ReadySetCrypto Income Through Options Masterclass

Module Three: Trading Call Options

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Trading Call Options

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Table of Contents

Introduction to Trading Call Options

In the last two modules we talked about the characteristics of Options and how the price of the Options moves with the price of the underlying spot price, the erosion of Time Value, as well as with changes in Implied Volatility.

In this module, we're going to focus on Call Options. More people are probably familiar with Call Options due to our generally Bullish nature....Call Options are typically the next logical extension to trading spot crypto like Bitcoin, since they can be traded like "Spot on Steroids" with the massive leverage that they have....each Option contract contains the same amount of price leverage as one entire coin.

So it's no wonder that this fascination with huge returns draws many traders in to investigate Options...however, as we'll soon see, that's not the professional approach to using them. (Shhhhh! Let the other guys keep buying Options off of us.....)

Just a side note, as we continue to dive further and further into the analytical side of your education, I'll rely less and less on the accessible analogies and more on the actual terminology. We must learn the language. Onward.

What Can We Do with Call Options?

A Call Option is an Option to Buy.

In this module we'll show how we can use Call Options to:

Exercise the Option

This is the classic example of how most people think about Options...that you buy them now and exercise them later. We'll show why this is not how most professionals use Options.

Buy to Open and Sell Later

What if we didn't actually carry the Call Option all the way to expiration, or if we didn't bother to Exercise that Option? The Option will still fluctuate in value depending on what happens to the underlying price, as well as other elements of the Options chain. We'll see how this can be an explosive method of trading.

Sell to Open and Buy Later

Well this is a new twist....did you know that you can actually "Sell to Open" a Call Option? Instead of purchasing a "Right to Exercise" as you would had you simply bought a Call Option, now you're turning the equation upside down by carrying an obligation...by selling a Call Option, someone can exercise YOU and you are obliged to sell them the Spot currency at the agreed-to price. This sounds somewhat bizarre, but we'll see how we can turn this "obligation" into a powerful income-earning strategy.

Let's get things started by seeing how we can purchase a Call Option with intent to exercise!

Buying a Call Option to Exercise

If you Buy to Open a Call Option position, you have bought the Right to exercise 1 BTC at the strike price that you bought your Option at. (Or if you're trading stock, one contract equals a right to exercise 100 shares of stock)

OK, for many of you I know that this sentence was written in a language that you don't understand, so let's demystify that with an example.

Spor Exercise Example

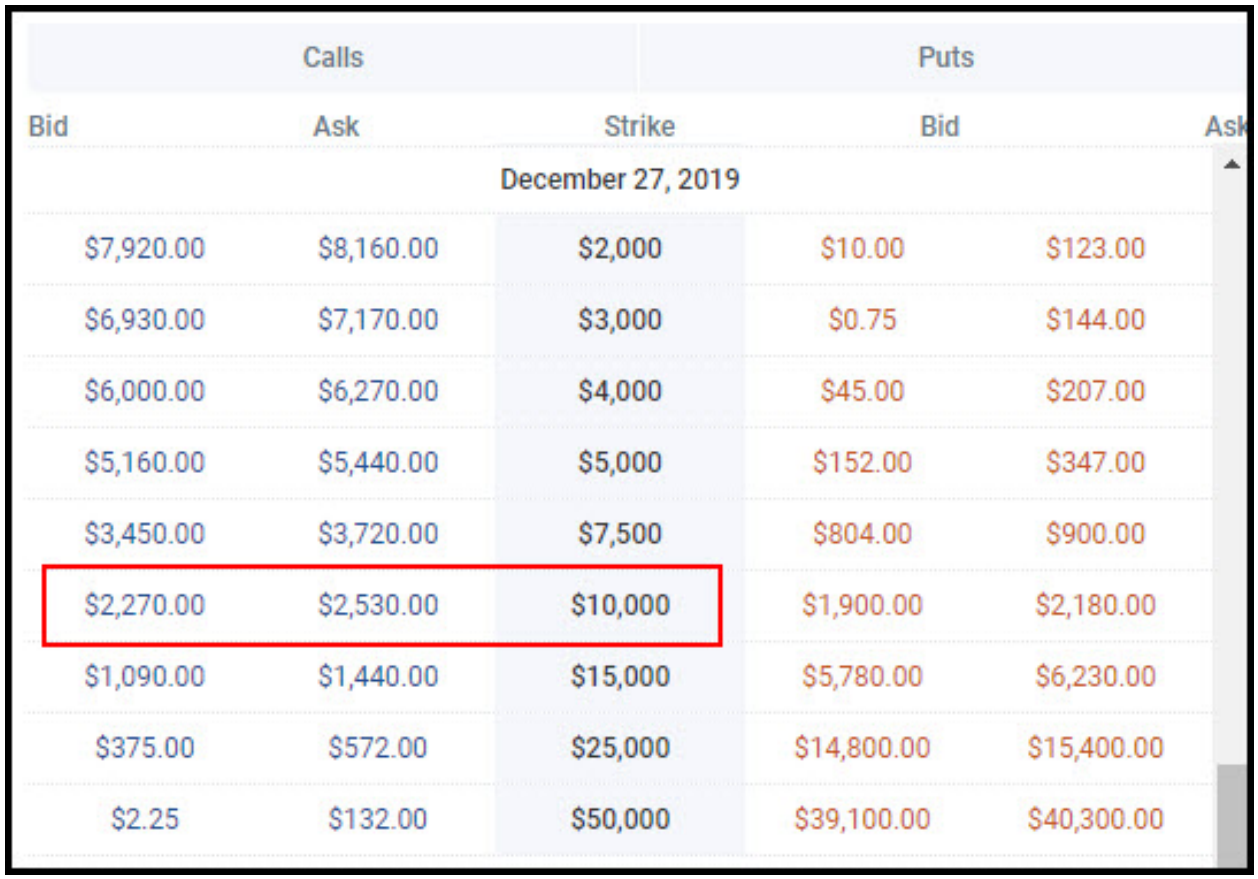
Let's say that you would like to own Bitcoin, but you just don't have the capital to buy it yet. It's an expensive coin, and you won't have the capital until a big bonus comes in next year. Through whatever analysis that you've done, you're convinced that the price will rise over time and that it's the right investment for you.

