Put Cost) * 100

Max Loss: Premium paid for option

+/- $0

Expiration Breakeven Stock Price:
Put Strike Price - Put Purchase Price

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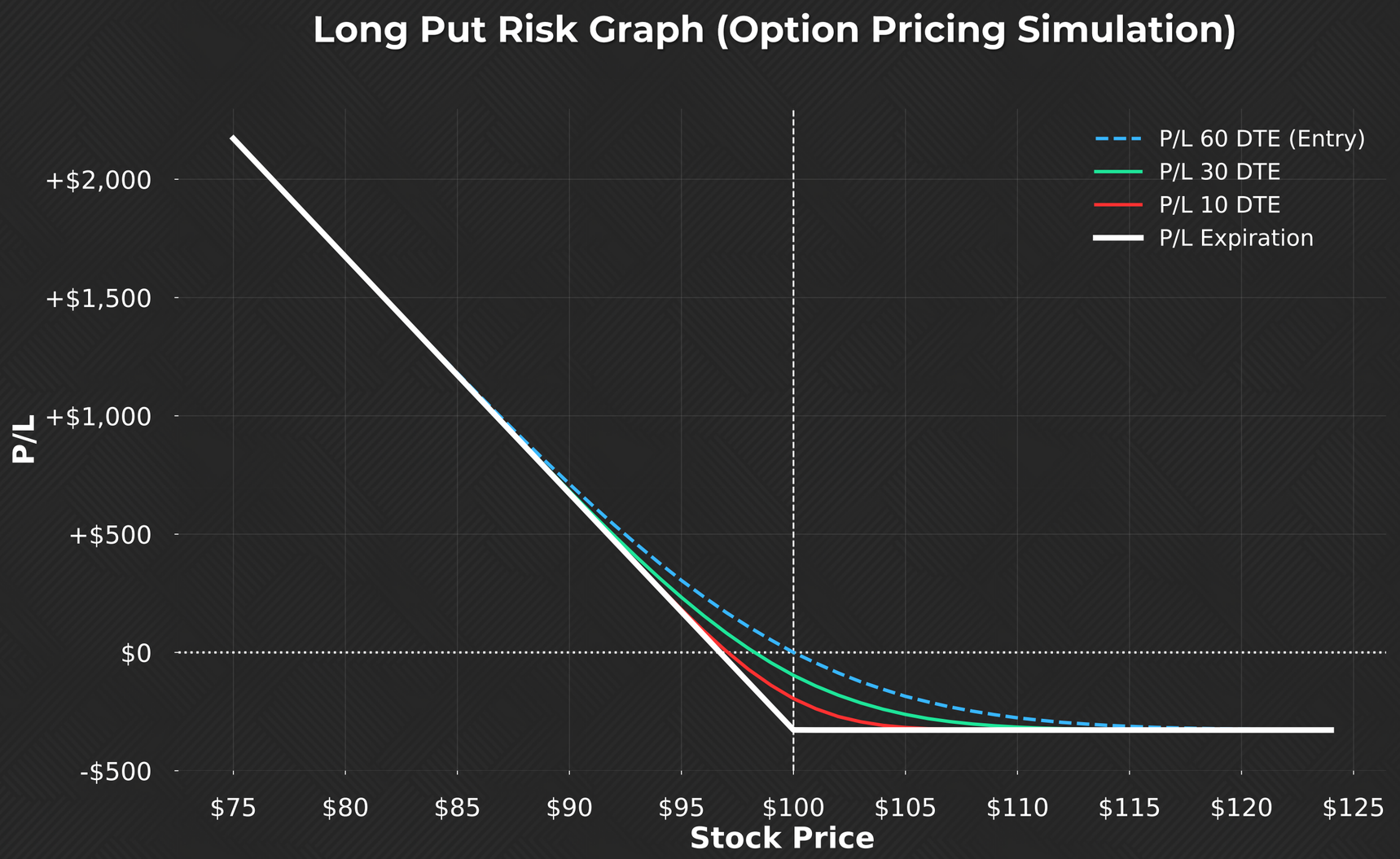
Long Put Risk Graph and Key Numbers

(One Contract)



Strike Price: $100
Entry Stock Price: $100
Implied Volatility: 20%
Put Purchase Price: $3.28
Max Profit: $9,672
Max Loss: -$328
Breakeven Stock Price @ Exp: $96.72

Note: the max profit can't be seen here because we need to extend the minimum stock price to zero.

