



## Unlocking the Power of Options Credit Spreads

Helping options traders to better methods to manage credit spread positions with the goal of improved profitability and reduced drawdowns.



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## Introduction

Much has been written about how to properly enter an options credit spread - selling an OTM (out-of-the-money) put spread or call spread. Whether it is using support and resistance levels, identifying a specific standard deviation away from the underlying asset's value, using specific deltas or targeting a preferred theta decay rate, the methods for entering are widely documented.

And while the entry method plays a role in successfully trading credit spreads, this is only one factor in the overall trade management process. What happens to the underlying asset and the related options contracts between the open and the close of the position determines whether the trade will be a profitable one. Because the profits don't count until the position is closed. As most traders can attest, "paper profitability" can disappear in an instant.

So in the spirit of trading credit spreads successfully, we would like to share with you several of our methods to best manage credit spreads. Each one can serve as the foundation for a profitable management approach when implemented systematically and properly tuned to each individual trader's risk preference, trading style and even personality. These techniques can serve as reference points as you refine your credit spreads trading.

## Background

Before we begin, a quick recap of the construction of an options credit spread.

A credit spread is constructed when a trader sells an OTM put or call and then hedges the short option by buying a put or call further out of the money. They receive a credit for the sale of the spread and their risk is limited to the width of the spread minus the credit received.

As an example, a trader could sell a 2400/2395 put spread in the SPX (S&P 500 index) in the September monthly expiration and receive a credit of 1.10. Because the spread is 5 points wide, the max risk on the trade is 3.90 (5 - 1.10). The maximum amount that the trader can gain on this trade is a 28.2% return on risk (the initial credit divided by the max risk). The buyer of the spread paid the 1.10 debit and is likely expressing a bearish point of view on the SPX (and/or hedging an existing portfolio or position).

Chart 1. SPX put spread

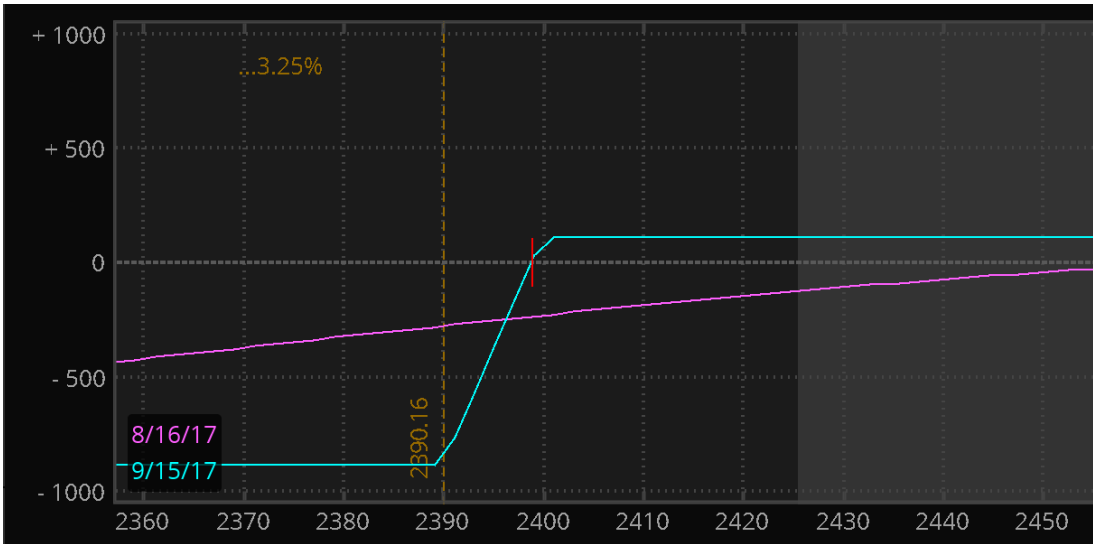
-1	SPX	31 AUG 17	2400	PUT	1.10	0.31%	11.48%	3.00
+1	SPX	31 AUG 17	2395	PUT	CREDIT	0.31%	11.71%	

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If the SPX finishes at or below 2395, the option seller will lose the maximum - 3.90. Even though this may be a low probability event based on the level of the SPX when the trade is opened, a single maximum loss can wipe out weeks or months of trading profits. Risk management is crucial to the long-term success of the options seller.

A similar structure can be constructed with a call spread. With the SPX at 2468, a trader could sell to open the 2510/2520 call spread for a 1.75 credit. The max risk is again the width of the spread minus the credit received -  $10 - 1.75 = 8.25$ . This spread, slightly less OTM, offers traders a maximum return on risk of 21.21%.

