

ReadySetCrypto Income Through Options Masterclass



Module Four: Trading Put Options

Module Four

Trading Put Options

By Doc Severson

© Copyright 2019 by Doc Severson & ReadySetCrypto, LLC

All Rights Reserved

- **We Are Not Financial Advisors or a Broker/Dealer:** Neither ReadySetCrypto® nor any of its officers, employees, representatives, agents, or independent contractors are, in such capacities, licensed financial advisors, registered investment advisers, or registered broker-dealers. ReadySetCrypto ® does not provide investment or financial advice or make investment recommendations, nor is it in the business of transacting trades, nor does it direct client commodity accounts or give commodity trading advice tailored to any particular client's situation. Nothing contained in this communication constitutes a solicitation, recommendation, promotion, endorsement, or offer by ReadySetCrypto ® of any particular security, transaction, or investment.
- **Securities Used as Examples:** The security used in this example is used for illustrative purposes only. ReadySetCrypto ® is not recommending that you buy or sell this security. Past performance shown in examples may not be indicative of future performance.
- **All information provided are for educational purposes only and does not imply, express, or guarantee future returns.** Past performance shown in examples may not be indicative of future performance.
- **Investing Risk:** Trading securities can involve high risk and the loss of any funds invested. Investment information provided may not be appropriate for all investors and is provided without respect to individual investor financial sophistication, financial situation, investing time horizon, or risk tolerance.
- **Cryptocurrency Trading Risk:** crypto trading is generally more complex than stock trading and may not be suitable for some investors. Margin strategies can result in the loss of more than the original amount invested.
- **No part of these materials presentation may be copied, recorded, or rebroadcast in any form without the prior written consent of ReadySetCrypto ®.**

Table of Contents

Introduction to Put Options	4
What Can We Do with Put Options?	5
Buying a Put Option as a Short Spot Substitute	6
Selling a Put Option to Open	12
Tasks - Put Options	19
Put Options Summary	20

Introduction to Put Options

In the last module we discussed the more “popular” of the Options, the Call Option. The perception that Calls are more popular is because we as retail investors just have a lot more exposure to “buying low and selling high” through using Stocks, Futures, or Spot Currency...so the Call Option seems more “natural” to us. What we’ll find with the Put Option in this module, however, is that it has some natural advantages that we’ll want to use.

One of the first things that separates a top-tier basketball recruit is their ability to shoot with either hand. No matter what the situation, they’ve put in the hours in the gym to feel comfortable going to the hoop with their “other” hand. We want to keep this image in mind, that we are “ambidextrous” when it comes to using Puts and Calls.

Let’s see what Put Options can do for us.....

What Can We Do with Put Options?

Earlier in this module, we defined a Put Option as “an Option to Sell.”

In this module on Put Options, we’ll show how we can use Put Options to:

[Buy to Open and Sell Later](#)

A very common application of the Put Option is as a proxy for a Short Spot position, by buying the Put Option to open the position. We’ll see how this can be an explosive method of trading, just as they were with Call Options.

[Sell to Open and Buy Back/Be Exercised Later](#)

Just as with a Call Option, you can “Sell to Open” a Put Option. Instead of purchasing a “Right to Exercise” as you would had you simply bought a Put Option, now you’re turning the equation upside down by carrying an obligation...by selling a Put Option, someone can exercise YOU and you are obliged to buy the Spot crypto at the agreed-to price. We’ll see later how this not only can become the cornerstone of an income strategy, but it can also allow us to accumulate crypto at a discount.

Let’s get things started by seeing how we can purchase a Put Option as a leveraged substitute for short spot currency!

Buying a Put Option as a Short Spot Substitute

What if you thought the price of Bitcoin or Ethereum was going to decline significantly over the near future? Most retail investors are only familiar with the good old “buy & hold/hodl” strategy, which means buying at a low price and selling it later at a higher price. Most are not experienced with the requirements and risks of selling crypto short, and not all brokers offer this capability to short spot crypto to begin with.

And this is where Put Options can come in. Guess what? We can do the same thing as shorting spot crypto...with Options!

Leverage

We have just as much leverage with Put Options as we did with Call Options. As we discussed in the Options Pricing module, each contract of a Put Option contains the same “punch” as 1 full Bitcoin, for a lot less cash.

Let’s use our Bitcoin example again. If you were “short” 1 full Bitcoin and the price went down by one thousand points, from \$11,000 to \$10,000, what would your gain & return be?

Your gain would be \$1000 or a 9.09% return on the \$11,000 “cost basis.”

What kind of return could we make by using a Put Option that we bought and then sold after Bitcoin lost one thousand points?