At a stock price of zero, the put is worth its intrinsic value of $100 (the strike price). The put purchase price of $3.28 reduces the gain to +$96.72 if we buy the put for $3.28 and it goes to $100.

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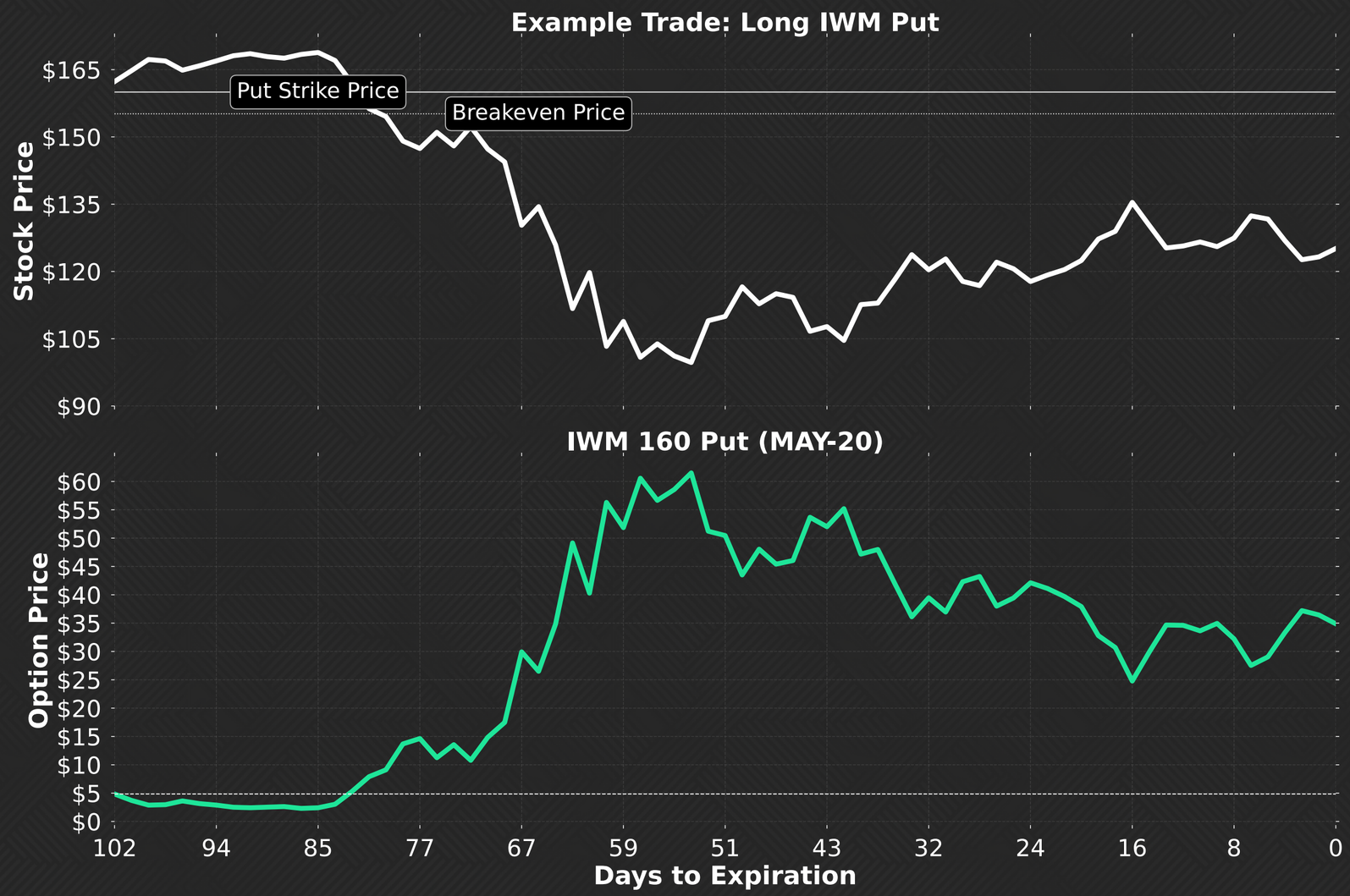
Profitable Long Put Example



