



Financial Derivatives - Option Trade

Patrick Jahn¹, Tânia Teixeira², Adalmiro Pereira³

¹ ISCAP – P Porto

² ISCAP – P Porto; CEO and finance assistance specialist

³ CEOS Member and ISCAP – P Porto teacher

ABSTRACT: This article will give a general review of options trading and examine how they may be utilized as a powerful tool for risk management. Due to this, topics such different kinds of options, trading tactics, and dangers involved in trading options are being discussed as well as the advantages of trading options and how to use them as a risk management tool. Finally, it will be talked about possible hazards that come with trading options and how investors may minimize them. Trading options gives investors and dealers the chance to diversify their holdings and insure against risk. Options trading is a potent tool that can be used to control risk and make market-related predictions. Also, hazards involved in trading options and how investors might reduce them will be discussed. Traders may make educated decisions about their trades and improve their trading success by being aware of the basics of options trading and the hazards involved.

KEY WORDS: Derivatives; Options; Risk; Traders

1. INTRODUCTION

1.1 General statement on financial derivatives

One of the most crucial tools for risk management in the modern trade and finance industries is the use of financial derivatives. In order to protect against several types of risk, including market risk, interest rate risk, currency risk, and other hazards related to financial markets, derivatives are utilized. Options are among the most popular types of derivatives, and investors utilize them to protect themselves from risk and speculation (Larcher, 2020, p. 97f.). The usage of options trading and how it works as a tool for risk management will be covered in this article.

Option trading is a type of financial derivatives that enables investors to make predictions about how the financial markets will develop in the future. Call and put options are available for purchase and sale by traders, giving them the right but not the duty to buy or sell a certain asset at a defined price at a given point in the future. Options are a flexible tool that can be used for hedging, speculation, and arbitrage, among other things (Eilenberg and Krautwurst, 2020, p. 37f.).

Due to traders' increased awareness of the possibility for profit, option trading has grown in popularity in recent years. Trading options can be dangerous, so before making any transactions, traders should be aware of the rewards and dangers involved. The fundamentals of options trading, the various options, trading methods, and hazards related to option trading will all be covered in this article.

2. BASICS

2.1 Definition of option trading

Option trading is a type of trade that entails the purchase or sale of a contract called an option that grants the holder the right, but not the duty, to buy or sell a certain asset at a fixed price within a given window of time. Both new and experienced investors employ option trading, which is betting on the potential direction of a security like a stock, index, or commodity.

Options are a type of derivative security, meaning that the price of an underlying asset determines how much they are worth. Options trading can be profitable using a variety of techniques, including buying and holding as well as selling calls and puts. There are other more tactics, but covered calls and defensive puts are the most popular one (Ludwig, 1987, p. 10ff.).

Compared to typical stock trading, option trading has various benefits, including the ability to short the market, leverage capital with little capital, and protect against losses. Reduced transaction costs and more liquidity are also advantages for option traders. Options are also adaptable and can be used to speculate, generate income, and diversify portfolios. One must comprehend the fundamentals of options and how they operate in order to become a successful option trader. Calls and puts are the two main



divisions of options. A put option offers the holder the right to sell a specific asset at a certain price within a specific time period, whereas a call option gives the holder the right to acquire a specific asset at a specific price within a specific time period (Hull, 2009, p. 54ff.).

Depending on their level of risk tolerance and financial objectives, investors can select from a range of options trading strategies. For instance, two of the most used methods by option traders are covered calls and protective puts. Protective puts entail purchasing put options to hedge against a future decrease in the price of the underlying investment, whereas covered calls involve writing call options against stocks that are already held.

It is critical to comprehend the dangers involved in trading options. Options have an end date, which means that if the option is not exercised before that date, it will lose all of its value. Option trading can also be dangerous because an option's value depends on the underlying security, which may be very volatile (Merk, 2011, p. 81ff.).

Finally, a deep knowledge of the markets and the ability to analyse and evaluate market data are prerequisites for success in option trading. Understanding the various methods and how they operate is also crucial. One should also be familiar with the various option kinds and the various elements that influence an option's pricing.

Option trading has the potential to be an extremely lucrative kind of investment. But it's crucial to comprehend the dangers of option trading as well as the various approaches and how they operate. One can succeed as an option trader by grasping the fundamentals and having a solid understanding of the markets (Konrad, 1992, p. 23ff.).

