



Audio Script: Know Your Options, Understanding Puts

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Audio Script:

Options can provide investors with the flexibility to capitalize on any market outlook. In our previous session, you should have a foundational understanding of call options. In today's session, we will expand on the understanding of options and explore the difference between buying and selling a put option contract. Our goal is to help investors understand the motivations behind buying versus selling, and when they might be considered.

Before we get started, please take a moment and read through and be aware of the following disclosures.

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To help investors understand buying and selling put options, we will start with a review of put option contracts and the difference between a call and put contract. We will then take a deep dive into an example where we compare the two sides of a put contract as the stock moves higher and lower. And lastly, reviewing the potential outcomes of a put option is critical to understanding the risks and rewards of each side of the trade. Let's get started.

Let's start off by taking a quick review of an options contract. A topic that we covered during our introduction to options pricing video, which you can review. While we will not cover call options. In today's video, I will provide a brief introduction to help investors understand call option contracts. As we covered call options in a previous session that you can view in this video series. The option is issued as a call or a put, which informs us if the option contains the right to buy or sell. A put option represents the right to sell. If this example were a call, the contract would represent the right to buy 100 shares of XYZ at any time up until March 24th. For a put option, it is just the opposite. A put option represents the right to sell. If this example were a put, the contract would represent the right to sell 100 shares of XYZ at any time up until March 24th. An option contract can be executed upon, meaning the put holder who has the right to sell, can sell the underlying shares at the strike price, and the call holder who has the right to buy, can buy the underlying security at the strike price. This process is called exercising. The option contract can also expire worthless, which occurs when it no longer holds any value. We will review an example of this during the potential outcomes section. So it's important for investors to understand that each option contract is standardized, which is what allows it to be readily bought and sold on an exchange or traded if a market exists. Option settle in American or European style. The style represents when the contracts can be exercised. American style contracts can be exercised at any time, and European only at expiration.

We will cover this in detail in a later video exploring index options. For now, we will focus on equity options which settle which shares of the underlying security, and can be exercised at any time up until expiration. The price at which an option is traded is called the premium which is represented on a per share basis. From here on forward, we're going to take a deeper dive into understanding the buyer and seller of put options.

In order to better understand the outcomes of a put option for both the buyer and seller, we're going to use various scenarios to analyze the trade. We will start with stock XYZ that is currently trading for \$100 per share. We will then analyze an option on stock XYZ with a strike price of \$100 per share that expires in 30 days with the premium of \$4 per share. The put buyer in this example has the right to sell 100 shares of XYZ at \$100 per share any time during the next 30 days. A put buyer enters into this contract with a bearish view on XYZ and has paid the seller \$4 per share for this right or a \$400 debit per contract.

On the other side, the put seller has the obligation to buy 100 shares of XYZ at \$100 per share. If and when the buyer chooses to exercise their right over the next 30 days. A put seller enters this contract with a neutral or bullish view on XYZ and collects the \$4 per share for this obligation, or \$400 credit per contract.

Before we move into the risks and rewards, let's focus on the put seller for a moment. For the duration of the contract, the put purchaser owns the right to sell the shares at the stock price at any time. When they choose to execute upon the terms of the contract, a short put holder of the same contract will need to

fulfill the obligation for the duration of the contract, the put purchaser owns the right to sell the shares at the strike price at any time. When they choose to execute upon the terms of the contract, a short put holder of the same contract will need to fulfill the obligation. This is called exercise and assignment. In order for the seller to meet the obligation, they will need to purchase the shares. Normally the option is only exercised if the underlying stock has declined in value upon assignment. The short option writer will take ownership of the shares. A short put holder can face substantial risk if the stock was to decline to \$0. A short put that is covered by cash to purchase the stock at the strike price is called a cash secured put the maximum loss is limited, but can be very substantial as the stock can decline to \$0. And we will take a deeper dive into this strategy in a later video. A short put that is not covered by the full cash amount to purchase the underlying stock is called a naked put. The maximum loss is also limited, but can be very substantial as the stock can decline to zero. Additionally, this strategy will require margin to enter the position and subject to margin calls. If the stock is to decline significantly. We will dive deeper into the options strategies in later webinars in this series, we want you to focus on the conceptual understanding of put options from the buyers and sellers perspective in this webinar to understand the outcomes after buying and selling a put option. Let's look at a visual of both strategies and the possible outcomes.