Entry Stock Price: $162.34
Put Strike: $160
Put Purchase Price: $4.84
Expiration: May 15, 2020 (102 DTE)

The 160 put experienced early losses as IWM rallied further away from the put's strike of $160. The put reached a low of $2.30, more than a 50% decline from the entry price.

Then the 2020 market collapse happened, sending IWM plummeting.

The long put became significantly ITM, reaching a high price of $61.51 (**+$5,667**), but ended with a price of $34.88 (its intrinsic value).

The long put trade ended with a profit of **+$3,004 (+621%)** per contract.

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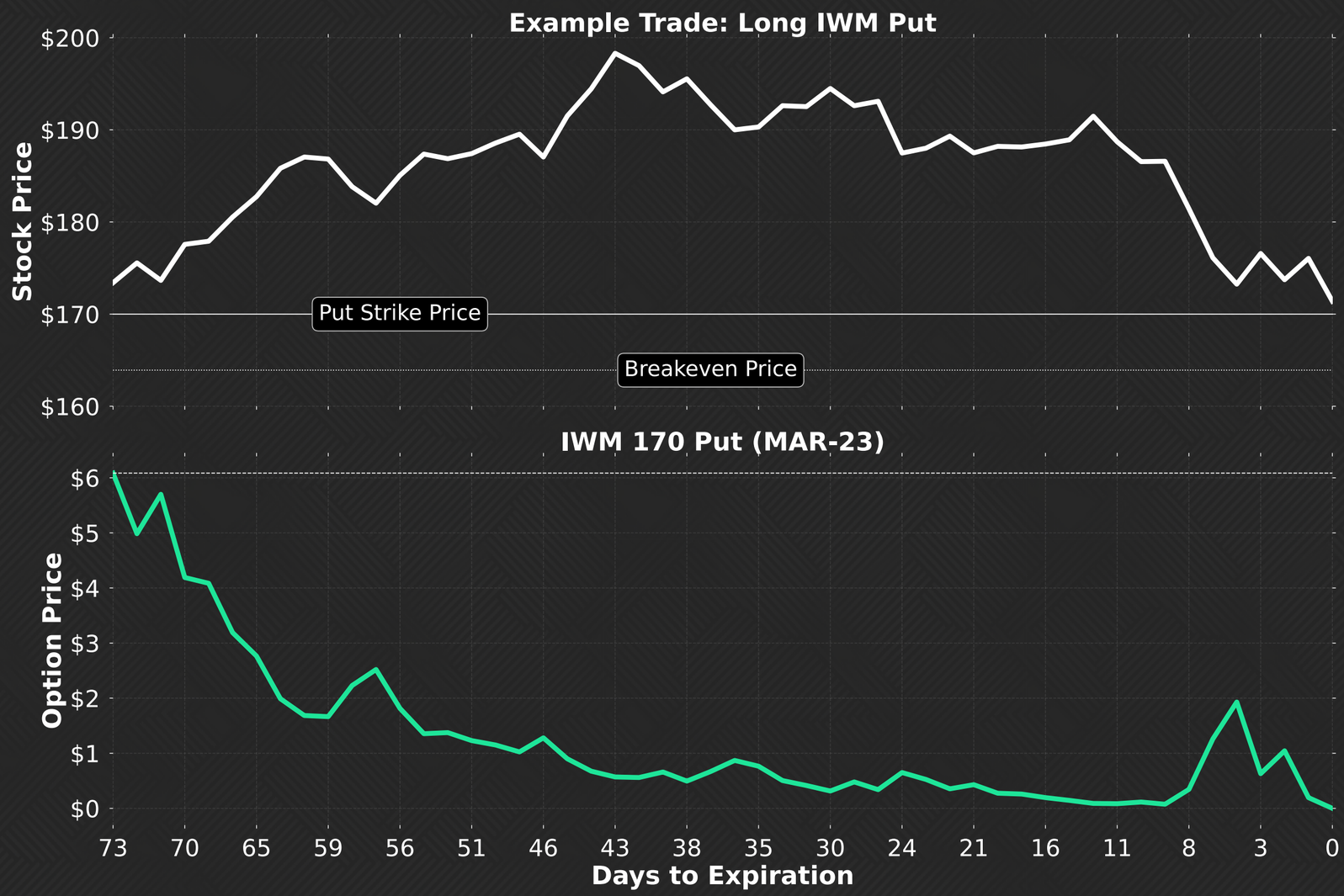
Unprofitable Long Put Example



