Credit Spreads, Debit Spreads: What's the Difference?!

Get a group of options traders in a room and sooner or later a discussion is likely to arise as to which is better: credit spreads or debit spreads. I've witnessed it countless times when teaching in-person classes. I've heard the arguments on both sides, too. Indeed, the world of option trading seems to fall into two camps: credit spread traders and debit spread traders.

> **Camp Credit Spread**: *The only way to make money with options is by selling them! Credit spreads are high-probability trades! Time is on your side!*
>
> **Camp Debit Spread**: *Debit spreads have great leverage for limited moves! Debit spreads offer better risk reward than credit spreads! With debit spreads you can make more than you stand to lose!*

For readers who haven't been around a lot of traders, it should be known that traders tend to be somewhat brasher, more confident than typical members of society. Each camp has reasonable arguments; and along with that, comes (from my own observation) staunch adherence to the doctrine. Each camp tends to look down their noses at the other with something of an air of superiority. *"They obviously don't understand…"*

But the fact is that, for all intents and purposes, debit spreads and credit spreads are actually the same thing. In fact, synthetically, they are identical. Let's take a closer look at the synthetic relationship between credit and debit spreads.

Synthetic Relationships

Before we get to the matter at hand, one must first understand a little thing called put-call parity. It's been around forever—like, literally, for centuries—and is possibly the most important pricing concept in all of option trading. But, alas! Some traders have gone their whole career without even an inkling of a notice of it.

At its root level, put-call parity is an equation that's relevance has obvious important implications; but, to be fair, may appear to have a limitation or two. In its original and purest sense, the following is the equation for put-call parity, which holds true for European options on non-dividend-paying stocks:

$$C + PV(X) = P + S$$

where C = Call premium, PV(X) = the present value of the strike price, P = the put premium and S = the stock price. But as mentioned, the equation was created for European options on non-dividend-paying stocks. There needs to be a few tweaks to make it function for typical (American-exercise) equity option.

A restated (less academic, more trader-friendly) version that accounts for dividends can be expressed:

Call + Strike – Interest + Dividend = Put + Stock

In addition to the alterations shown, traders must also account for the potential for early exercise of American-style equity options. This can be managed through use of an options-pricing model. When the put-call pair is observed in an option chain, the relationship between the call and put is bound together with great precision contingent upon this stated put-call parity and the early exercise consideration of both calls and puts.

From this logic progression, there can be born two important algebraic restatements of put-call parity:

Call = Put + Stock – Strike + Interest – Dividend

and

Put = Call – Stock + Strike – Interest + Dividend

Essentially what this states is that once interest, dividends (and early exercise potential) is factored in…

Call = Put + Stock

and

Put = Call – Stock

These representations are referred to as *synthetic relationships*. Synthetically, a long call equals a long put plus long stock. Synthetically, a long put equals a long call plus short stock. These relationships are very important to option pricing and position management—particularly when it comes to debit and credit spreads.

Synthetics and Vertical Spreads

Here's where the rubber hits the road. There are two options in any vertical spread, whether it's a call spread or put spread. One is long; one is short. Both can be synthetically compared to the other option in their put call pair.

Example

Imagine a trader buys a call and sells 100 shares of stock. What does he have? A long put. If the trader, likewise, sells a call and buys 100 shares of stock, what does he have? A short put.

So next, imagine the trader makes both of these stated hedged call trades. The trader buys a call and sells stock; and sells a call (with a higher strike) and buys stock. The trader has thus created a debit call spread, but one with stock hedging each leg. What did the trader actually create? A credit put spread.

But let's take it one step further. The call spread trade consists of both long 100 shares and short 100 shares. These would in fact, cancel each other out. The stock part of this trade wouldn't need to be made.

The following graphic shows an example of the synthetic relationship of call spreads and put spreads.

Market Taker Mentoring™

Implications of the Synthetic Relationship
Buying a call spread (aka a debit call spread) always synthetically equals selling a put spread (aka a put credit spread) with the same strike prices. They will both have the same maximum profit, maximum risk and break evens (once the aforementioned influences are factored in). The only difference is from the accounting perspective in the timing of the payments: one gets a credit up front and will profit or lose from there; one is a debit up front and will profit or lose from there.

So, does it matter which a trader executes? Yes. There is one major reason for deciding which is better. If the call spread is in-the-money, the synthetically corresponding put spread will be out-of-the-money (because they share the same strikes) and vice-versa. Out-of-the-money options tend to have tighter markets than in-the-money options. Tighter markets are better to trade because the bid-ask spread is a veritable transaction cost. Traders save themselves money (in terms of greater profit or less of a loss) by trading tighter markets.

Understanding this synthetic relationship also comes into play in trade management. Options (or whole spreads) can move from being out-of-the-money to in-the-money and vice-versa. When the moneyness of a vertical spread changes, traders need to treat the trade like its synthetic equivalent.

For example, imagine a trader buys a slightly out-of-the-money debit call spread. If the underlying stock rallies and spread becomes in-the-money in a short period of time (prior to expiration), not all of the debt spreads' profits will have been reaped. The remaining profits come from time decay. If the debit call spread is entirely in-the-money, the short strike will be closer to the underlying stock price. That means the spread will have positive theta, benefiting from time decay. It will in fact, function just like an out-of-the-money credit spread and must be treated as such by the trader as he manages the trade.

Conclusion

Understanding nuances such as the synthetic relationship of debit spreads and credit spreads can make all traders better at both trade execution and trade management. Traders must be nimble, educated and be able to think abstractly to maximize the trades they make.