Let’s use the Option Chain in Figure 1 as an approximation, since we are making the assumption that “time,” “delta,” and “implied volatility” are constants....which as we know by this point, are not. But just for the purposes of illustration, let’s see what kind of leverage that one Option can provide:

Figure 1

32) 30 Aug 2019		Expires In 25 days 19 hours 8 minutes			Puts	
Strike	Size	Bid	Ask	Size		
6000	25.0	0.0010 \$10.79	0.0025 \$26.97	1.0		
7000	24.0	0.0045 \$48.51	0.0060 \$64.68	0.9		
8000	24.1	0.0130 \$140.00	0.0145 \$156.16	0.1		
9000	0.9	0.0315 \$338.92	0.0340 \$365.82	19.7		
10000	19.3	0.0600 \$645.75	0.0655 \$704.94	0.4		
11000	14.4	0.1055 \$1135.44	0.1130 \$1216.16	14.8		
12000	2.0	0.1630 \$1754.25	0.1795 \$1931.83	2.0		
13000	2.0	0.2315 \$2491.58	0.2530 \$2722.98	2.0		
14000	2.0	0.2865 \$3083.56	0.3665 \$3944.59	2.0		
15000	-	-	-	-		

We can extrapolate the gains from the chain if we assume that the “out of the money” put Options at \$10,000 became the value of the “at the money” Options at \$11,000. Thus, our \$11k Puts that we spent a midpoint price of \$676 for suddenly became “at the money” for about an \$1176 midpoint price. That’s a \$500 gain in the Option price, for a 74% return.

Just like with Call Options, there are many questions to answer before we can enter the trade.....What month Option are we going to buy? What strike price? Just like we did with Call Options, let’s see how an Option’s Delta affects the leverage and return.

Option Delta

Let’s remind everyone what the definition of Delta is since we’ll use it in almost every section from here on:

Delta is the amount an Option’s value will change with a one point move in the underlying price of the spot currency.

We’ve made a change to our Option chain by adding the “delta” field. Notice in our Option chain in Figure 2, that each Put Option has an associated Delta. And here’s something else; **notice how the Deltas are Negative!** This means that a one point

move down in the underlying spot currency will actually **increase** the value of the Put position, where the Deltas were **positive** with long Call Options.

The further In the Money that the Put Option is, the higher the Delta will be, with the highest Delta possible being 1.0. In addition, the further Out of the Money that the Put Option is, the lower the Delta will be, with the lowest Delta possible being 0.

Here's where we need to make another shift in our thinking; recall how the "in the money" Options were the lower-priced Call Options? Any Call Option strike price that was below the current spot crypto price was in the money. Now we're going to flip that for Puts; any strike price ABOVE the current spot crypto price is an "in the money" Put Option!

Figure 2

30 Aug 2019		Expires In 25 days 18 hours 49 minutes			Puts	
Strike	Size	Bid	Ask	Size	Δ Delta	
6000	29.9	0.0010 \$10.79	0.0025 \$26.98	1.0	-0.02	
7000	24.0	0.0045 \$48.37	0.0060 \$64.50	0.9	-0.04	
8000	0.1	0.0130 \$139.90	0.0145 \$156.04	0.1	-0.10	
9000	0.9	0.0315 \$339.29	0.0335 \$360.83	19.3	-0.20	
10000	4.3	0.0600 \$647.25	0.0650 \$701.18	22.7	-0.33	
11000	4.7	0.1055 \$1138.23	0.1105 \$1192.17	0.4	-0.48	
12000	2.0	0.1400 \$1510.17	0.1875 \$2022.54	7.9	-0.62	
13000	2.0	0.2310 \$2490.65	0.2540 \$2738.64	2.0	-0.73	
14000	2.0	0.2865 \$3083.56	0.3665 \$3944.59	2.0	-0.82	
15000	-	-	-	-	-	

Notice that the \$12,000 strike price has a delta of -.73 which means that for the next point down move in spot Bitcoin, the Put Option value will increase by \$.73.

For the \$6000 strike price, however, the delta is -.02, which means that there will only be a two cent difference in the price of the Option should Bitcoin drop by one point.

What can we conclude from this exercise?

Just like with the Call Options, notice the leverage at work. While selling the spot currency and holding it over that one thousand point gain forced you to hold \$11,000 worth of short BTC to make your 9% return on capital invested. On the other hand, buying a BTC \$11000 Put Option for \$676 netted you \$500 of return, or a 74% return on your capital.

Just like with Call Options, the further out of the money that you purchased the Option, the less expensive that it was to buy....and generally the higher the rate of return, assuming that the underlying price DID go down enough to make a difference!