Entry Stock Price: $173.40
Put Strike: $170
Put Purchase Price: $6.09
Expiration: March 17, 2020 (73 DTE)

The 170 put in this trade lost nearly all of its value in the first half of the trade, as IWM shares surged away from the put's strike, increasing its probability of expiring worthless.

IWM turned around and began a slide from nearly $200 back down to the put's strike of $170, but this put ran out of time.

With the stock above $170 at expiration, the put expired with its intrinsic value of zero.

The long put trade ended with a max loss of **-$609 (-100%)** per contract.

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Short Puts

Strategy: Short Put

Description: The "Short Put" is selling a put a trader doesn't own.

Outlook: Bullish

Max Profit: Total premium received for shorting the put.

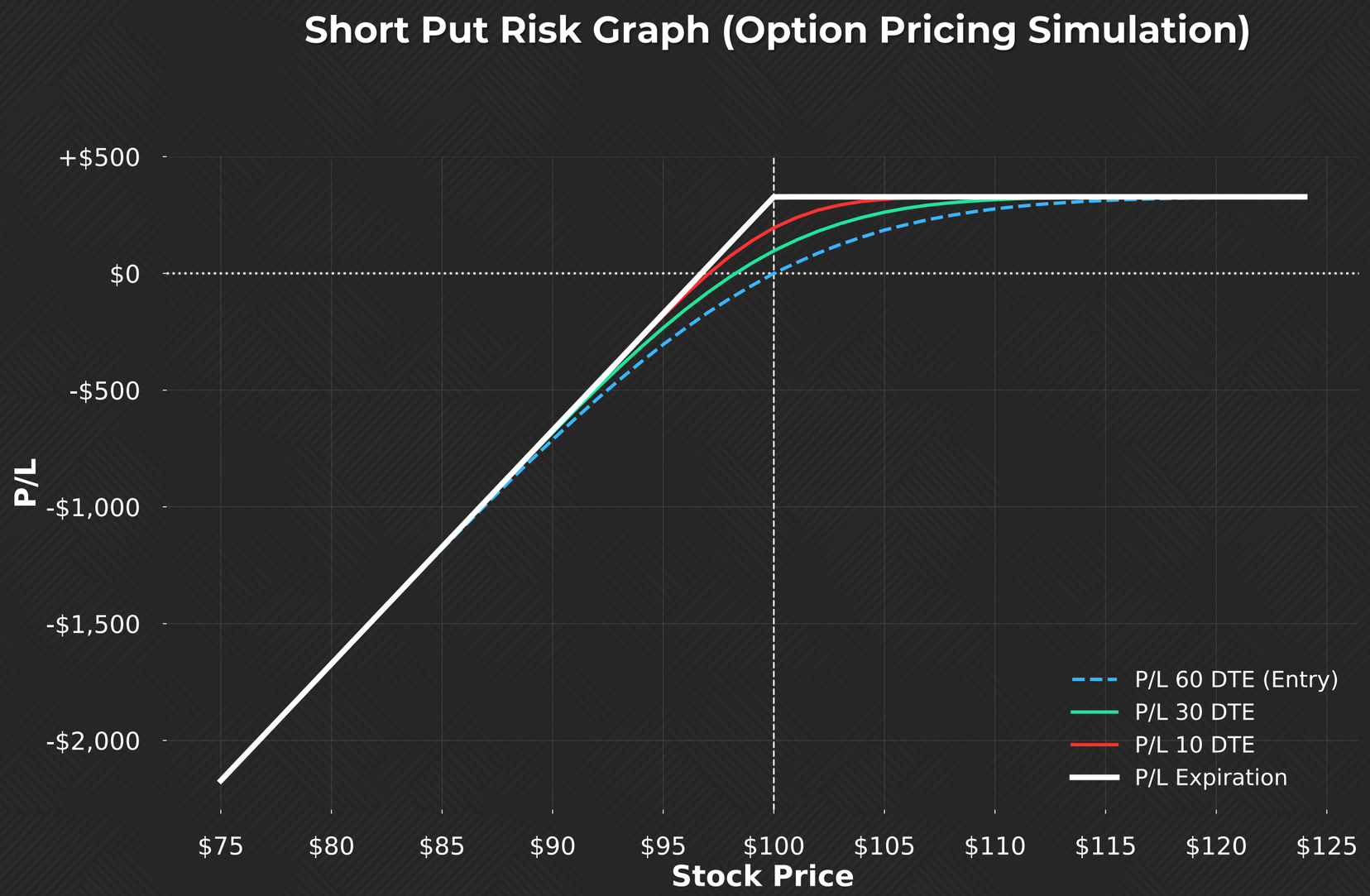
Max Loss: (Put Strike - Put Sale Price) * 100.

