



# Unlocking Futures Options: A Guide to Pricing and Trading



Options  
**Strategies**

## What are options on futures?

Options on futures, also known as futures options, are derivative instruments similar to options on stocks or ETFs. The key difference is that the underlying asset for options on futures is a futures contract instead of shares of an equity or index product.

When an investor buys an option on a futures contract, they have the right, but not the obligation, to take a specific action:

- **Call option:** The holder/buyer has the right to buy a specific futures contract.
- **Put option:** The holder/buyer has the right to sell a specific futures contract.

This right to buy or sell the futures contract is set at a predetermined price, known as the strike price, and must be exercised on or before a specific date, called the expiration date.

Just like options on stocks, the buyer of an option on a futures contract pays a premium to buy the option. If the buyer decides not to exercise their right, they lose the premium but nothing else.

The seller/writer of an option on a futures contract collects the premium and assumes an obligation. If they are assigned, they must meet the obligation:

- **Call option:** The seller has the obligation to deliver a specific futures contract at the strike price.
- **Put option:** The seller has the obligation to buy a specific futures contract at the strike price.

## Understanding exercise styles

The exercise style defines when an option can be exercised.

- **European-style options:** These options can only be exercised at the expiration.
- **American-style options:** These options can be exercised any time before expiration.

The CME Group offers a mix of both styles of futures options depending on the underlying asset. They provide a functional tool to quickly view options and futures contract information the [Contract Directory and Calendar Tool](#).

## Additional considerations

### Derivatives

Remember, futures are complex products that include significant risk. It is possible to lose more than your initial investment. Futures and options on futures are both classified as derivatives because their value is derived from an underlying asset rather than having intrinsic value. In other words, these financial instruments do not have value in and of themselves but gain their value from the assets they represent. For instance, a lean hog futures contract derives its value from the physical lean hogs that can be delivered to fulfill the contract's obligations, not from the contract itself.

An option on a futures contract can be considered a second derivative of the underlying security since the futures contract is a derivative of the index, and the option is a derivative of the futures contract. As a result, there are additional variables to consider when dealing with options on futures.

## Expirations

Both the option and the underlying futures contract have expiration dates and are subject to unique supply and demand dynamics. Traders must be mindful of both the expiration of the options they select and the expiration of the underlying futures contracts. The expiration cycles for futures options are linked to the expiration dates of their underlying futures contracts, which can vary depending on the specific futures market.

Options are available on futures contracts until their expiration. Options expirations beyond the underlying's front-month expiration use the forward-month contracts as their underlying. Often there will be an option that expires on the same date as the underlying futures contract. When that occurs, any in-the-money contracts that expire will be settled in cash regardless of whether they are normally deliverable or not. Expired futures contracts cannot be delivered.

The example option chain from the TradeStation FuturesPlus platform shows several options available on the E-mini S&P 500 futures contract.

Active	IV	SV	CPos	CΔ	CBidQ	CBid	CTV	CAsk	CAskQ	Strike	PBidQ	PBid	PTV	PAsk	PAskQ	PΔ	PPos
+						<b>ES Jun24</b>	46	5278.75		5279.00	69						5279.00
+						<b>ES Sep24</b>	4	5340.75		5341.25	3						5341.00
+						<b>ES Dec24</b>	1	5399.00		5401.75	1						5400.38
+						ES Mar25	1	5441.50		5480.75	1						5461.13
+						ES Jun25	2	5491.75		5535.75	2						5513.75
+						ES Sep25											5587.00
+						ES Dec25											5633.00
+						ES Mar26											5679.75
+						ES Dec26											5819.25

The bold dates are the options expirations. In the center are the underlying ES futures contracts with their expiration month. Notice that the ES June 2024 futures contract was the front month at the time. The June options were available to trade with that contract as the underlying. But if you traded the September options on the ES, you would use the September E-mini S&P 500 futures as the underlying.

Looking at the option chain for the end-of-month options on the E-mini S&P 500 futures, we see several options series using the same underlying futures contract. The June expiration option has the June ES future contract as its underlying. The July options are tradable beyond the June futures expiration, so the underlying for those options is the September contract. Because the August and September options expire before the September ES futures contract expires, they share the same underlying.

Active	IV	SV	CPos	CΔ	CBid0	CBid	CTV	CAsk	CAsk0	Strike	PBId0	PBId	PTV	PAsk	PAsk0	PΔ	PPos
+							ES Sep24	3	5360.50	5377.00	1					5366.25	
+							ES Sep24	3	5360.50	5377.00	1					5366.25	
+							ES Sep24	3	5360.50	5377.00	1					5366.25	
+							ES Dec24	1	5339.75	5475.00	1					5423.25	
+							ES Dec24	1	5339.75	5475.00	1					5423.25	
+							ES Dec24	1	5339.75	5475.00	1					5423.25	
+							ES Mar25	2	5466.75	5507.75	2					5487.25	
+							ES Jun25	2	5517.25	5562.50	2					5539.88	
+							ES Sep25									5588.00	

The September ES futures contract expires on the third Friday in September. Since the September option does not expire until the 30th of the month, it uses the December futures contract as its underlying security.