You just don't have the capital yet but you don't want to let it get away without you.

This is not unlike the "old" way of Christmas shopping where you'd put a gift on "layaway" until you had saved up the money to fully purchase it. A small non-refundable premium was required to hold it on layaway.

The next question for our example is: "When will you have the money?" Let's say that you expect to have the funds in place by the end of the year. If you purchase a Call Option, you will own the Right to Exercise that spot currency at the strike price that you purchased. Let's see what this looks like on the Option chain for BTC:

Figure 1



Calls			Puts	
Bid	Ask	Strike	Bid	Ask
		December 27, 2019		
$7,920.00	$8,160.00	$2,000	$10.00	$123.00
$6,930.00	$7,170.00	$3,000	$0.75	$144.00
$6,000.00	$6,270.00	$4,000	$45.00	$207.00
$5,160.00	$5,440.00	$5,000	$152.00	$347.00
$3,450.00	$3,720.00	$7,500	$804.00	$900.00
$2,270.00	$2,530.00	$10,000	$1,900.00	$2,180.00
$1,090.00	$1,440.00	$15,000	$5,780.00	$6,230.00
$375.00	$572.00	$25,000	$14,800.00	$15,400.00
$2.25	$132.00	$50,000	$39,100.00	$40,300.00

Let's say that you'd like to lock in your ability to buy one BTC for $10,000 until December 2019; that Right to exercise 1 BTC will cost you about $2400, which is the midpoint between bid and ask on the chain above. (This snapshot was taken on August 1st so this shows that the option has about 5 months of "time" left)

At the time that this snapshot was taken, the spot Bitcoin price was almost exactly $10,000; this means that the option price is all "Time Value" and essentially no Intrinsic Value. That means that there is about $2400 of Time Value being charged for the Right to buy BTC for the $10,000 price no later than the December 27 expiration date.

Are you SURE that you really want in at $10,000 on BTC? To buy 1 BTC at $10,000, you'll need $10,000 of capital...and if you wait until December 27 to exercise your Call Option, all of that Time Value will have eroded ($2400) and will cut into any gains that you may have made should the spot price be higher at that time.

In fact, the price will have to rise to ($10,000 + $2400) = $12,400 by December 27th just for you to BREAK EVEN on this transaction if you wait until then to exercise your Call option!

So you will definitely have the RIGHT to buy BTC for $10,000 in December (or before then), but you will pay a hefty premium for that right. One of the reasons for this is because of Bitcoin's Implied Volatility is very high, one of the main drivers to the price of Options as we discussed in the last module.