2.2 Financial instruments in option trading

The right to buy or sell a certain asset at a specified price on or before a predetermined date is a feature of the financial instrument known as options trading. It has an expiration date and is a contract between the buyer and the seller. Because it enables investors to hedge their position, speculate, or diversify their portfolios, it is one of the most well-liked trading instruments.

Calls and puts are the two forms of options. The buyer of a call option has the option to purchase the underlying asset at a specific price before the option expires. The right to sell the underlying asset at a fixed price prior to the expiration date is provided by a put option to the buyer. On several assets, including stocks, futures, commodities, and currencies, call and put options are exchanged (Alexander, 2008, p. 34ff.).

Options trading is a difficult and dangerous type of investment that calls for thorough understanding of both the underlying asset and the options market. Before making a deal, it's critical to understand the rewards and hazards of options trading. Options have a lot of benefits, including the ability to guess on the future path of the underlying asset and leverage with no risk. Options do, however, carry a significant level of risk because the option's value is subject to changes in the market (Brenner and Galai, 1989, p. 61ff.).

Options are typically traded on margin, which calls for a deposit of money to cover the option's cost. In addition to serving as collateral, these money can also be utilized to cover trade losses. Options typically have an expiration date, at which point the investor must choose whether to utilize the option or let it lapse. The buyer will buy or sell the underlying asset at the specified price if the option is exercised (Santa-Clara and Saretto, 2009, p. 391ff.).

When done correctly, options trading may be a lucrative kind of investing. Before making a deal, it is crucial to comprehend the rewards and risks related to the options market. Additionally, it's critical to understand the underlying asset and adopt a trading technique that fits your risk profile and financial objectives. Options come in a wide variety of forms, including covered calls, vertical spreads, and straddles. Before making a trade, it is crucial to comprehend the various tactics and the risks involved (Cohen and Loke, 2022, p. 101ff.).

2.3 Put-Call parity

Put-Call parity, which describes the link between the value of a call option, a put option, and the underlying asset, is a key idea in financial options. It can be used to find chances for arbitrage and is a tool for market players to assess an option's fair value. The idea of put-call parity will be thoroughly covered in this article, along with an illustration of how it functions.

The price of a call option and a put option in respect to the underlying asset is known as put-call parity. According to this rule, as long as the strike price and other terms are the same, the cost of a put option and a call option with the same underlying asset and expiration date should be identical. As a result, the spread between the costs of a call option and a put option must equal the current



market value of the underlying asset. The idea behind put-call parity is that an investor who purchases a call option has the right to purchase the underlying asset at the strike price, while an investor who purchases a put option has the right to sell the underlying value at the strike price (Merk, 2011, p. 81ff.).

Put-Call parity is a crucial idea in financial options since it aids market participants in determining an option's fair value. As investors can profit from differences in the call and put option pricing, it is also used to spot arbitrage possibilities. Put-Call parity is based on the idea that, with the same underlying value, strike price, and expiration date, the cost of a call option and a put option should be identical. Investors can trade options with greater confidence if they comprehend how put-call parity functions (Albrecher et al., 2009, p. 29ff.).

3. BENEFITS OF OPTIONS TRADING

3.1 Risk management

As more investors explore for strategies to diversify their portfolios and take advantage of the potential for significant profits, option trading has grown in popularity in recent years. However, there are significant risks associated with option trading, and it is crucial for investors to know how to control those risks. Investing professionals can maximize their gains while reducing their losses by grasping the fundamentals of risk management (Math, 2002, p. 21ff.).

In option trading, risk management refers to the process of evaluating the benefits and risks that could be associated with a specific option and making decisions in light of this evaluation. It entails determining the chances that a specific option will expire worthless as well as the possible losses that could result from doing so. In order for the investor to determine whether the rewards outweigh the risks, risk management also entails identifying the possible benefits of a successful option. Understanding the fundamentals of the options market is the first step in risk control in option trading. Investors need to be aware of the various options available, as well as their expiration dates, strike prices, and premiums. Investors must also be aware of the different risk-management techniques available, including diversification, hedging, and the use of stop-loss orders (Heussinger et al., 2000, p. 157ff.).