Delta and Time Value Risk

If you run the numbers like we did in the last module, you'll see that there is just as much of a risk to the Put Option value for a rising price as there is opportunity to watch the Option gain value if the price drops. Remember, Delta of the Option shows us the relationship of how much the Option value will rise or fall depending on whether the underlying spot price falls or rises.

And we also have the same risks with Time Value erosion; recall our study with Call Options, and how we showed that when we defined what an Option was, we stated that Options have **Intrinsic Value** as well as **Time Value**. Let's assume a spot price of \$11,000 for this example, and we'll use the \$12,000 and \$9000 Bitcoin Puts, and determine how much Intrinsic and Time Value each Put Option has.

- For the **\$12,000** strike price, let's assume that the the Option is available at the midpoint price of \$1767. The Option is \$1000 "in the money" so there is $(\$12,000 - \$11,000 = \$1000)$ \$1000 of Intrinsic Value and \$767 of Time Value.
- For the **\$9000** strike price, let's assume that the Option is available at the midpoint price of \$350. Since this Option is "out of the money" that means that this Option is all Time Value and contains no Intrinsic Value.

Just like the example with Call Options, if the price of Bitcoin rises into Expiration Day, then all of the Time Value in these Options is at risk.

Question: what happens to the value of both of these Options if the price of BTC stays exactly the same between when this Option Chain was printed, and Expiration Day for those Options?

The first thing that happens is that ALL of the Time Value will erode completely away with just a few minutes left on that Expiration day, especially if the Options are either far in the money, or far out of the money like these two Options are.

So with five minutes left to trade on Expiration day, what is the value of our \$9000 and \$12000 Bitcoin Puts?

\$9000 Put - no value left

\$12000 Put - \$5.60 Intrinsic Value left

If you own the \$9000 Put Option, there's nothing for you to do because your Put Option is about to expire worthless on Expiration day. The \$12000 Put still has \$1000 of Intrinsic Value left per contract that will disappear if you don't sell or exercise the Put prior to the closing bell on Expiration.

Summary on Buying Put Options

- Instead of buying a Put Option with intent to exercise the Option to sell the spot crypto, we can just buy to open and sell to close an Option contract on its own and realize the gains or losses in the position.
- Buying a Put Option represents the price movement of one underlying currency, so a huge amount of leverage can be present, which can either give you massive upside gains or bad losses.
- Depending on what strike price Put Option that you buy, it will have different amounts of Intrinsic Value and Time Value. In the money Options will generally have more Intrinsic Value than Time Value, and out of the money Options will have NO Intrinsic Value and all Time Value.
- The ratio of how the value of the Put Option moves in relation to the underlying currency is called the Delta of the Option, one of the Options Greeks.
- The Time Value component of the Put Option erodes in an exponential fashion as Expiration Day approaches. An Option's "Time Value" component will become equal to zero as expiration day comes to a close. This "time risk" is very important because it can affect your ability to make a profit on a position just as much as your directional forecast of the price movement. You can be correct on your price forecast, but still wrong on the amount of time that it will take to get there.
- Even Options that have Intrinsic Value will become worthless if you hold them past Expiration day.

We've just discussed the basics as it relates to buying Put Options, or as we say "going long the Put." We can see how buying a Put Option is really a substitute for

Short Spot, but with different risks like Delta Risk and Time Value risk. (and we haven't covered them all)

Now we'll show you something very interesting; we're going to Sell a Put Option to open a position.

Selling a Put Option to Open

Selling a Put Option is just like selling a Call Option, however as we'll see there's a very, very practical use for doing so.

What happens when you Sell a Put Option to open a position, and why would you want to do that?

Just like selling a Call Option, when you Sell to Open a Put Option, your broker puts the cash proceeds of the sale right into your account.

Let's see what we're getting ourselves into when we sell a Put.

The Seller's Obligation

Recall that when we defined an Option, we said that Option Buyers had a "right" and that Option Sellers had an "obligation." What exactly is this obligation when we sell a Put?

If you sell a Put Option, you have an obligation to buy one unit* of the underlying coin per contract sold, at the strike price that you sold it at, upon "assignment" by the Put Option buyer. This is why we call this "being Put the Asset."

**Please check with each broker you intend to use to determine their specific margin requirements.*

Selling a Put Option is much different than selling a Call Option, in that the biggest requirement is that you have the funds available to pay for the spot that you are being assigned due to your "obligation." As we'll soon see, it's not necessarily a bad thing to be obligated to purchase the spot crypto at the strike price.