So if you really are into owning Bitcoin and you don't have the capital to buy a full BTC at this very moment, then buying a Call Option will definitely give you that Right, but as we can see through this example, there are no assurances that this will be a money-maker over time.

And what happens if the price goes down between now and December 27? What if the price is $7000 for Bitcoin? You would be unwise to exercise your $10,000 Call option at that point; it would be worthless to you and your $2400 premium is gone. Why go ahead with the assignment to own the spot currency at $10,000 when you can buy it for $7000 at that point?

Using a Call option for a future exercise is not a sure-fire strategy; **you still have price risk.** You're just putting that asset on "layaway" and you hope that its value improves over time.

So what would happen if we bought a Call Option but didn't intend to exercise it? Let's see how this would work.....

Buying a Call Option as a Spot Substitute

Recall the previous example (in the “What Are Options? module) where we bought a house with a small down payment, and “flipped” it a while later to double our original investment. Because the original mortgage was a 30-year note, did we have to hold on to that house for the entire 30 years before we sold it? Of course not. This is how so many real-estate fortunes have been made....by using leverage to secure a home for next-to-nothing and then sell it as fast as possible for a huge gain on your capital.

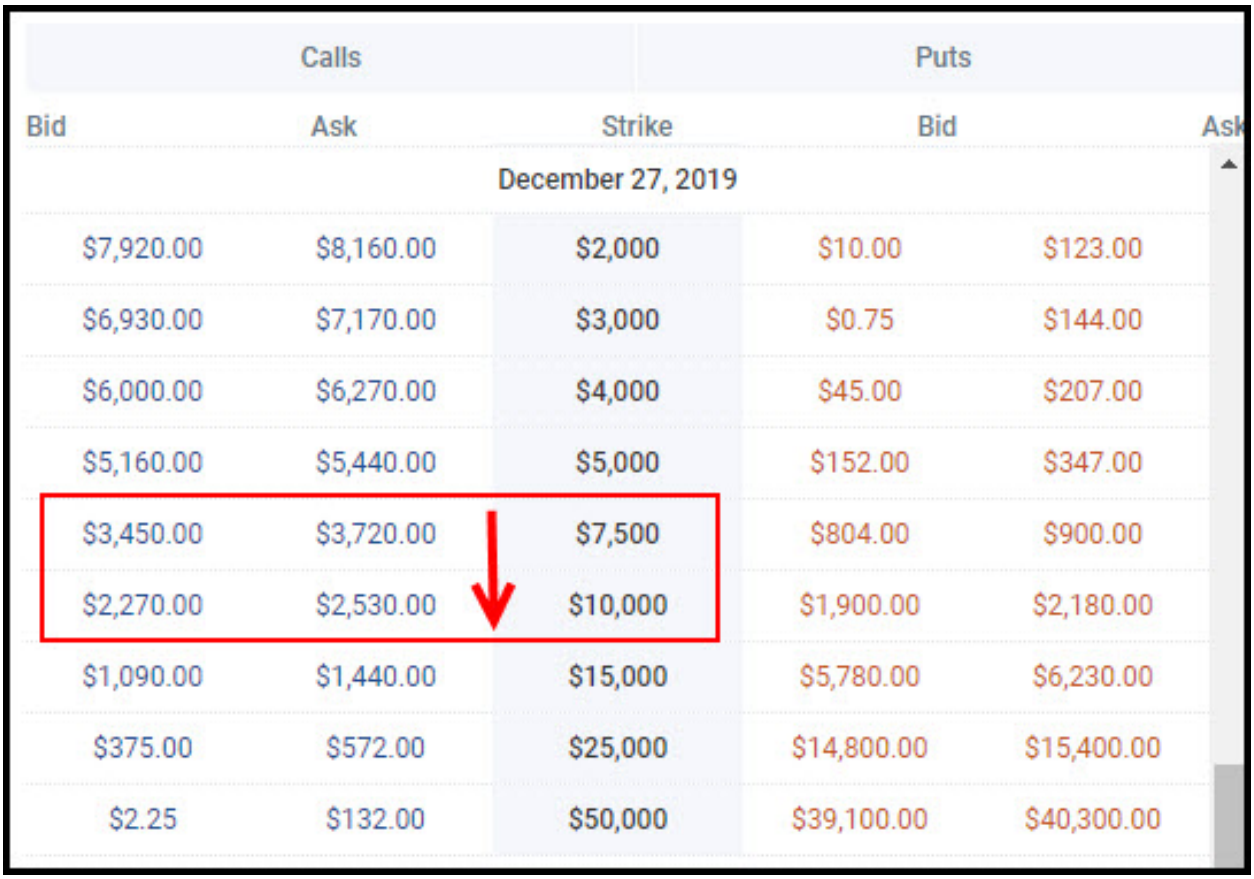
Guess what? We can do the same thing with Options! Before you get too excited, however, I’ll show you how this works....and then I’ll show you why it’s not a good idea for you to do these trades just yet.