An investor can start evaluating their risk once they have a basic understanding of the options market. By calculating the prospective gains and losses of a specific choice, this can be accomplished. The current value of the underlying value in addition to the strike price can be used to evaluate the possible losses. By examining the potential benefit if the term ends in the money, it is possible to compute the prospective rewards (Oehler and Unser, 2013, p. 28f.).

By enabling users to specify a certain price at which the option will be sold, irrespective of the price of the underlying asset, stop-loss orders can help shield investors from significant losses. Investing in another asset to balance out the option's risk is known as hedging. By investing in a variety of various assets, an investor can fall back on their other investments in the event that one performs poorly.

Investors should be aware of the different dangers related to option trading in addition to these tactics. These include the risk of margin calls, the risk of the underlying asset losing all of its value, and the risk of trading in an unstable market. Setting suitable margin amounts can reduce the possibility of margin calls. Avoiding trading during periods of high volatility will help you reduce trading in an illiquid market (Eller et al., 2010, p. 473f.).

Investors need to keep in mind that risk management is a continuous process. Investors should re-evaluate their risk management plan as market conditions shift to make sure they are managing their risk as efficiently as feasible. Overall, risk control is a key component of profitable option trading. Investors can make well-informed selections that will maximize their earnings while reducing their losses by comprehending the fundamentals of the options market and evaluating their risk (Oehler and Unser, 2013, p. 44f.).

3.2 Making profits

The buying and selling of contracts on a publicly traded stock or commodity constitutes the investment strategy known as option trading. Option trading enables investors to benefit from the potential high returns provided by the stock market while also lowering their risk, making it a potentially lucrative form of investing. Options are contracts that grant the holder the right, but not the responsibility, to buy or sell the underlying asset at a defined price on or before a specific date. Option trading comprises the buying and sale of options, which are contracts (Lingner, 2013, p. 93f.).



Option trading enables investors to benefit from the possibility for significant returns on their investments, making it a potentially lucrative form of investing. The secret to profitable option trading is to buy and sell options at the proper time and price. This necessitates a careful examination of the underlying asset and its market environment.

Purchasing call options, which grant the holder the right to buy the underlying asset at a certain price on or before a defined date, is the most popular type of option trading. The option may be profitable to sell in the event that the value of the underlying asset increases. On the other hand, the option may be sold for a loss if the value of the underlying asset decreases (Lingner, 1991, p. 33ff.).

Selling put options, which provide the holder the ability to sell the underlying asset at a predefined price on or before a given date, is another way to trade options. The option may be repurchased at a gain if the value of the underlying asset decreases. On the other hand, if the value of the underlying asset increases, the option may be repurchased for a loss.

To possibly improve their profits, option traders might also employ methods including spreads, straddles, and strangles. Spreads entail the buying and selling of many options with various strike prices and expiration dates. Two options with the same strike price but different expiration dates are bought and sold in a straddle. Two options with various strike prices but the same expiration date are bought and sold in a strangle (Mondello, 2017, p. 917ff.).

Leverage is another tool available to option traders who wish to boost their earnings. Using leverage enables traders to invest considerably less money than would be needed to buy the underlying item directly. This might potentially boost their earnings, but it could also potentially boost their losses (Smith, 2008, p. 67f.).

3.3 Flexibility

The flexibility that option trading provides traders is one of its main advantages. Options give traders the freedom to alter the risk-reward ratio of their bets, enabling them to benefit in a variety of market circumstances. A number of techniques, including buying calls, buying puts, writing covered calls, uncovered calls, and cash-secured puts, are used to achieve this.

A common trading tactic is buying calls, which enables a trader to profit from an increase in the value of the underlying asset. An investor effectively purchases the right to purchase the underlying asset at a fixed price when they buy a call. The investor may then exercise their option to purchase the underlying asset at the predetermined price if the value of the underlying asset increases. The investor can secure a profit in this way (Daume and Dennhard, 2017, p. 7ff.).

It is possible to profit from a drop in the price of the underlying asset by purchasing puts. An investor effectively purchases the right to sell the underlying asset at a fixed price when they purchase a put. The investor can then use their option to sell the asset at the predetermined price if the value of the underlying asset decreases. The investor can secure a profit in this way.

An investor can use the concept of writing covered calls to write a call option on a stock they already own. In exchange for writing the call, the investor will receive a premium. If the value of the underlying asset rises, the investor can sell the asset for more money while keeping the premium. The investor will not be required to sell the asset and may keep the premium if the value of the underlying asset declines (Hull, 2009, p. 38f.).