Understanding the difference between buying and selling an option may feel complicated at first. So I've assembled a quick visual to provide some context around the specific example we will explore today. On the left, we have the visual of a payoff graph for long put option. This is what the put buyer should expect based on the change in the price of XYZ stock. The important aspect to understand is that buying a put option is a bearish strategy that has limited risk, but requires a significant decline in stock XYZ in order to overcome the breakeven cost of the option to profit. On the right we have a visual of the payoff graph for a short put option. What the put seller should expect based on the change in the price of XYZ stock. The important aspect to understand with selling a put option is that it's a neutral to bullish strategy with limited reward and a substantial loss potential if stock XYZ is to decline to \$0. To understand how these payoff graphs are created, let's take a deeper dive into the various outcomes for a put options trade.

In order to assess the motivations of buying or selling a put option, let's fast forward a put option to the expiration date for three different outcomes and see how each side performs. In our example, a put option is traded between the buyer and seller on stock XYZ, when it was trading at \$100 per share. One contract of a put option on stock XYZ with the strike price of \$100 per share expiring in 30 days is traded for \$4 per share. In this example, the buyer pays \$4 per share for the put option to the seller. As we fast forward to the expiration date of the option. In our first example, we will assume that stock XYZ does not move higher or lower, and simply settles at exactly \$100 a share 30 days later at expiration. At expiration, the value of an option is equal to the intrinsic value of the option. In this case, if XYZ is at \$100 per share, the put option is worthless, with an intrinsic value of \$0. This is because of put option that provides the buyer the right to sell the stock XYZ at \$100 per share, when the investor can sell the stock on the open market for the same price, does not have any value. For the put option buyer. When the option expires worthless, the \$4 Premium that was paid to enter the contract is lost, and the trade results in a \$400 per contract loss. On the other side of the transaction, the \$4 Premium that was collected by the seller is kept in the trade results in a \$400 profit per contract. It is important to understand that when a put option settles above the strike price at expiration, it will always have an intrinsic value of \$0. That is why these results will be identical for both parties if XYZ settles at \$100 or higher at expiration. As a reminder, on expiration, the long put holder does not have to exercise their contracts. If a market exists for the option they can sell to close the option at the market. The short put holder can also buy to close their option if a market exists to end their obligation at any time during the duration of the contract. Now with the same trade, we can build a more complete picture for understanding the motivations for buying and selling a put option by exploring a few more outcomes.

In our next scenario, we have the same trade. And we're reviewing the outcome of the put option. If stock XYZ decreases to \$96 per share at the expiration of the put contract. As in our example before, the value of an option is equal to the intrinsic value of the option at expiration. With XYZ stock trading at \$96 per share, a \$100 put option that provides the buyer the right to sell the stock at \$100 per share has an intrinsic value of \$4. This is because the put option that provides the buyer the right to sell XYZ stock at \$100 per share, when the investor can buy the stock on the open market for \$96 per share, has an intrinsic value of \$4 per share. For the put option buyer, when the option has \$4 of intrinsic value at expiration, but the buyer paid a \$4 premium to enter the put contract, the net gain on the trade is \$0. The buyer can either exercise the put option and instantly make \$4 per share in profits on XYZ to offset the \$4 Premium paid or if a market exists, potentially sell the option for \$4 at expiration to offset the \$4 paid for

the contract. On the other side of the transaction, when the put seller has the obligation to buy 100 shares of XYZ at \$100 per share, but they can only sell it on the open market for \$96, that would result in a \$4 per share loss to the put seller. However, with the \$4 that was collected to enter the put contract, the premium collected, offsets the \$4 a share loss on the put contract, resulting in a \$0 net gain for the put option seller. The seller could hold a put option to expiration, and have the put option assigned, or if a market exists, buy back the put option to close at expiration, and clear the obligation to buy XYZ stock at \$100 per share. Keep in mind, that the seller could hold a put option to expiration and have the put option assigned, or if a market exists, simply buy back the put option to close at expiration and clear the obligation to buy XYZ stock at \$100 per share. Lastly, let's explore XYZ stock moving substantially lower after the put option is traded and review the outcomes.

In our last scenario, we have the same trade, and we're reviewing the outcome of the put option if stock XYZ decreases to \$90 per share at the expiration of the put contract. As in our example before, the value of an option is equal to the intrinsic value of the option at expiration. With XYZ stock trading for \$90 per share, the \$100 put option that provides the buyer with the right to sell the stock at \$100 per share has an intrinsic value of \$10. This is because the put option that provides the buyer the right to sell the stock XYZ at \$100 per share, when the investor can buy the stock on the open market for \$90 per share, has an intrinsic value of \$10 per share. For the put buyer, when the option has \$10 of intrinsic value at expiration, but the buyer paid a \$4 premium to enter the contract, the net gain on the trade is \$6 per share, or \$600 per contract. The buyer can either exercise the put option and instantly make \$10 a share in profits on XYZ to offset the \$4 Premium paid, or if a market exists sell the option for \$10 at expiration to offset the \$4 paid for the contract. On the other side of the transaction. When the put seller has the obligation to purchase 100 shares of XYZ at \$100 per share, but can only sell it on the open market for \$90. That would result in a \$10 per share loss to the put seller. However, with the \$4 that was collected to enter the put contract, the premium collected offsets the \$10 a share loss on the put contract, resulting in a \$6 per share net loss for the put option seller. The seller could hold the put option to expiration and have the put option assigned or if a market exists, buy back the put option to close at or before expiration and clear the obligation to buy XYZ stock at \$100 per share. Once again, the seller could hold a put option to expiration and have the put option assigned or if a market exists, simply buy back the put option to close at or before expiration and clear the obligation to buy XYZ stock at \$100 per share. Now that we've reviewed the outcomes of stock XYZ with the put option that has been traded between a buyer and a seller, let's summarize the risk and rewards of both parties and discuss the motivations behind buying and selling a put option.