Leverage

We have leverage with Options, and lots of it. As we discussed in the Options Pricing module, each contract of a Call Option contains the same “punch” as 1 full BTC, for a lot less cash. (please check with your broker on their assignment of leverage; not all brokers are the same. We will use the 1 BTC leverage of LedgerX for this module)

Let’s use our Bitcoin example again. If you owned 1 BTC with a cost basis of $10000, paying $2400 for that Call Option…and the price of Bitcoin went up by $2500, what would your gain & return on that Call Option be? Let’s refer to the Options chain again in Figure 2:

Figure 2



Calls			Puts	
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Notice how the $7500 strike price Option has a mid-point price of $3585; most of that Option's value is INTRINSIC value. What would happen if the price of Bitcoin went up to $12,500 is that you would then see the $10,000 strike option trading for about $3585 midpoint, while the $12,500 strike price (if it existed) would be trading for about $2400.

This is all an approximation because other factors like Time Value Decay and Implied Volatility all have effects, but these approximations are a good way to "forward-project" what the price might be.

In this case, for an Option that we bought for $2400, its' value would rise to $2585, for about an $1185 gain, or a return of 49.3% on capital.

Compare that with a return of 25% for the gain on the spot currency. ($10,000 to $12,500)

Again, this is a very rough approximation of potential gains on a Call Option that is bought and then later sold, used as a leveraged substitute for buying the spot currency.

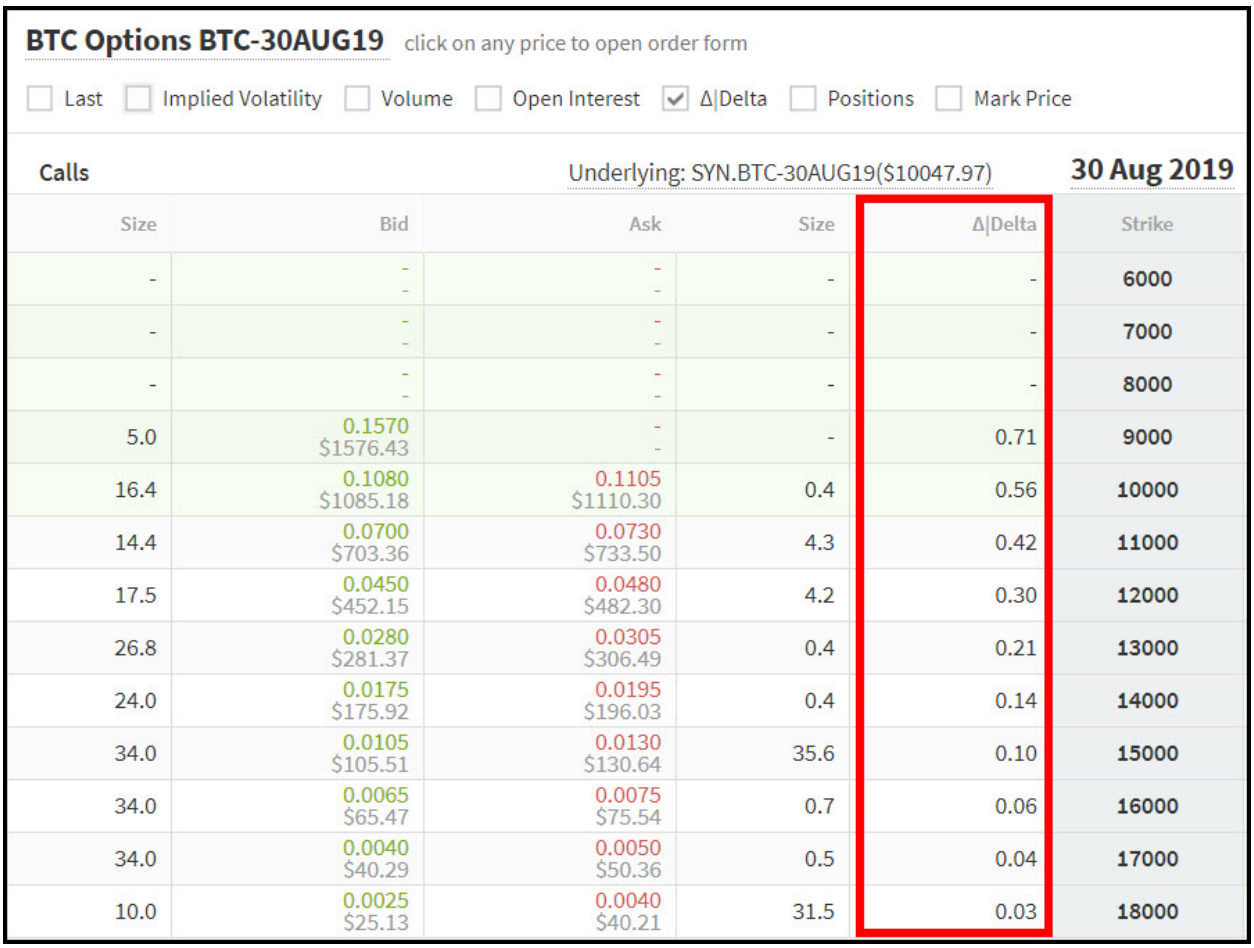
Is there a more precise way of determining the potential forward return of a long Call Option? Yes, and to answer that question, we need to learn one more definition related to Options: **Delta**.