This is a key element of options on futures. The underlying asset for the option must expire after the option's expiration date. This means the expiration month for the option may not always equal the expiration of the underlying. This is the same for all options on futures.

## Settlement

There are two main types of settlement for options on futures: deliverable and cash settled.



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- **Deliverable options:**

These result in the actual delivery of the underlying futures contract upon exercise or assignment. If you hold a long call option and choose to exercise it, you will be assigned a long position in the underlying futures contract at the strike price. Conversely, if you hold a long put option and exercise it, you will be assigned a short position in the underlying futures contract at the strike price. It's crucial to understand that you are responsible for managing the resulting futures position with deliverable options, which may involve further capital requirements and risk management considerations.
- **Cash-settled options:**

These do not result in the delivery of the underlying futures contract. Instead, the option is settled in cash based on the difference between the underlying futures contract's strike price and the settlement price. If the option expires in the money, the option holder will receive a cash payment equal to the option's intrinsic value. If the option expires out-of-the-money, it will expire worthless, and no cash settlement occurs. Cash-settled options can be a more straightforward way to trade options on futures, as they do not involve the management of an underlying futures position. However, it's essential to consider the liquidity and trading volume of cash-settled options, as they may differ from their deliverable counterparts.

For more information on TradeStation's procedure for the settlement of options on futures, please contact our trade desk.

## Trading hours

Many options on futures are open for trading 23 hours a day, from Sunday evening until Friday, excluding holidays. Specific trading hours may vary for different securities, so refer to the CME Group's [Contract Directory and Calendar Tool](#) for precise information.



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## Taxation and pattern day trading

Options on futures are treated like the futures themselves, potentially offering a tax advantage compared to options on stocks or ETFs. Tax laws can be complex and may change over time, so it's crucial to consult a qualified tax advisor to understand how your specific options trades will be taxed.

Options on futures are not subject to pattern day trading requirements, unlike options on stocks and ETFs.

## Understanding the options on futures pricing

Futures options premiums are quoted per contract, not per share like stocks. Stock option quotes are multiplied by 100 to get the total cost. Since each futures option represents one futures contract, the quote is multiplied by the future's point value to determine the option's price.

For example, if you are interested in buying the 440 strike July 24 Call on corn (OZC is the option symbol), the ask price in the picture below is 11'0. Each point on the ZC contract is \$50.

The screenshot shows an Options Chain for OZC (Corn) with the following data:

Active	IV	CPos	CVol	CΔ	CBid0	CTV	CBid	CAsk	Strike	PBid	PAsk	PTV	PΔ	Gamma	Theta	Vega	PAsk0	PVol	PPos	
Jul24 (17 days; Jun 21, 2024)																				
ZC Jul24										198	439'0	439'0	35							439'0
21.97	22.17	0	6	92.71	29'5	0	0	0	410	0'2	3'4	0'5	7.05	0.65	-4.06	6.39	1	11		
21.40	21.43	0		89.16	25'0	0	0	0	415	0'4	0	1'0	10.60	0.90	-5.41	8.67		2		
21.09	21.07	0	16	83.95	20'6	0	50'4	0	420	0'4	5'0	1'5	15.80	1.21	-7.08	11.43	1	199		
21.00	20.82	0		76.96	16'6	0	0	0	425	1'0	0	2'5	22.79	1.52	-8.88	14.30		163		
21.08	21.07	0		68.42	13'1	0	30'0	0	430	2'1	4'7	4'1	31.33	1.77	10.49	16.77	5	807		
21.29	21.31	0		58.89	10'1	0	50'0	0	435	4'4	7'4	6'0	40.87	1.92	11.63	18.37		1		
21.61	21.56	0		49.11	7'5	7'2	11'0	0	440	2'0	12'0	8'4	50.65	1.94	12.11	18.85	1	1769		
22.05	22.17	0		39.82	5'6	5'3	13'0	0	445	4'6	0	11'5	59.93	1.84	11.96	18.25				
22.59	22.53	0	652	31.58	4'2	0	8'0	0	450	9'0	18'0	15'0	68.18	1.66	11.28	16.83	2	419		
23.22	23.14	0	2300	24.65	3'1	0	15'0	0	455	3'0	0	18'7	75.10	1.43	10.25	14.93				
23.95	23.87	0		19.09	2'2	1'2	5'0	0	460	15'0	25'4	23'1	80.66	1.20	-9.08	12.88	2	258		
24.79	24.73	0		14.80	1'6	1'2	4'2	0	465	1'2	0	27'4	84.96	0.98	-7.94	10.94				
25.75	25.95	1		11.58	7	1'2	0'6	1'4	470	5'4	32'4	32'1	88.18	0.80	-6.93	9.23	2	94		
26.84	26.80	0		9.21	1'0	0	4'0	0	475	0	0	36'6	90.55	0.65	-6.09	7.82				

