

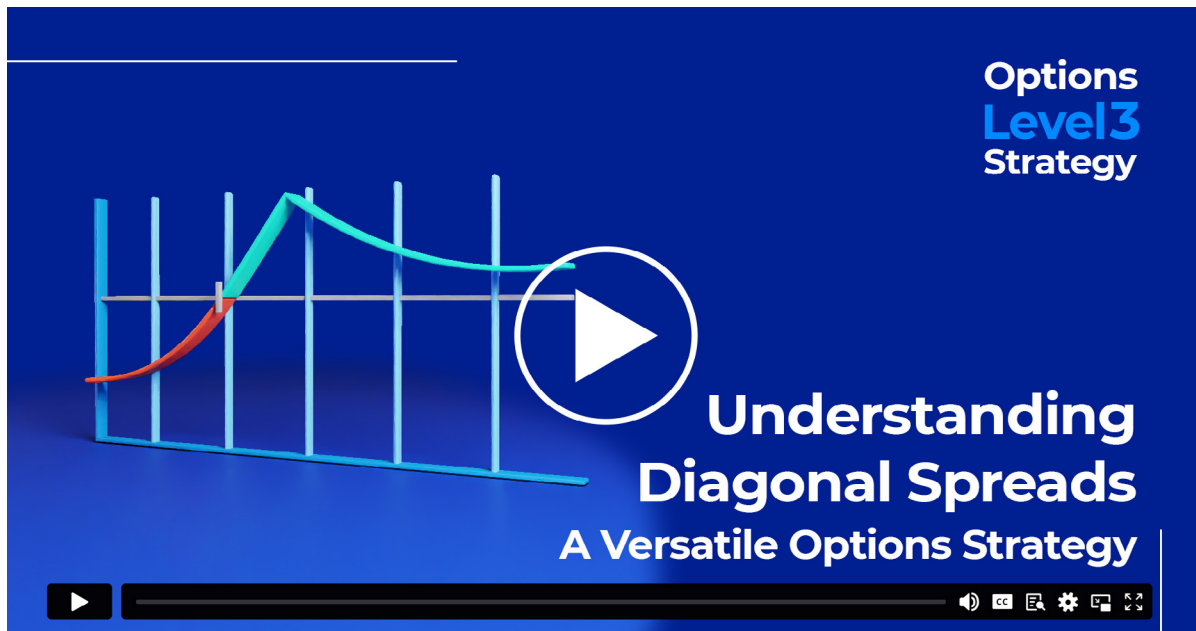


Understanding Diagonal Spreads: A Versatile Options Strategy



Options
Strategies

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What is a diagonal spread?

A diagonal spread is a complex options strategy that a trader may use to potentially profit from various factors, including time decay, changes in volatility, and price movement. The term diagonal comes from the spread being a combination of a vertical and a horizontal (calendar) spread. The strategy involves buying one option and selling another on the same underlying asset, with different strike prices (the vertical portion) and expiration dates (the horizontal). Both options are of the same type: either calls or puts, with the sold option having a closer expiration date than the bought option.

Risks of diagonal spreads

1 Assignment risk

If the sold option is exercised and you are assigned, you may be required to buy or sell the underlying shares. This risk exists until the option expires or is bought to close.

2 Volatility risk

Volatility affects the longer-term option more than the shorter one. If volatility drops significantly, the value of the long option could decrease more than the short-term one benefits.

3 Directional risk

Many traders aim for the short option to expire out-of-the-money allowing the long option to gain intrinsic value. However, if the underlying price moves against the long option, its value could drop significantly.

4 Variable risk

The risk profile line depicting profit and loss is variable based on when the position is closed.

Types of diagonal spreads and how to create them

Call diagonals

1 Bullish call diagonal (debit spread)

The trader buys an in- or at-the-money, longer-term call and sells an out-of-the-money, shorter-term call with a higher strike.

2 Bearish call diagonal (credit spread)

The trader sells an out-of-the-money short-term call and then buys a longer-term call at a higher strike price.

3 Expiration structure

The expiration date of the long call is typically set between one and three months after the expiration date of the short call.

4 Objective of bearish credit spread

The goal is for the short option to expire out-of-the-money, so the premium collected becomes realized profit. Another call option can be sold to repeat the process.