A strategy known as "writing uncovered calls" involves an investor writing a call option on a stock he does not already own. The investor may be obligated to buy the underlying asset at the fixed price even if the value of the underlying asset rises. If the price of the underlying asset increases too high, this could lead to a loss.

An investor can use the writing cash-secured puts approach to write a put option on a stock he does not already own. If the option is exercised, the investor must have enough money on hand to buy the underlying asset. The investor will be required to buy the asset at the fixed price even if the value of the underlying asset declines. If the price of the underlying asset declines sufficiently, this could lead to a profit (Deutsche Terminbörse GmbH, 1989, p. 9ff.).

Finally, option trading offers a great lot of freedom to investors. Depending on the state of the market, investors can take advantage of a number of techniques by being able to tailor the risk-reward profile of their bets. Investors can make money if they take advantage of this flexibility, even in challenging market situations (Daume and Dennhard, 2017, p. 22ff.).



4. RISKS OF OPTION TRADING

4.1 Volatility

Volatility is a metric for the degree of risk or uncertainty connected to significant swings in a security's value. It is typically used to calculate the price changes of an item over a predetermined time period. Because it has an impact on the price of the options traders are trading, volatility is a crucial notion.

Options are derivatives that grant the holder the right, but not the duty, to buy or sell a security at a fixed price on or before a particular date. Volatility is a tool used by options traders to estimate the likelihood that a deal will be profitable. The cost of options typically rises when volatility is high, whereas the cost of options typically falls when volatility is low (Keber, 1999, p. 205ff.).

An asset's volatility is also used to calculate its risk. Since the price of the asset is more likely to fluctuate fast and unexpectedly, a security with high volatility is regarded as riskier than a security with low volatility. Options traders must therefore be conscious of the volatility of the commodities they are trading as well as any potential dangers involved (Korn and Luderer, 2019, p. 177ff.).

By comparing the standard deviation of its past prices, volatility may be calculated. The asset is more volatile the larger the standard deviation. For option traders, this measure of volatility is crucial since it can aid in selecting which options to trade and determining the possible profit from such bets.

Additionally, option traders need to be aware of the dangers posed by volatility. The price of an option can be significantly impacted by volatility, and if the value of the asset swings too quickly in either direction, the trader may suffer severe losses. Additionally, the trader may be exposed to changes in volatility over the course of the option if they are trading options with a lengthy expiration date. As a result, traders should always keep an eye on the volatility of the assets they are trading as well as any potential hazards.

In conclusion, since volatility has an impact on the price of the options traders are trading, it is a crucial idea. The standard deviation of its past prices can be used to calculate volatility, and higher levels of volatility typically result in higher option pricing. However, because volatility can have a big impact on an option's pricing and result in considerable losses for the trader, options traders need to be mindful of the risks connected with it (Keber, 1999, p. 205ff.).

4.2 Time value

A common type of derivative trading that enables investors to enter the market with little risk is option trading. Contracts known as options grant the buyer the right, but not the duty, to purchase or sell an asset at a defined price on or before a given date. Investors find option trading appealing because it offers large returns with little initial expenditure and, in some circumstances, can be utilised to control risk. Time value, which is the margin by which the option price exceeds the intrinsic value, is one of the key elements of options trading. Time value can be an effective tool for investors, but there are also some risks involved (Deutsche Terminbörse GmbH, 1989, p. 25ff.).

The difference between the market price and intrinsic value of an option is its time value. The difference between the strike price and the underlying asset's current market price is known as intrinsic value. The price at which the option may be exercised is known as the strike price. Options have intrinsic value if their strike price is equal to or less than the underlying asset's current market value. Options with a strike price greater than the underlying asset's current market value have no intrinsic value (Imo, 2013, p. 45ff.).

The margin by which the option price exceeds the underlying value is known as time value. The remaining time before expiration and the market's implied volatility both affect time value. The time value increases as the remaining time decreases. The temporal value increases as indicated volatility increases.

Investors may find time value to be a useful tool. Options that have a long time until expiration offer a higher possibility for profit than options that expire quickly. This is due to the fact that time value decreases as the option gets closer to expiration and eventually reaches zero at expiration. Additionally, as implied volatility rises, time value rises as well, giving investors access to the higher chance of profit (Gresser, 2005, p. 29ff.).

