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ANALYZİNG THE ADVANTAGES AND DİSADVANTAGES OF OPTİONS STRADDLE TRADİNG

Summary

Straddle is popular trading strategy offering unique opportunity to profit from volatility regardless of market direction. This paper analyzes straddle trading, highlighting benefits like risk management alongside drawbacks such as cost and time decay. It offers concise overview for investors of all levels by incorporating mathematical models and real-world examples.

Key words: *finance, financial markets, straddle, derivatives.*

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Introduction

Options straddle trading is a sophisticated investment strategy that involves purchasing both a call option and a put option with the same strike price and expiration date[1]. This strategy enables investors to profit from significant price movements in the underlying asset, irrespective of whether the price rises or falls. The core principle behind straddle trading lies in exploiting volatility, making it particularly attractive in uncertain market conditions. However, like any trading strategy, options straddles come with their own set of advantages and disadvantages, which must be carefully considered by investors. This paper aims to explore these factors in detail.

Advantages of Options Straddle Trading

Risk Management: One of the primary advantages of options straddle trading is its effectiveness in managing risk. By purchasing both a call and a put option simultaneously, investors limit their potential losses to the premium paid for the options. This risk-defined nature of straddle trading provides a level of security, particularly in volatile markets where prices can fluctuate unpredictably.

Potential Returns: Options straddle trading offers investors the potential for substantial returns, especially in scenarios where the underlying asset experiences significant price movements. If the price of the underlying asset moves sharply in either direction, the profitability of the straddle can be considerable, surpassing the initial investment.

Flexibility: Another advantage of options straddle trading is its flexibility. Unlike directional strategies that require predicting market direction, straddle trading allows investors to profit from volatility regardless of whether the market moves up or down. This flexibility can be particularly beneficial in uncertain market conditions or during periods of heightened volatility[2].

Disadvantages of Options Straddle Trading

Cost: One of the main disadvantages of options straddle trading is the upfront cost. Since investors must purchase both a call and a put option simultaneously, the initial investment can be substantial. This cost factor can deter some investors, especially those with limited capital or risk tolerance.

Time Decay: Another disadvantage of options straddle trading is the impact of time decay, also known as theta decay. As time passes, the value of both the call and put options diminishes, eroding the profitability of the straddle.[3] Therefore, for straddle traders, it is essential to monitor the time decay and adjust their positions accordingly.

Requirement for Significant Price Movement: For options straddle trading to be profitable, the underlying asset must experience substantial price movement before the expiration date[4]. If the price remains relatively stagnant or moves within a narrow range, the straddle may result in losses due to the combined effect of time decay and the initial premium paid.

Mathematical Equations and Formulas

To further illustrate the concepts discussed above, we provide the following mathematical equations and formulas commonly used in options straddle trading:

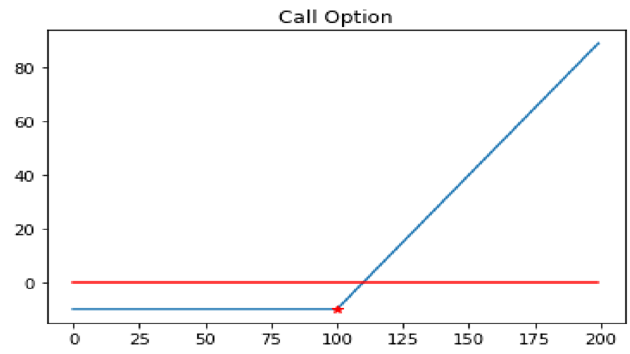
Payoff for Long Call Option (C):

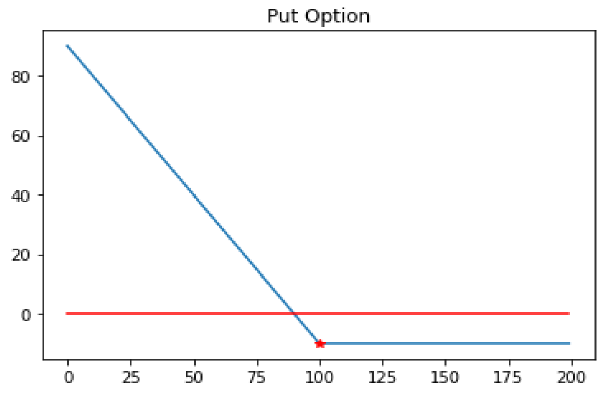
$$C = max(0, S_T - K)$$

Payoff for Long Put Option (P):

$$P = max(0, K - S_T)$$

Diagram 2. Call and Put payoff





Payoff for Options Straddle:

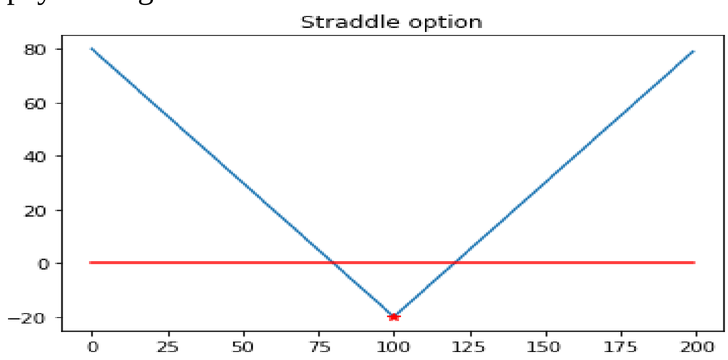
$$\textit{Straddle Payoff} = C+P$$

Time decay:

$$\Theta = -\frac{\partial V}{\partial t}$$

Where, S_T Price of the underlying asset at expiration, K Strike price of the option, V Value of the option.

Diagram 1. Straddle payoff diagram



Conclusion

Options straddle trading presents investors with a unique opportunity to profit from volatility in financial markets. While it offers several advantages, including risk management, potential for high returns, and flexibility, it also comes with its own set of disadvantages, such as cost, time decay, and the requirement for significant price movement. By understanding these factors and utilizing appropriate mathematical models and formulas, investors can make informed decisions when employing options straddle trading strategies.

The growth of the options market has been greatly hampered by the high complexity of these contracts, as well as gaps in the rules for their accounting and taxation. The lack of government regulation of trade and taxation of option contracts limited the further expansion of options, as well as a number of other complex financial instruments, into the national markets of a number of countries.

As already noted, there are a number of options.

Based on the form of implementation, two main types can be distinguished.

1. Options with physical delivery of underlying financial instruments or goods. A physically delivered option, when exercised, gives its owner the right to buy (call option) or sell (put option) a specified amount of the underlying asset at a specified price.

A call option gives the buyer the right to buy the underlying asset from the option seller at the strike price within a specified time frame or to refuse this purchase. An investor purchases a call option if he expects the market value of the underlying asset to increase. Therefore, a call option gives the option holder the right to buy or refuse to buy the underlying asset. A call option gives the option holder the right to sell or refuse to sell the underlying asset. To better understand the essence of an option transaction, you should remember that it consists of two stages. In the first stage, the option buyer acquires the right to exercise or not exercise the contract. On the second, he exercises (or does not exercise) this right.

A spot cash option gives its owner the right to receive payment in the form of the difference between the price of the underlying asset in the real commodity market at the time of exercise and the exercise price of the option. Moreover, a call option (purchase option) with cash settlement gives its owner the right to receive the difference

between the value of the underlying asset and the exercise price of the option, when the value of the asset upon delivery on the real commodity market is higher than the exercise price of the option.

2. Options settled in cash on spot terms. A put option (put option) gives the right to receive the difference in cash when the strike price of the underlying asset in the real commodity market is lower than the option's strike price.

A put option gives the buyer of the option the right to sell the underlying asset at the strike price within a specified time frame to the seller of the option or to refuse to sell it. An investor purchases a put option if he expects the price value of the underlying asset to fall.

Based on their execution time, options are divided into those that can be exercised:

1) at any time before the expiration of its validity period. Such options are called American;

2) for a specific period of time before expiration. These options are called European options;

3) automatically before expiration, when a situation arises in the market on which the option is traded in which the value of the underlying instruments at a specific time in the trading session is higher (for a call option) or lower (for a put option) than its exercise price. This option is called an interest option. It can be exercised in the same way as the European one, for a specific period of time before the date of termination.

Based on the relationship between the exercise price and the current value underlying the option of market instruments, three types of options are distinguished.

1. Out of the money option. If the market situation is such that for a call option the strike price is higher than the current value of the underlying market instruments, then such an option is called an out-of-the-money option. A put option becomes an out-of-the-money option when the strike price is below the current value of the underlying market instruments. For example, with the current market price of a share equal to 40 rubles, a call option with an exercise price of 45 rubles. would be an out-of-the-money option for the amount of 5 rubles, and a put option for the same amount with an exercise price of 35 rubles.