Option Delta

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

What does that mean? If an Option has a Delta of +.50, then if the price of the spot currency rises $1, then the Option will rise by $.50. Notice in our Option chain in Figure 3, that each Call Option has an associated Delta. The further **In the Money** that the Call 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 Call Option is, the lower the Delta will be, with the lowest Delta possible being 0.0.

Figure 3



BTC Options BTC-30AUG19 click on any price to open order form

☐ Last ☐ Implied Volatility ☐ Volume ☐ Open Interest ☑ Δ|Delta ☐ Positions ☐ Mark Price

Calls — Underlying: SYN.BTC-30AUG19($10047.97) — 30 Aug 2019

Size	Bid	Ask	Size	Δ|Delta	Strike
-	- -	- -	-	-	6000
-	- -	- -	-	-	7000
-	- -	- -	-	-	8000
5.0	0.1570 $1576.43	- -	-	0.71	9000
16.4	0.1080 $1085.18	0.1105 $1110.30	0.4	0.56	10000
14.4	0.0700 $703.36	0.0730 $733.50	4.3	0.42	11000
17.5	0.0450 $452.15	0.0480 $482.30	4.2	0.30	12000
26.8	0.0280 $281.37	0.0305 $306.49	0.4	0.21	13000
24.0	0.0175 $175.92	0.0195 $196.03	0.4	0.14	14000
34.0	0.0105 $105.51	0.0130 $130.64	35.6	0.10	15000
34.0	0.0065 $65.47	0.0075 $75.54	0.7	0.06	16000
34.0	0.0040 $40.29	0.0050 $50.36	0.5	0.04	17000
10.0	0.0025 $25.13	0.0040 $40.21	31.5	0.03	18000

What does this mean and how does this help us?

Using this new definition, let's buy one contract of BTC Call Options at the $10000 strike price. Bitcoin is currently right around the $10,000 mark as I write this, so if BTC moves from $10,000 to $10,001 (1 point higher) then the $10,000 call option will move $.56 higher in value, from a midpoint of about $1098 to a new value of $1098.56.

It doesn't seem like much, but since Bitcoin can run hundreds (or thousands) of points a day per move, it adds up quickly.

But then notice that this effect is not "linear." If you buy a Call Option with a $18000 strike price, the option value will only increment 3 cents if Bitcoin moves one point higher.

And you can only extrapolate Delta so far; if we take the delta of the next point move at the $10k strike as being +.56, then we can perhaps assume that we would see a $560 move in the price of the option if the price of the spot currency went up to $11,000. However, the difference in the midpoint prices of the $10k and $11k options is about $379, showing that Delta moves in a non-linear manner as the price moves away from "the money."

What can you learn from this? If you want to buy an option that mirrors the price movements of 1 BTC, then a higher-delta Option will do that, however it comes at a much higher price. You'd want an Option that is nearly 100% intrinsic value, which is what an Option with a Delta of 1.0 features.