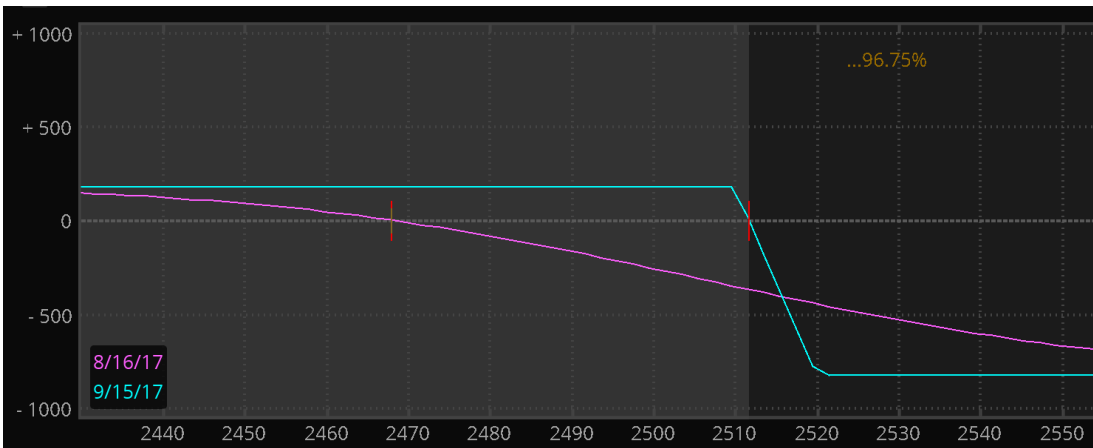
The below payout diagrams (charts 1 and 2) are frequently cited when discussing the P+L of a credit spread. But what happens between the open and close of the position is frequently much different than the clean lines at expiration. In an effort to better manage credit spreads to improve consistency as a trader, let's look at several methods that can help.



**Chart 2**

The typical put spread payout diagram for options sellers.

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**Chart 3**

The typical call spread payout diagram for options sellers.

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## A few caveats

There are as many ways to trade options as there are options traders. The methods that we will discuss here are only a few of the many ways to manage credit spreads - there are several, such as dynamic hedging, kite spreads and rolling with variable position sizes - that are beyond the scope of our discussion today. We simply want to share some simple ways to make your credit spread trading more consistently profitable.

And these approaches to managing and closing spreads are not mutually exclusive - traders can use multiple methods to build a robust risk management approach to credit spread trading.

## How and when to close a credit spread

One of the main attributes that attracts many traders to credit spreads is the win rate. When selling OTM put or call spreads, the underlying asset can move around within a range and only needs to avoid hitting the short strike at expiration to be profitable. This typically provides traders with a win rate of 75% or more. While that is appealing, it doesn't guarantee success.

## Holding through expiration

As an example, let's look at selling a weekly 5 point OTM put spread in the SPX (S&P 500 index). Selling the 2400/2395 put spread with 10 days until expiration and the SPX currently at 2425 would bring in a 1.10 credit.

That's a 1.10 return with a maximum risk of 3.90. We will look at the most passive approach to selling credit spreads - openign the position and holding through expiration. This amounts to risk management by position size (and placement of the long option to hedge the short strike) and carries with it a host of unfavorable features.

Since returns do not always flow smoothly and in a particular order, let's look at several scenarios where a trader holds their credit spreads until expiration.

### *Side note*

The 2400 strike put has a delta of 32. Delta values are often used as by traders shorthand for the probability of expiring in the money. So a 32 delta put strike has a 68% probability of expiring worthless.

Obviously delta values change rapidly as the underlying moves (as measured by the options greek "gamma") - think of the deltas and OTM probabilities at expiration (that will change constantly over the life of the trade) more as a snapshot in time.

## Scenario 1: The "ideal" full loss

This represents a best case scenario where the trader realizes all of the profitable trades first (and it does not include transaction costs) in a 75% win rate system.

	Weekly Return	Total Return
Week 1	1.10	1.10
Week 2	1.10	2.20
Week 3	1.10	3.30
Week 4	-3.90	- .60

## Scenario 2: The impact of an early loss

If the loss occurs early in the run of four trades, the returns table feels quite different, with a trader underwater for three of the four weeks.

	Weekly Return	Total Return
Week 1	1.10	1.10
Week 2	-3.90	-2.80
Week 3	1.10	-1.70
Week 4	1.10	- .60

## Scenario 3: A small reduction in winning percentage

In periods of heightened volatility, the win rate can easily dip below the long term average of 75%, resulting in a month like this with a 50% win rate:

	Weekly Return	Total Return
Week 1	1.10	1.10
Week 2	-3.90	-2.80
Week 3	1.10	-1.70
Week 4	-3.90	-5.60

As the numbers clearly demonstrate, by blindly holding credit spreads until expiration is a recipe for disaster. Let's look at five decidedly more dynamic alternatives to crossing your fingers and holding your breath.