Being Exercised on your Put Option

Next point....**when** is someone going to "exercise" your short Put Option?

Only at the time/date of the expiration for that contract. There is currently no broker that is exercising "early exercise" of the assets via American-style Options settlement.

What Are the Conditions Necessary To Be Exercised?

If you have sold a Put Option and created an Obligation for yourself, the risk of Exercise depends on whether the Option is "In the Money" or "Out of the Money." Recall that for a Put Option, the definition of a position being "in" or "out" of the money depends on where the price is in relation to the strike price in the Option chain:

- **In the Money** = the price of the underlying spot crypto is **below** the strike price of the Put Option that you sold.
- **Out of the Money** = the price of the underlying spot crypto is **above** the strike price of the Put Option that you sold.

In the Figure 2 Option Chain for Bitcoin and a spot price of \$11,000, any strike price at or below \$11000 is considered “out of the money.” Any strike price above \$11000 is considered “in the money.” Technically the \$11000 strike price is “at the money” but for the purposes of this example we’ll just use “in” or “out.”

The next step that we need to take is to find out just when you would run the risk of being exercised, forcing you to honor your obligation. Would it be when your Option is In the Money or Out of the Money?

Let’s look at those two strike prices on the Bitcoin Options chain from Figure 2, the \$9000 strike Puts and the \$12000 strike Puts. First, the \$9000 Puts:

Risk of Exercise, \$9000 Bitcoin Put Options

If the current price is \$11,000, what is the risk of someone exercising your \$9000 Put Option at expiration? Recall that selling the Put Option is creating an obligation that someone might require you to buy one BTC for \$9000. If someone actually did this and forced you to buy a full Bitcoin for \$9000 with the current price at \$11,000, you could immediately turn around and sell that coin back for \$11,000, earning a quick \$2000 profit!

Through this exercise, you can see that if you have sold a Put Option out of the money, that **no one** will exercise your Put Option as long as that strike price remains out of the money. Now let’s look at the risk of exercise of an in the money Put Option:

Risk of Exercise, \$12000 Bitcoin Put Options

If the current price is \$11,000, what is the risk of someone exercising your \$12000 Put Option? Selling the \$12000 Put Option means that you have been paid up front in exchange for the obligation to buy one BTC for \$12000. Recall that the Put Option Buyer has paid a premium to their broker to have this right to sell Bitcoin at that price. So it certainly makes sense that someone might want to sell Bitcoin at a price of \$12000 if BTC is currently trading at \$11000. **Therefore, your Short Put Option is at much higher risk of potential exercise if the Put is In the Money.**

What if We Do Want to be Exercised?

So far in this section, we've talked about "being exercised" as if it's a BAD thing.....yes, there are times where you DO want to be exercised! Let's say that we have a particular spot currency that we want to buy, however we'd like to wait on a pullback before doing so. The chart hasn't been particularly cooperative lately, running away from each shallow pullback and making new highs.

This is where we can employ this "Cash-Secured Put" position, which is sold out-of-the-money, to be paid that premium while we wait for the price to pull back far enough to allow us to be exercised, thus owning the crypto with the strike price being our acquisition cost. We can see this example below.

With a few weeks left to trade before the 27 July expiration cycle, we have sold a BTC \$10000 27 JULY Put Option. We want to own Bitcoin, but the price keeps running away from our buy point....what we'll do is to collect that income from selling the 27 JULY Put Option (\$600/contract) which will help lower the cost basis (if we are assigned the coin) from \$10000/coin down to \$9400/coin, if we apply the credit from the Put sale. And if the price doesn't come down to the \$10k price level of BTC by 27 JULY expiration, then we keep the \$600 that we earned when we sold the Put Option.

Figure 3



In Figure 3, we can see that the price is about \$11600 with about two weeks left until the 27JULY expiration. The vertical blue line represents that 27JULY expiration date, and the horizontal red line represents the \$10000 strike price that we sold.

Let's jump forward two weeks to the 27th of July, which is the expiration date for those options. The price of Bitcoin is actually about \$9500, which means that our \$10000 put option is "in the money" and open for assignment at the actual time that the day closes and the contract settles.

Figure 4



This is important: If we used a broker that uses **Physical Settlement**, then we will be obligated to buy that one BTC that we signed up for. If we use a broker that uses Cash Settlement, then we settle the trade in cash and they actually remove the cash difference between the current/settlement price, and our strike price.