5 Managing the long call

The long call can be sold with around 30 days left until expiry to recover some of the time value and possibly some intrinsic value, or it may be held until closer to or into expiration if the trader believes it will increase in value.

6 Exercise of the long option

The long option will be automatically exercised at expiration if it is at least \$0.01 in the money. Alternatively, it can be sold before expiration for a profit or a loss.

7 Maximum loss

For a debit spread, the maximum loss is the premium paid. For a credit spread, it is the spread width minus the premium collected if both legs are closed at the short call's expiration.

Put diagonals

1 Bearish put diagonal (debit spread)

The trader buys an in or at-the-money, longer-term put and sells an out-of-the-money, shorter-term put with a lower strike.

2 Bullish put diagonal (credit spread)

The trader sells an out-of-the-money short-term put and buys a longer-term put at a higher strike price.

3 Expiration structure

The expiration date of the long put is typically set between one and three months after the expiration date of the short put.

4 Objective of bullish credit spread

The goal is for the short put to expire out-of-the-money, so the premium collected becomes realized profit. Another put can be sold to repeat the process.

5 Managing the long put

The long put may be sold with about 30 days left until expiry to recover some of the time value and possibly some intrinsic value, or it can be held closer to or into expiration if the trader believes it will increase in value.

6 Exercise of the long option

The long option will be automatically exercised at expiration if it is at least \$0.01 in-the-money. Alternatively, it can be sold for profit or loss before expiration.

7 Maximum loss

For a debit spread, the maximum loss is the premium paid. For a credit spread, it is the spread width minus the premium collected if both legs are closed at the short put's expiration.

Diagonal Spreads	Spread type	Shorter expiration	Longer expiration	Strike price 1	Strike price 2	Underlying Assumption
Calls	Long Debit	Sell Shorter	Buy Longer	Buy Lower ITM/ATM	Sell Higher OTM	Bullish
	Short Credit	Buy Shorter	Sell Longer	Sell Lower OTM	Buy Higher OTM	Bearish
Puts	Long Debit	Sell shorter	Buy Longer	Sell Lower ITM/ATM	Buy Higher OTM	Bearish
	Short Credit	Buy Shorter	Sell Longer	Buy Lower OTM	Sell Higher OTM	Bullish

Key factors to consider when selecting strike prices

Strike price distance

The distance between your strike prices affects both the cost and potential profit of your diagonal spread:

- a. Wider spreads or strikes further apart cost more but offer larger potential profits.
- b. Narrower spreads cost less but have a smaller profit potential.
- c. Many traders choose strikes that are 2-5 strikes apart, depending on the stock price.
- d. The closer the strikes are to the underlying price, the higher the initial cost.
- e. The farther the strikes are from the current price, the larger the price movement required for potential profit.

Delta considerations

Delta is the expected rate of change in an option price based on a one-point increase in the underlying asset's price. Delta can help you choose effective strike prices for your diagonals.

Debit Diagonals:

1. For debit call diagonals, consider buying a longer-term option with a delta between 0.70 and 0.80 and selling a shorter-term option with a delta between 0.30 to 0.40. This will result in a net-positive delta above 30, creating a bullish position that benefits from upward movement in the underlying price.

2. For debit put diagonals, use similar deltas but in reverse. Buy a longer-term option with a delta of -0.70 to -0.80, and sell a shorter-term option with a delta of -0.30 to -0.40. This will result in a net-negative delta that benefits from bearish underlying price movement.

Credit diagonals:

1. Credit diagonals typically have lower deltas since both options are OTM.
2. Bullish diagonals should have a positive delta.
3. Bearish diagonals should have a negative delta.

Price impact factors

Several elements affect how your choice of strike prices impacts the spread's price:

Stock price location

1. Choose strikes based on where you expect the stock to trade.
2. The sold option should be slightly out-of-the-money for income generation.
3. The bought option provides protection against adverse moves

Market direction

1. Bullish outlook: Place call diagonal strikes above the current stock price.
2. Bearish outlook: Place put diagonal strikes below the current stock price.
3. Neutral outlook: Place strikes close to the current stock price.

Cost considerations

The total cost of your spread will depend on:

1. The width between strikes.
2. Time until expiration for both options.
3. Current implied volatility levels.
4. The underlying stock's price.