+/- $0

Expiration Breakeven Stock Price:
Put Strike Price - Put Sale Price

Short Put Risk Graph and Key Numbers

(One Contract)



Strike Price: $100
Entry Stock Price: $100
Implied Volatility: 20%
Put Sale Price: $3.28
Max Profit: $328
Max Loss: -$9,672
Breakeven Stock Price @ Exp: $96.72

Note: the max loss can't be seen here because we need to extend the stock price to zero.

At a stock price of zero, the put is worth its intrinsic value of $100 (the strike price). The sale price of $3.28 means the loss is -$96.72 if we short the put for $3.28 and it goes to $100.

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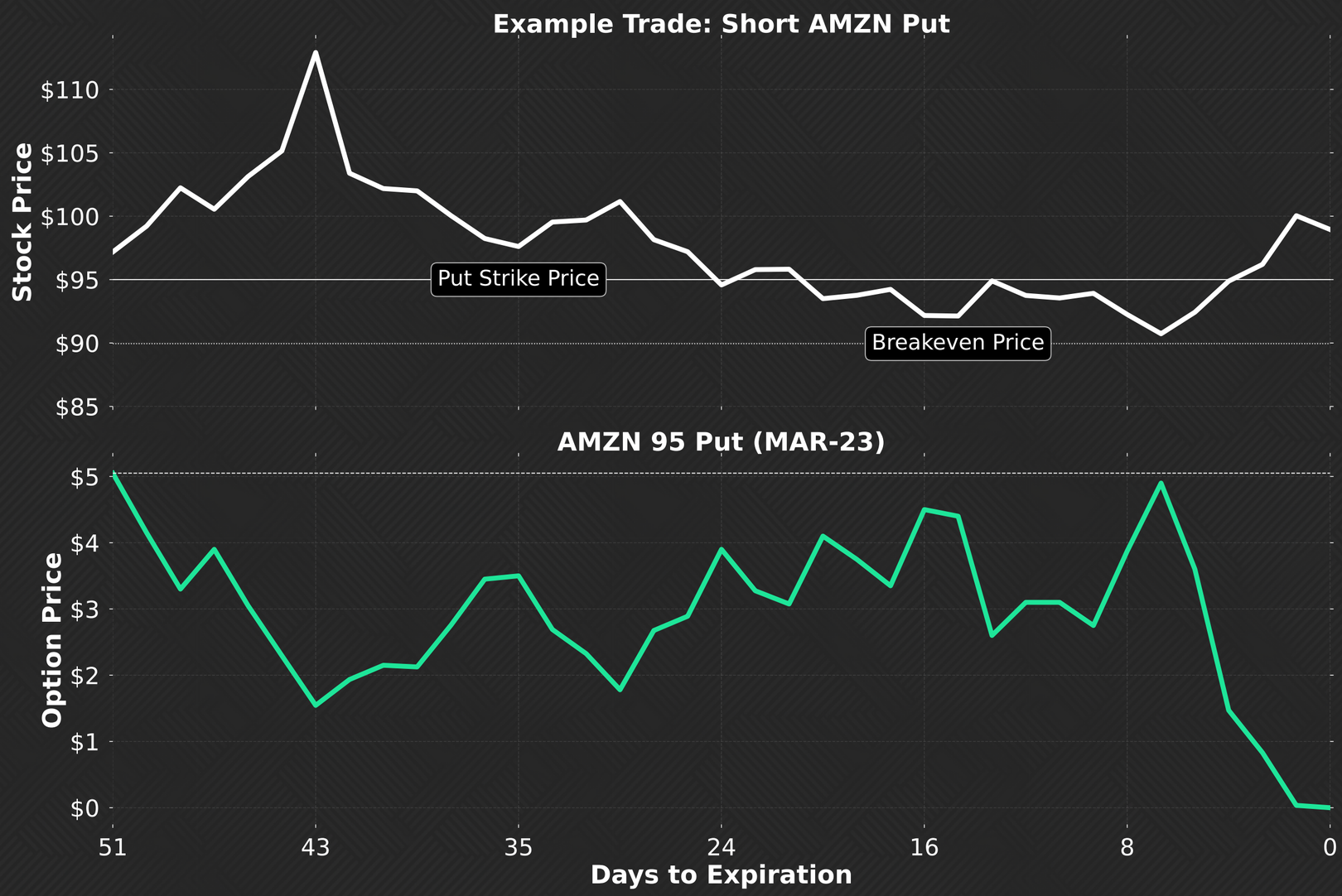
Profitable Short Put Example