Notice a peculiar feature in the Options chain in Figure 3, however; those Options with a much higher Delta are not particularly liquid….at all! In fact the 9k Call Option with a Delta of .71 has no offers on it…a sign of little trading activity. You don't want to enter an Option that becomes a "roach motel." Traders check in, but they can't check out! It's possible to enter a trade that you cannot exit from, no matter how many things you did right about the forecast.

The Knife Cuts Both Ways

We just showed what happens when you bought (or "went long") a Call Option with a rising underlying spot currency…..in this case, a rising Bitcoin cooperated with our trade and went higher. What would happen if the price *dropped* one point instead?

It's quite simple, in that the Delta value implies the change in the Option's value for *the next point move* and it doesn't care whether the price is moving up or down. So let's say that you bought the $10000 Call Option from Figure 3 for a midpoint price of $1098…what happens if the price drops to BTC $9000? We can take a quick estimation by looking at the difference in the Option price from the $11k strike price to the $10k strike price, which gives us an estimate that the $10k Call would now only be worth about a mid-point level of $719. This will, of course, vary with other factors such

as the amount of time left in the cycle, as well as the value of the Implied Volatility for that Option.

I hope you're getting the point here that the leverage in an Option can work both ways...for you AND against you.

Time Value Risk

Recall that when we defined what an Option was, we stated that Options have **Intrinsic Value** as well as **Time Value**. With the current value of Bitcoin spot being about $10,000, what are the Intrinsic and Time Value components of the $10k calls listed above in Figure 3?

Since the current spot price is about $10,000, that means that ALL of the Option's value is Time Value!

Question: what happens to the value of this Option if the price of BTC stays exactly the same between when this Option Chain was printed, and Expiration Day for those Options? (about 29 days in this case)

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 at the money like this Option is.

The only value that an Option might have left with minutes until the bell rings on expiration day…is any INTRINSIC value, which must be either sold or exercised before that Option expires.

Any Option that is allowed to expire will have zero value left, regardless of whether it's in the money and contains intrinsic value, or not.

This shows that we are holding a wasting asset, trying to trade a Call Option as a substitute for the underlying spot currency.

Summary on Buying Call Options

- Instead of buying a Call Option with intent to exercise the Option to receive spot currency, we can just buy and sell an Option contract on its own and realize the gains or losses in the position.

- Buying a Call Option represents the price movement of 1 unit of the underlying spot 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 Call 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 Call Option moves in relation to the underlying asset is called the Delta of the Option, one of the Options "Greeks."

- The Time Value component of the Call 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 Call Options, or as we say "going long the Call." We can see how it can function as a substitute for the spot currency, but with a lot of moving parts to it.....and we haven't even covered them all! This is a somewhat dangerous point in your development as an Options trader, because this is where most traders start to trade Options....and ultimately stop. Using "long" Call Options like this is relatively simple to understand and place a trade, yet it's one of the most difficult trades to "win" and should only be used by professionals. (And few professionals trade in this manner) This is why most investors who don't understand Options consider them "risky"....because they ***are*** in the hands of the undereducated trader.

Now we'll show you something very, very different from what you're used to, if your background is Stocks or Futures. We're going to Sell a Call Option to open a position.

Selling a Call Option to Open

When I first learned about "Shorting Stock," I was beyond confused. "Y*ou borrow shares and sell them to open, then you buy to cover.*" I didn't get it. I had to ask the guy to explain it several times before I was able to wrap my skull around the idea.

Fortunately, selling Call Options is a somewhat less convoluted process. Instead of the usual "Buy to Open" action that you'll take with the Call Option, you will instead "Sell to Open" the position.

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

When you "Sell to Open" a Call Option, your broker puts the cash proceeds of the sale right into your account!

I realize that this is "backwards" from how you're used to thinking about using the Markets....we're used to the mantra of "buy low and sell high" and you're used to paying out cash to buy your assets....or perhaps you're already used to buying Options as a proxy for the spot currency. Being paid to open a new position is probably a new concept to you.

This concept of being paid to open a position is key to everything that we do from here in this program!

Just like we did with buying Call Options, let's see what we're getting ourselves into when we sell a Call.

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?

If you sell a Call Option, you have an obligation to sell the underlying asset per contract sold, at the strike price that you sold it at, upon "assignment."