A general rule for debit diagonals, try to keep the spread's cost (premium paid) less than the spread's width. If possible, keep it less than half the width between strikes. This gives you a reasonable chance to earn back your investment.

Time decay and diagonal spreads

1. Shorter-term options lose value faster than longer-term options.
2. This decay rate difference benefits the spread, as the value of the sold option erodes faster.
3. Choose strikes that take advantage of this time decay difference.

How volatility affects diagonals spreads

1. Higher implied volatility makes options more expensive.
2. Look for situations where the shorter-term option has higher implied volatility than the longer-term option.
3. This setup creates favorable pricing for selling the near-term option.

Adjusting a diagonal spread

As market conditions change, you may need to adjust your diagonal spread to manage risk or take advantage of new opportunities. Here are some common adjustment techniques:

Rolling the spread

“Rolling” a diagonal spread involves closing the short-dated option and opening a new short option with a later expiration. This allows you to:

1. Extend the time frame of the trade.
2. Generate potential additional income.
3. Adjust the strike prices to match your market outlook.

To roll a diagonal:

1. Close the short option.
2. Open a new short option with a later expiration date.
3. If necessary, sell the longer-term option and buy a new option with a later expiration date.

Adjusting strike prices

You can also modify the strike prices of your diagonal spread by:

1. Widening the spread (buying higher/selling lower strikes).
2. Narrowing the spread (buying lower/selling higher strikes).

Widening the spread increases your potential profit and your risk. Narrowing the spread reduces risk and your profit potential.

Consider adjusting strikes based on changes in:

1. The underlying stock price.
2. Implied volatility levels.
3. Your market outlook.

Closing vs. rolling

Sometimes, it may be more beneficial to simply close the entire diagonal spread rather than rolling it, such as when:

1. The trade is no longer aligned with your market view.
2. The risk/reward profile has become unfavorable.
3. You want to take profits or limit losses.

Closing the spread resets your position and allows you to potentially re-enter with a new diagonal setup.

Stay flexible

Diagonal spreads are versatile strategies, so be open to adjusting your position as market conditions evolve. Careful monitoring and timely adjustments can help you maximize the potential of this powerful options trading technique.

The ability to sell a second options contract after the near-term contract expires or is closed is a key component of the diagonal spread. The spread between the short and long options must be at least the same width to avoid adding risk. Selling a new option will generate more credit and may even lead to a risk-free trade with unlimited upside potential if the net credit received exceeds the width of the spread between the options.



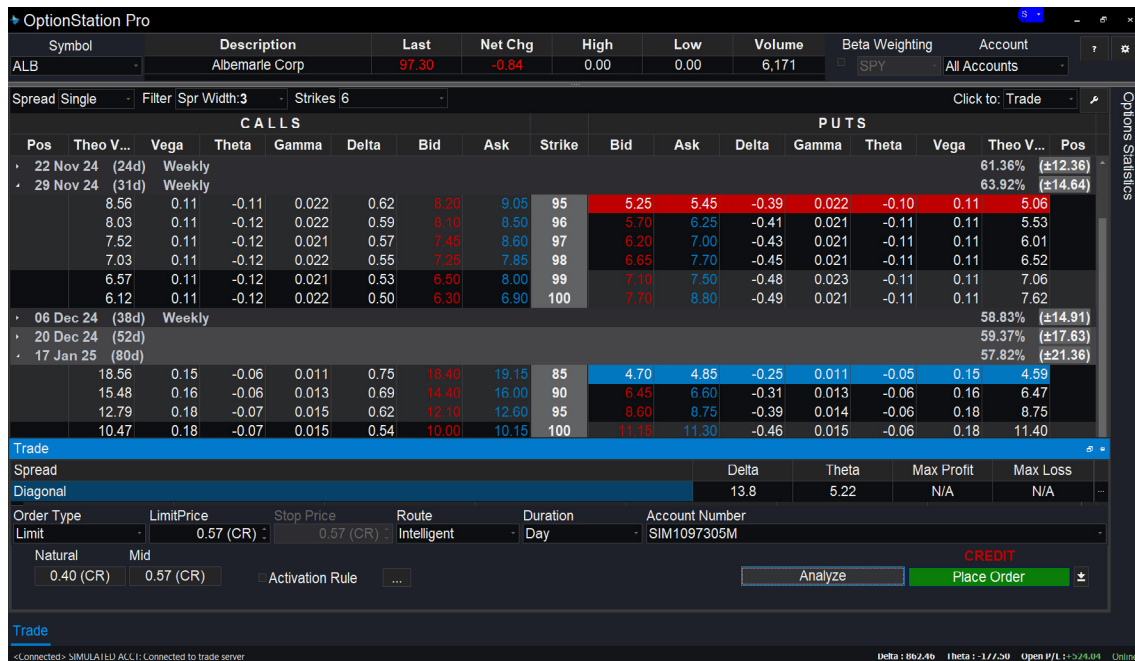
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Strategy example – Bull Put Diagonals