Entry Stock Price: $97.18
Put Strike: $95
Put Sale Price: $5.05
Expiration: March 17, 2023 (51 DTE)

The 95 short put made quick profits with AMZN's rally after trade entry. The trader could have bought back (closed) the put for profits at any time.

AMZN did fall hard from the initial rally, testing the short put strike of $95 and falling below it for a period of time, bringing the put's price up to the entry price (resulting in a breakeven trade at that point).

Right before expiration, the stock rallied above the short put's strike and the trade ended with a profit of **+$505 (+100%)** per contract.

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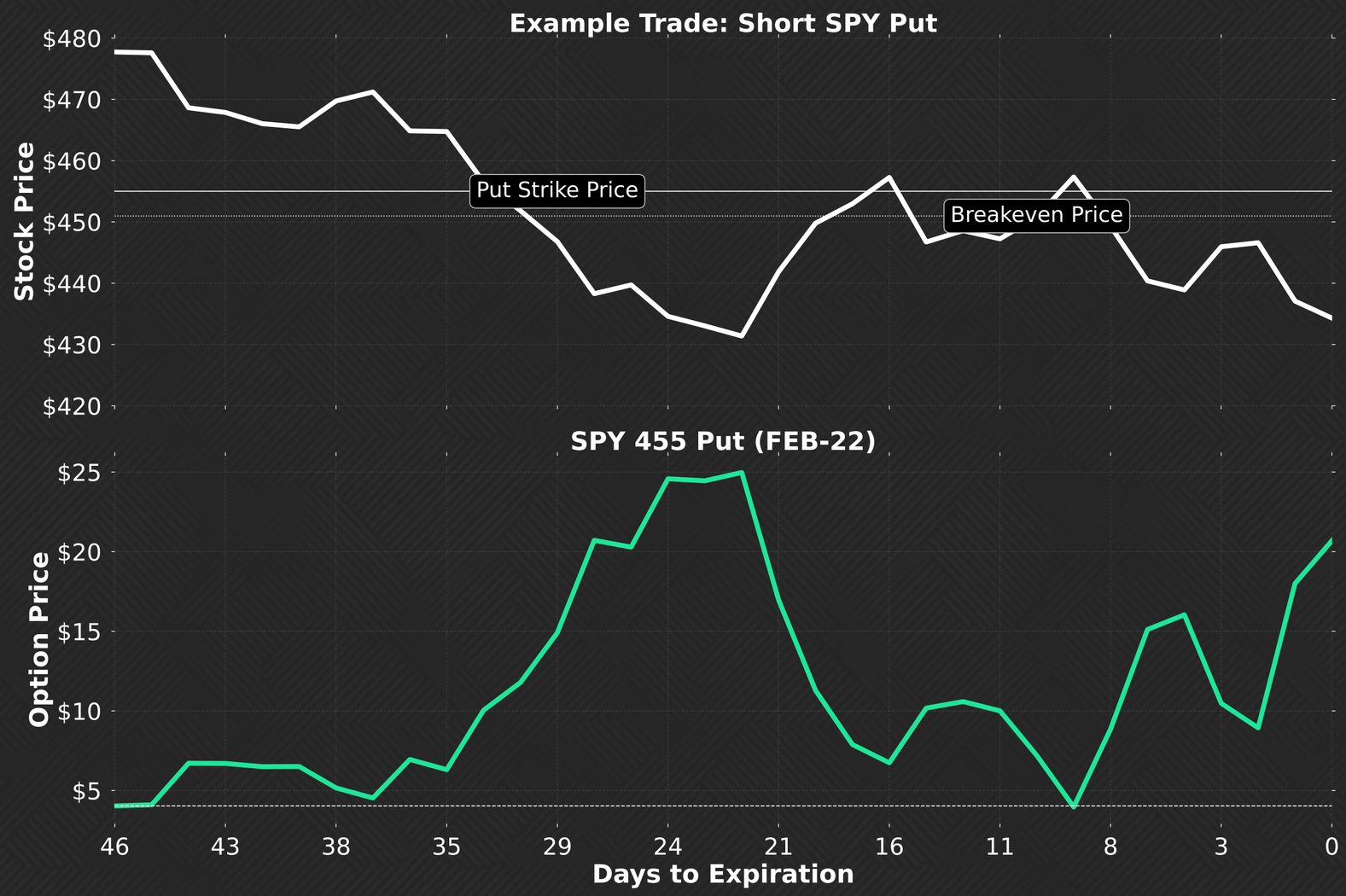
Unprofitable Short Put Example



Entry Stock Price: $477.72
Put Strike: $455
Put Sale Price: $4.04
Expiration: February 18, 2023 (46 DTE)

A hypothetical trader is engaging in a monthly short put strategy on SPY where they short a put 5% below SPY's price.

In the first month of 2023, SPY fell about 10%, resulting in a huge appreciation in the 455 put's value as it became notably ITM.

The put ascended to a high price of $25, over 6x higher than the inital sale price of $4.04.