So if we wanted to be exercised to accumulate more BTC, then we'll have to be careful about the selection of our broker. For the purposes of this example, let's say that we did actually use a broker using physical settlement. Therefore we not only kept the original \$600 credit, but also were assigned to buy BTC at a \$10,000 cost basis. Thus,

our actual cost basis was \$9400....and with the price at \$9500 at expiration, we're still ahead due to the credit that we received. We got "paid" for that pullback in the price of BTC, and lowered our cost basis for the trade. This is an example of a situation where we WANT to be assigned on a spot currency that's in a very strong uptrend, so we can participate in gains down the road, yet not pay too much for the asset.

If we jump ahead a couple of weeks, we can see that the uptrend resumes, which is why we aggressively pursued assignment.

Figure 5



Something Else to Think About

Recall this little gem that we learned about Call Options? It's the same thing here. If we sold a Put Option out of the money:

- We would have no risk of exercise as long as the strike price of the Option stayed out of the money.
- We would receive cash for selling the Option at the very beginning of the trade.
- You know that there is no Intrinsic value of the Option since it's out of the money, so therefore it's all Time Value.
- You know that time value erodes as a function of how close it is towards Expiration day.
- You also know that once Expiration Day passes, your obligation is released.

With all of these facts in mind, can you see the potential here?

If you sell a Put Option and the strike price of the Option stays out of the money past Expiration day, you get to keep the original cash that you received AND your obligation is released, so there is no further follow-up on your part!

This is the very core of creating income with Options. You have sold a “wasting” asset, and the **time risk** that we discussed when buying a Put Option...now becomes your **EDGE**. The weakness of the Option Buyer....the time decay of that Option.....becomes your strength.

Summary on Selling Put Options

- Instead of buying a Put Option to open a position, we can sell a Put Option to open a new position.
- When we sell a Put Option to open a position, we will be paid the selling price of that Option and the cash will be deposited into our account.
- Selling a Put Option creates an obligation that we agree to fulfill if we are assigned, which is called “being Put the Spot”; we might have to buy the Spot Crypto at the strike price that we sold.
- Just like with buying a Put Option, depending on what strike price Put Option that you buy, it will have different amounts of Intrinsic Value and Time Value. “In the money” Options will generally have more Intrinsic Value than Time Value, and “out of the money” Options will have NO Intrinsic Value and all Time Value.
- The ratio of how the value of the Put Option moves in relation to the underlying Spot price is called the Delta of the Option, just as with the long Put Options.
- The Time Value component of the Put Option erodes in an exponential fashion as Expiration Day approaches. An Option’s “Time Value” component will become equal to zero as expiration day comes to a close; this is an enormous benefit to selling Put Options.
- Short Options that have Intrinsic Value will become automatically exercised if you hold them past Expiration day; in other words, if you have a short Put Option that is In the Money and you hold it past the “closing bell” on that Expiration Friday, you can expect to be “Put” those shares of the underlying spot crypto.

Tasks - Put Options

Here is your “homework” for this module.

- ☐ If you haven't already, consider creating a virtual account such as those available at test.deribit.com.
- ☐ Enter a simulated long Put Option trade by buying an “at the money” front month Put Option on BTC with your virtual account. (*Front Month* is the next monthly Options cycle to expire) Note the price of BTC when you bought it, and what you paid for the Option. Hold it for one week and then sell it. Note the closing price of BTC when you sold it. Did the spot price go up or down during this period? Did the Put Option value go up or down?
- ☐ (*This exercise can be done at the same time as the above, however pick a different strike price to sell*) Enter a simulated short Put Option trade by selling an “out of the money” front month Put Option on Bitcoin with your virtual account. (the price will be LOWER than the current price of the Spot) Note the price of BTC when you bought it, and what you sold the Option for. Hold it for one week and then close the position by buying it back. Note the closing price of BTC when you closed it. Did the Spot Price go up or down during this period? Did the short Put Option gain or lose value?
- ☐ Ask yourself this question - *who would buy that out-of-the-money Option that you sold?* Can you think of some possible applications for why someone would buy it?

Put Options Summary

Now we have a slightly different perspective on Put Options; recall that we originally defined a Put Option as “an Option to Sell.” That’s true if you purchase the Put Option, but we also showed that by selling the Put Option, you might have to buy spot crypto from someone, and if that’s your design for the trade, then it’s almost an “Option to Buy,” isn’t it?

We saw that the most powerful ways to use Put Options were:

- Buying Options as a Leveraged Proxy for a Short Spot position
- Selling Options to earn income from a wasting asset
- Selling Options to lower the effective cost of purchasing Spot Crypto

No, we are STILL not yet ready to start trading Options without putting your account in danger! Be patient, we want you to do this the right way the first time.

In the upcoming module, we’ll put some meat around the “Income Trades” that we discussed in these most recent two modules on Call and Put Options.