Therefore, buying one OZC 440 July 24 Call would cost \$550 (11 x \$50). Buying or selling futures contracts requires an initial margin set by the CME and varies by futures contract. For instance, TradeStation's overnight margin for one corn futures contract is \$1430 at the time of writing.

The cost of an option, known as the premium, is influenced by various factors such as strike prices, the price of the underlying, volatility, and the time remaining until expiration. Generally, establishing an option position is less expensive than taking an equivalent position in the futures market.

Traders often buy and sell to close options on futures contracts before expiration to secure profits or minimize losses to less than the initial premium paid for the option.

## Trading spreads

The same calculations apply to options spreads on futures. For example, if you changed the long call into a bull call debit spread on corn:

- Buying the long 440 Call from the ask is 13'5
- The short 460 Call's bid is 4'4

To buy the 440/460 bull call spread would cost 9'1 (13'5 – 4'4). Since the quote is in eighths, 9'1 is 9.125. Thus, the spread cost would be \$456.25 (9.125 x \$50).

### Futures options vs Stock/ETF options

	Futures options	Stock / ETF options
Underlying	One futures contract	100 shares
Exercise style	European and American	American
Settlement	Delivery of futures contract or cash settled	Delivery of underlying shares
Quote multiplier	Futures point value	100 Shares
Tick size	Varies based on underlying future	Dollars and cents
Trading hours	23 hours x 5.5 days	9:30 am to 4:00 pm EST
Pattern day trading rules	No	Yes
Taxation	IRC 1256 Contracts	Typically short-term for trading, depending on the situation

## How are options on futures used?

Options on futures are versatile financial instruments that can be used for various purposes, including:

### 1 Hedging

Options on futures can help manage risk, whether it's related to an investment position, a portfolio, or a business operation. For instance, a farmer concerned about falling wheat prices before harvest could buy a put option on wheat futures. If the cost of wheat drops, the increase in the put option's value could compensate for the decrease in the value of the farmer's crop.

### 2 Directional trading

Traders can use options on futures to speculate on the future price direction of an underlying asset. If a trader expects the price of copper to rise, they could buy a call option or open a bullish spread on copper futures. If correct, the option position's value would likely increase, allowing them to potentially close the position for a profit. Conversely, if the trader expects copper prices to fall, they might buy a put option or open a bearish spread on copper futures.

### 3 Neutral markets

When a trader believes that a market will remain relatively stable or trade within a narrow range, they may use options on futures to profit from time decay and potential changes in implied volatility. This strategy, often referred to as a neutral or non-directional trading approach, aims to capitalize on market stability.

## Trading options on futures with TradeStation

To begin trading options on futures with TradeStation Securities, you'll first need to open a futures options account. Once your account is set up, you can access futures options through the FuturesPlus platform. It's important to note that TradeStation Securities requires a minimum start-of-day equity balance of \$5,000 in your account to place opening transactions on futures options contracts. This requirement helps ensure you have adequate capital to manage the risks associated with trading these leveraged instruments. If you have any questions about account requirements or need assistance getting started, our dedicated Client Experience team is always ready to help.

### Test before you trade

Before diving into live trading, login to the TradeStation FuturesPlus platform in simulated-trading mode to familiarize yourself with options on futures and order entry. Practice placing simulated trades in this risk-free environment to build confidence and skill before investing real money in actual trading activities.

### Conclusion

Options on futures offer a unique opportunity for traders to leverage their positions and potentially amplify their returns. However, this could also magnify their risks. It's essential to approach these instruments with a solid understanding of their mechanics, risks, and rewards. As with any trading strategy, doing your homework, practicing risk management, and continually educating yourself about the markets are crucial.

Success in trading options on futures hinges not only on seizing opportunities but also on managing risk and making informed decisions. By taking the time to master these concepts and develop a well-rounded trading plan, you can unlock the power of options on futures and work towards achieving your financial goals in the dynamic world of commodity and financial markets. As always, if you have any questions or need further guidance, the team at TradeStation Securities is here to support you on your trading journey.

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