Let's say that we sell a Call Option on BTC…

If you do NOT own at least 1 Bitcoin for every contract of Calls that you sold, then your position is considered "uncovered" or more commonly known as "naked." This is an apt description because as we're going to see later, you open yourself up to unlimited risk.

To net this out, when you sell a Call Option, your Options position is either going to be "covered" (you have the spot currency to cover the position) or "uncovered/

naked." (you do not have the spot currency to cover) There are less-expensive methods of "covering" a short Option, but they're beyond the scope of this program.

Exercising your Call Option

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

Only after expiration. To this point, all crypto Options are "European-settled" which means that they cannot be exercised early if they are in the money. This is a big relief for those that are used to the "American" settlement process which can produce some nasty surprises with overnight settlements prior to expiration.

Being exercised on a short call depends on whether your broker is doing Cash Settlement (Deribit) or Physical Settlement (LedgerX).

With Cash Settlement, you just pay the difference between the actual price in the money vs. the strike price that you sold. If the price is BELOW your strike price, you walk away with no action from the broker.

With Physical Settlement, if your short Call Option is in the money at expiration, they can assign you a SHORT Bitcoin position if you are "naked" or uncovered.

If you have a Naked Short Call position and you are exercised on the short Calls, then this is usually an unwanted surprise because you have promised to sell 1 BTC per contract of the underlying spot currency at the strike price of the Option. If you do not have the spot currency to sell (uncovered), then your broker will loan you the spot to sell and you will wake up to a short spot position in your account.

This is why I will state right here and now that you NEVER want to sell an uncovered or "naked" Call Option.

Something to Think About

I want to plant this idea in your head right now. If we sold a Call Option out of the money:

- We would have little 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 Call 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 Call Option...now becomes your EDGE. Their weakness becomes your strength.

Much more on this concept shortly; some of the strategies that you’re about to learn are built on this simple advantage.

Summary on Selling Call Options

- Instead of buying a Call Option to open a position, we can sell a Call Option to open a new position.
- When we sell a Call 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 Call Option creates an obligation that we agree to fulfill if called to do so, which is called “being exercised;” we might have to Sell our spot to the exercising buyer if we already have the spot (covered), or we might have a short spot position created in our account if the short Call was naked (uncovered or unsecured).
- Just like with buying a Call Option, depending on what strike price Call 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 Call Option moves in relation to the underlying asset is called the Delta of the Option, just as with the long Call Options.
- The Time Value component of the Call 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 Call 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 Call Option that is In the Money and you hold it past Expiration, you can expect to be assigned short spot currency, or be “called out” on the spot position of the underlying that you already own.

Tasks - Call Options

Here is your “homework” for this module.

❏ Set up a virtual trading account with your broker. If they do not offer virtual trading, then set up an unfunded account and learn to “paper trade” positions by noting positions that you would want to take on paper.

❏ Enter a simulated long Call Option trade by buying an “at the money” front month Call Option on BTC with your virtual account. 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 Bitcoin go up or down during this period? Did the Call Option gain or lose value?

❏ (*This exercise can be done at the same time as the above, however pick a different strike price to sell.*) Enter a simulated short Call Option trade by selling an “out of the money” front month Call Option on BTC with your virtual account. Note the price of Bitcoin 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 Bitcoin when you closed it. Did Bitcoin go up or down during this period? Did the short Call Option gain or lose value?

Call Options Summary

Now we have a slightly different perspective on Call Options; recall that we originally defined a Call Option as “an Option to Buy.” That’s true if you purchase the Call Option, but we also showed that by selling the Call Option, you might have to Sell spot currency to someone.

We also discussed how most investors come across Call Options as a way to “lock in” an asset price ahead of time, kind of like a “layaway” program....however few traders use Options in that manner. We saw that the two most powerful ways to use Call Options were:

- **Buying Options as a Leveraged Proxy for a spot currency position**
- **Selling Options to earn income from a wasting asset**

Another thing that we accomplished in this module was to introduce some new terminology that we’ll use through the rest of this program, such as:

- Delta
- ITM or “In the Money”
- OTM or “Out of the Money”

We’re not yet ready to start trading Options yet, although most trade Options with less background than you now have already been trading them, and probably contributing to others’ accounts. We need to see the other type of Option available to us; I think you’d agree that life is easier if you have both left and right hands available to you. We need to understand and use Put Options just as well as we use Call Options so that we can take advantage of market edge wherever it’s available. The next module will focus on Put Options....