The short put expired with its intrinsic value of $20.69, resulting in a loss of **-$1,666 (-412%)** per contract.

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	STOCK & ETFs OPTIONS	FUTURES OPTIONS	MICRO FUTURES OPTIONS	STOCKS
OPEN	$1.00 per contract ($10 max per leg)	$2.50 per contract	$1.50 per contract	$0.00 unlimited shares
CLOSE	$0.00 commission	$0.00 commission	$0.00 commission	$0.00 commission

	FUTURES	MICRO FUTURES	SMALL FUTURES	CRYPTO
OPEN	$1.25 per contract	$0.85 per contract	$0.25 per contract	1% of total crypto purchase ($10 max)
CLOSE	$1.25 per contract	$0.85 commission	$0.25 per contract	1% of total crypto sale

CAPPED COMMISSIONS

We cap opening commissions at $10 per leg[2] on all listed equity options trades, no negotiations necessary.

20 Puts/Calls single leg	~~$20~~	$10 **OPENING**[2] COMMISSION	$0 **TO CLOSE**[1]
20 Verticals two legs	~~$40~~	$20 **OPENING**[2] COMMISSION	$0 **TO CLOSE**[1]
20 Iron Condors four legs	~~$80~~	$40 **OPENING**[2] COMMISSION	$0 **TO CLOSE**[1]

[1]Applicable exchange, clearing, and regulatory fees still apply to all opening and closing trades except for cryptocurrency orders which are not subject to exchange, clearing, and regulatory fees.

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