Using RadarScreen® in the Bull Put Diagonals workspace to filter for candidates, Albemarle Corporation (ALB) appeared in the S&P 500 filtered list as a possible bullish stock.



To build a bull put diagonal spread, we bought the 17 January 85 put and sold the shorter-term 29 November 95 put for a credit of \$0.57, or \$57.



Looking at the risk profile, the max profit and risk are showing N/A, highlighting the variable nature of the diagonal spread. Should the position be closed at the shorter-term option's expiration, the maximum loss would be \$9.43. This is the difference between the strikes (95-85=10) minus the \$0.57 premium collected when opening the position.



The possible outcomes:

- 1 This diagonal put spread aims to have the November 95 put expire out-of-the-money. If that happens, the premium collected from selling becomes a realized profit. If the trader is still bullish on the stock, a December 95 put could be sold against the long January 85 put to potentially collect an additional premium.
- 2 The trader could allow the November 95 put to expire OTM and sell the long January 85 put to recoup the extrinsic(time) value left in the option.
- 3 The diagonal spread allows for some flexibility. If the price of ALB has dropped below 95 but was likely to stay above 90, the December 90 calls could be sold instead. If the price of ALB rallied, a higher strike put could be sold to collect a greater premium.

- 4 If ALB's price threatened to drop below 95 near the short put's expiration, both options could be closed for a smaller profit. The time value of the long put would help offset some of the loss from the short put.
- 5 If ALB had dropped below the breakeven price of \$88.68 at the expiration of the November short put, the put would have expired in the money and been automatically exercised. The trader would be assigned and must buy the shares assigned to them at \$95. They could keep or sell the shares for a loss.
- 6 The maximum loss would be realized if the price of ALB dropped, and the 95 puts were assigned while the trader exercised their 85 put. The loss would be \$9.43, the spread of \$10 between the strikes minus the \$0.57 premium collected to enter the diagonal put spread.

Monitoring and exiting a diagonal spread

Diagonals are highly sensitive to time and momentum, requiring regular supervision and possible adjustments throughout the trade. While a diagonal can be held until expiration, the time value would be lost. If one option is in-the-money at expiration, it will be automatically exercised, and the trader will be responsible for the new position in the underlying. Ensure your account is well funded and you are prepared to handle an exercise or assignment.

Traders often sell diagonals to close for either a profit or a loss before expiration. If the underlying price moves to or beyond a certain level, traders can use the [activation rule tool](#) to set a stop-loss or take-profit order. Explore the article and video in the Options Education Center for more information on activation rules.

Additionally, the diagonals can be closed after the expected event to recover the time value and the possible intrinsic value gained.



Watch the Webinar – “Diagonal Spreads: Analyzing Long-Term Income Potential”. Discover how to go beyond directional trading and benefit from time and volatility.

Practice with simulated trading

To help you get comfortable with diagonal spreads, you can practice placing, managing, and exiting these strategies in TradeStation's Simulated Trading mode. This environment allows you to experiment with different diagonal configurations. As you become more familiar with the mechanics and nuances of diagonal spreads, you can then start incorporating them into your live trading portfolio. Start with small position sizes as you build experience. The Simulated Trading environment is an excellent way to develop your diagonal spread skills in a safe setting before transitioning to live trades.

Conclusion

Diagonal spreads are a versatile options strategy that allows traders to potentially generate income, manage risk, and profit from market movements. By carefully selecting the strike prices and expiration dates, you can construct diagonal spreads tailored to your trading goals and market outlook. As with any options strategy, it's important to fully understand the risks and use appropriate position sizing.



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