Time value, however, also entails some dangers. For option buyers, time value functions as insurance, and the sum of time value paid represents the insurance's cost. The time value of the option decreases as it gets closer to expiration, and if it is not exercised, the option buyer forfeits the time value they paid. Additionally, if implied volatility declines, the option's time value will decline and the option buyer will forfeit the time value they paid.



Furthermore, the time value that was paid for an option is not refundable. The time value of the option will not be refunded if the option buyer decides to exit his position before expiration. This indicates that when an option buyer pays for time value, he assumes some risk.

To sum up, time value plays a significant role in option trading. When attempting to increase their chances of profit, investors can use time value as an effective instrument. It's crucial to realise that time value involves some risks and that the money spent for it is not refundable. Before engaging in an options transaction, investors should be conscious of these dangers and make sure that the potential gains outweigh the risks (Lombard, 2013, p. 56f.).

4.3 Counterparty risk

Option trading is a well-liked method of making money on the stock market, but it's crucial to comprehend the hazards involved. Counterparty risk, or the possibility that one party to a trade won't uphold their end of the bargain, is one of the dangers that traders need to be aware of. This risk is particularly important in option trading because the two parties are frequently unfamiliar with one another (Larcher, 2020, p. 97ff.)

Counterparty risk is the chance that one of the parties to a financial transaction won't carry out their end of the bargain. The buyer and the seller of the option are the two parties involved in option trading. The right to buy or sell the underlying asset at a fixed price on or before a specific date is granted to the option buyer in exchange for a premium. If the buyer exercises their right, the option seller is then compelled to carry out their contractual obligations (Merk, 2011, p. 81ff.)

When a buyer exercises an option, there is a chance that the seller won't be able to fulfil their end of the bargain. This is known as counterparty risk. This might happen if either the seller is unable to deliver the underlying item or the seller is incapable to generate enough cash to pay the purchase price. The buyer can be left with an unmet contract and a monetary loss in either scenario (Ludwig, 2013, p. 89f.).

Understanding the underlying asset and its anticipated performance in the future is crucial for lowering the risk connected to counterparty risk in option trading. Since many option agreements are based on stocks, it is crucial to examine the business and the performance of its stock before signing a contract. It's also critical to comprehend the contract's terms and conditions as well as the hazards involved.

It's crucial to comprehend the underlying asset in addition to the counterparty's financial standing. The counterparty must possess the financial means necessary to carry out their contractual obligations. The counterparty's creditworthiness, which can be ascertained by checking their credit rating, should also be taken into account. Lastly, it's critical to comprehend the conditions of the option contract. All parties should be aware of their responsibilities, and the terms should be brief and unambiguous. Additionally, it is crucial to make sure that the option contract will be enforceable in court.

Overall, when trading options, counterparty risk is a crucial risk to take into account. To lower the risk involved in this sort of trading, it is crucial to comprehend the underlying asset, the counterparty's financial stability, and the contract's terms. By doing this, traders can better prepare themselves to control this risk and reduce their possible losses (Linger, 2013, p. 165ff.).

CONCLUSION

One of the most significant financial derivatives offered to investors and traders is option trading. It offers a wide variety of adaptable solutions for risk management and return maximisation for investors. Options can be utilised in a variety of ways to profit from market opportunities and to hedge against market volatility. The ability to leverage the possibility for higher profits than what would be available with a single share or other underlying asset is the main benefit of options trading (Larcher, 2020, p. 97ff.). Options provide a variety of potential strategies and techniques, ranging from straightforward hedging measures to more intricate spread and combo tactics. Options can also be utilised to build synthetic long and short positions, giving investors even more flexibility. Options are an excellent risk management and hedging tool. Investors that use options can keep their losses to the amount they put into the option. As a result, investors can manage their risk and safeguard their money. Moreover, you can employ options to lock in a profit at a pre-set price. Optional strategies can be utilised to boost returns and broaden diversification. Options give investors the opportunity to "go long" or "go short" on a range of assets, which can help lower overall portfolio risk whilst allowing investors to profit from potential upside (Ludwig, 2013, p. 104ff.).



Option trading is a potent instrument for investors of all experience levels, to sum up. Options provide investors with a variety of techniques and approaches to help them succeed because of its capacity to leverage prospective returns, control risk, and boost portfolio diversification.

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