## Stop Loss Methods for Credit Spreads

Though common to directional traders, many income or credit spreads traders neglect to use firm stop losses. Perhaps it is because they are hoping that their positions will recover before they get closer to expiration or because they need to squeeze every last dollar out of their winning spreads but stop losses, defined before opening a position can be effectively used to improve overall profitability.

### Spread Value Stop Loss

One method of stop losses is to set the stop loss at a specific dollar value of the spread such as a value equal to the credit received. So in the previous example, the position would be closed if the value of the spread increased to 2.20 (double the 1.10 credit received). This approach would ensure profitability in the 75% win rate examples and minimize the drawdowns. A losing week would effectively cancel out a winning week, allowing a trader to remain out of the red even if their win rate dips to 50%. Compare the impact of a 2.20 loss to a max loss in the holding through expiration example.

**Table 4.** Hold through expiration vs. spread stop loss

	Weekly Return	Total Return		Weekly Return	Total Return
Week 1	1.10	1.10	Week 1	1.10	1.10
Week 2	1.10	2.20	Week 2	1.10	2.20
Week 3	1.10	3.30	Week 3	1.10	3.30
Week 4	-3.90	-.60	Week 4	--2.20	1.10

### Delta Value Stop Loss

Another stop loss to set would be the delta value of the short strike. In the above example of the put spread with a 32 delta short put, a trader could decide to close the spread if the delta of the short strike hits a predefined level such as 45, regardless of the actual value of the spread. If the SPX pulled back from the 2425 level and got close to 2400 early in the trader's holding period, the long put would help mitigate the losses in the short strike. If the predetermined delta level was hit closer to expiration, the long put may not help temper the short strike, especially when using larger width spreads.

Regardless of how close the trader is to expiration, a stop loss level based on the delta of the short strike can help to prevent a trader from incurring larger than desired losses on a single spread.

### Support/Resistance Level Stops

Traders with backgrounds as technicians may choose to identify key levels for the underlying and decide that, if those levels are breached, they will close the position. The levels could be based on former price levels, key moving averages, Fibonacci levels or weekly or monthly pivots. Whatever the method, using levels as an exit methods means identifying the spot on the chart where a trader will agree that the conditions for opening the credit spread are no longer valid and the position needs to be closed. Like all stop loss levels, these need to be identified when the positions are initially opened, rather than waiting until the spread begins to go against the trader.

**Chart 5.** Weekly pivot levels for the SPX index



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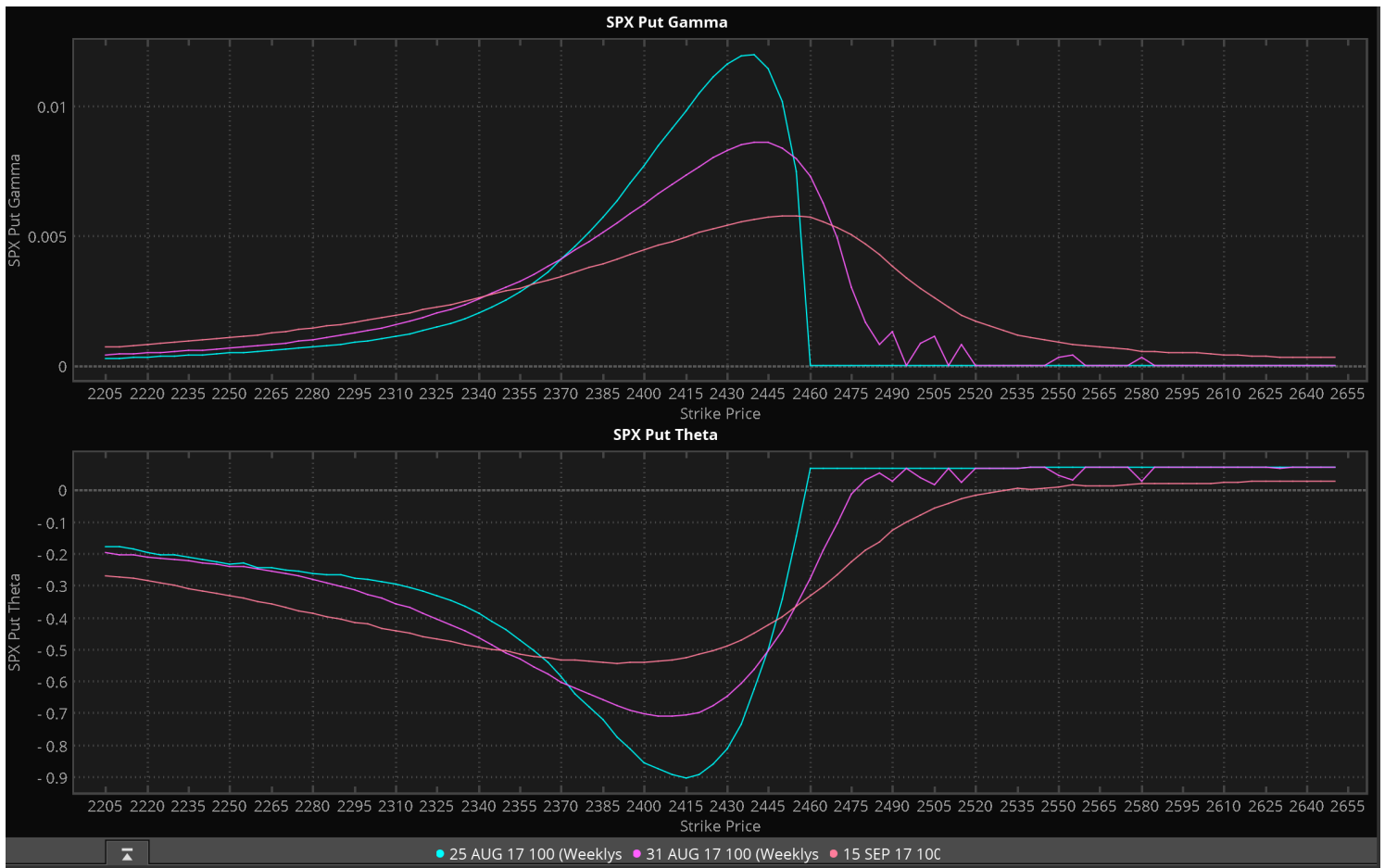