I've rearranged the various outcomes of stock XYZ in a table to better understand and summarize the scenarios that we explored in the previous few slides. We are analyzing a put option on stock XYZ when it was trading at \$100 per share and a put option is purchased with a \$100 strike price expiring in 30 days for \$4 a share or \$400 a contract. This trade is a bearish trade and requires the stock XYZ to move lower.

For the put buyer, if stock XYZ either stays at \$100 or moves any higher, even if it were to rally indefinitely, the only risk that the put buyer experiences is a loss of \$4 a share or \$400 a contract. That is the limited risk factor that a put option buyer can achieve if stock XYZ does not move in the direction that they expect. However, if stock XYZ declines to \$96, the strategy only breaks even and the put buyer experiences no net gain or loss. Only if stock XYZ declines below \$96 at expiration, does the put buyer experience a profit. And if stock XYZ continues to move lower and lower, the profit potential for the put buyer is substantial, all the way down to zero. This asymmetrical risk to reward where the losses are limited to just \$4 per share, but the profit potential is substantial is the attractiveness that options provide for many investors. However, it's important to understand that buying a put option has a lower probability of success. Only if the stock makes a large directional move in the direction that the put buyer expected, will it result in a profit. Even a mildly bullish move may result in a small loss. On the other side, a put option is sold with a \$100 strike price expiring in 30 days for \$4 a share or \$400 a contract. This trade is neutral to bullish and requires the stock XYZ to either stay at \$100 per share or move higher at expiration.

For the put seller, if stock XYZ either stays at \$100 or moves any higher, even if it were to rally indefinitely, the only net gain is \$4 a share or \$400 a contract since option selling strategies have limited gains equal to the premium collected. That is the limited reward factor that a put option seller can achieve if stock XYZ moves in the direction that is expected. However, even if the directional view on stock XYZ is incorrect, and it declines down to \$96, the strategy only breaks even and the put seller experiences no net gain or loss. Only if stock XYZ declines below \$96 at expiration, does the put seller experience a net loss on the trade. And if stock XYZ continues to move lower and lower, the risk potential for the put seller is substantial down to \$0. This asymmetrical risk to reward where the gains are limited to just \$4 per

share, while taking on substantial risk, is sometimes seen as a negative for option selling. However, only if the stock makes a large directional move against the put sellers direction, will it result in a loss otherwise even a mildly bearish move may still result in a small net gain. As you can see from this example, buying and selling a put option have very different potential outcomes with either a limited risk and substantial reward potential or a limited reward with substantial risk potential. While on paper, buying a put option may seem like the better choice for most investors to take on limited risk with a potential substantial reward, it's important to understand that overcoming the breakeven point is not always easy. And on the flip side, on paper, selling a put option may seem like it's taking on excessive risk for limited profit potential. While it does take on substantial risk if stock XYZ declines, there are some options strategies that you will learn which involve buying put options that hedge the substantial risk such as a credit spread.

Let's look again at our goals and objectives, and what we learned today. You should now understand the components of an option contract, and the difference between a call and a put. The basic rights and obligations of a buyer and seller of a put option. And finally, we've reviewed the outcomes of buying and selling a put option to understand the risk and rewards of each counterparty. I hope that this provided insights into when an investor may want to buy or sell a put option, and the tradeoffs that you're making between the two strategies.

As we discussed naked puts, it is important to know that margin is required due to the increased risk. Here's important information related to margin you should be aware of.

Options can be complex, and we thank you for taking the time to expand your knowledge of the options universe. If you're looking for more options educational content, check out our options educational hub, and please feel free to give us a call with any questions or concerns at 1-877-653-4732. Also, we would love to hear from you. We welcome any feedback or questions in regards to today's presentation, as well as suggestions for future webcast. Click on the send questions button at the bottom of this page. On behalf of the Merrill an OptionsPlay team, thank you.