Looking at the 2400/2395 SPX put spread example, a trader could decide that a close in the SPX below 2420 would be a trigger to close the 2400/2395 put spread, based on the level of open interest in 2420 puts and the fact that the next key level of OI support is at 2400. If the trader is unwilling to have their short strike ATM (at the money) and deal with the resulting spike in gamma, then they will want to close it before it reaches 2400.

## Time limits

There are few credit spread trading experiences more frustrating than watching a profitable short spread suddenly become a losing trade in the days (or hours) before expiration. As the options contracts move towards expiration, the gamma levels (rate at which the deltas change) increase dramatically, especially for options contracts that are closer to the money. The below chart highlights the difference in gamma levels over a 3 week period (5, 10 and 25 days until expiration respectively).

**Chart 8.** Gamma and Theta diagram for SPX puts across three expiration cycles



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As you can see from chart 8, the short theta that the credit spread trader benefits from can easily be exceeded by the gamma risk that they assume, especially close to expiration. On the opposite side of the trade, a buyer of a put or call spread is wagering that the long or positive gamma will benefit them and they will get the move in the underlying before the options hit expiration.

For credit spread traders looking to avoid gamma risk in the final days before expiration, a simple time exit often helps. A trader can set a predetermined time to close their positions ahead of expiration. Could be a day, week or longer depending on the trader's specific time frame. The position can either be closed entirely or rolled into a new position with different strikes and expiration date.

Revisiting the 2400/2395 SPX put spread example we've used throughout could be opened with 10 days until expiration and could be closed three days ahead of expiration. If the short 2400 put still has a delta at or below the value of 32 (the delta when it was first opened) and implied volatility hasn't substantially increased, the spread will be able to be closed for a profit. If the SPX has moved up, a new credit spread can be opened with deltas in-line with a trader's specific methodology for strike selection.

## Conclusion

The five stop loss methods to manage credit spreads - deltas, spread values, levels, open interest and time – are all simple, rules-based approaches that are accessible to any retail credit spread trader. While the methods may lack the complexity of institutional management techniques such as dynamic hedging and scaling, they offer retail traders a simple but reliable way to manage risk, especially when trading smaller position sizes.

These methods are frequently used in combination to build a OCO (one cancels other) style of decision making. For example, a trader might use a delta stop combined with a time stop, closing the position when one of the two conditions is true. A trader who is short the SPX 2400/2395 put spread might decide to close the position when the delta of the short 2400 put hits 40 or when the time to expiration is 5 days - whichever happens first.

This is only one example of combining stop loss methods to manage position risk. By testing various methods and parameters, traders can find a repeatable process to manage risk that aligns with their risk tolerance, trading goals and portfolio construction. The combinations are almost limitless, especially when trading a range of contract types across various underlying assets (not simply equity indexes).

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