2. Option “in the money”. In the event that the current market value of the underlying

A call option on a financial instrument is higher than the exercise price of the option; such a call option is called “in the money.” A put option is said to be “in the money” if the current market value of the underlying instruments is below the option’s strike price. For example, if the current market price of the stock was 43 rubles, then a call option with an exercise price of 40 rubles. would be “in the money” in the amount of 3 rubles.

3. The term “at-the-money option” means that the current market value of the assets underlying the option is equal to the exercise price.

When implementing a program related to the issue of an option, the main risk is the lack of a legislative definition of an option and its main features and characteristics, as well as the risk of an ambiguous interpretation by various government regulators of the concept of an option, the mechanism of its action and the applicable legislation to it. In addition, the question remains open of how to interpret the tax legislation applicable to options, but this largely depends on the tax authorities. In the absence of options legislation, there is a risk that the right that secures the option will remain unrealizable (or in no way secured), and then investors may refuse to purchase options even on very attractive underlying assets. Moreover, unregulated (exchange or over-the-counter) options markets are subject to numerous abuses.

The most important common features for using options in the financial market are:

— functional and price secondary;

— the necessity and sufficiency of the value of the basic indicator to determine the option price;

— the ability to unambiguously determine the value of the basic indicator for a given point in time.

An option is an instrument whose value directly depends on (and can be calculated based on) the value of some objectively existing indicator that is subject to unambiguous determination - the basis, which is the price of some asset or some calculated value.

The main trends in the development of the segment of standard contracts for stock assets in the world should be considered:

— continuation of the processes of integration and consolidation of the market, implemented both through

intranational and cross-border mergers of infrastructure facilities and concentration of trading activity within leading sites, and through the harmonization of technological solutions, standards and approaches to regulating the industry;

— a significant increase in the importance of emerging markets due to the formation of independent exchange centers within them, the redistribution of trading volumes in their favor, and the strengthening of the influence of the characteristics of such centers on the global market structure in terms of traded instruments;

— transformation of the structure of contracts presented on the market by strengthening the index segment, accelerated growth in trading volumes in stock futures and the design of fundamentally new types of instruments;

— maintaining the wide participation of individual investors as one of the main factors in the growth of trade volumes. The most significant problems hindering the further development of the domestic

options market for stock assets are:

— lack of mechanisms for optimizing simultaneous participation in the market of standard contracts and the market of underlying assets and the inability to use Russian infrastructure to manage the risks of foreign markets;

— high dependence of market liquidity on the activity of private investors and insufficient participation of professional financial market players;

— limited range of instruments presented (weak development of the options segment, dependence on a small number of contracts in the segment of instruments for individual shares, lack of non-traditional instruments). Promising areas of development

domestic market of standard contracts for

stock assets should become:

— increasing the efficiency of the exchange infrastructure, implemented through the consolidation of trading activity within a single platform, the creation of mechanisms for interaction between the leaders of the derivatives and stock segments and the creation of prerequisites for the internationalization of infrastructure;

— expansion and harmonization of the structure of participation in trading by maintaining broad participation of individuals as a factor in maintaining liquidity, while simultaneously removing barriers for institutional investors and increasing the attractiveness of the market for foreign players;

— improvement of market instruments: expanding the range of available underlying assets in the options segment, forming new types of contracts (for volatility, for collective investment instruments).

Literature

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АНАЛИЗ ПРЕИМУЩЕСТВ И НЕДОСТАТКОВ СТРЭДДЛ-ТОРГОВЛИ ОПЦИОНАМИ

Резюме

Straddle — популярная торговая стратегия, предлагающая уникальную возможность получить прибыль от волатильности независимо от направления рынка. В этой статье анализируется стрэддл-трейдинг, подчеркивая такие преимущества, как управление рисками, а также такие недостатки, как стоимость и временной спад. Он предлагает краткий обзор для инвесторов всех уровней, включая математические модели и примеры из реальной жизни.

Ключевые слова: *финансы, финансовые рынки, стрэддл, деривативы.*

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OPSİONLARIN ÜSTÜNLÜKLƏRİNİN VƏ ƏSASLARININ TƏHLİL EDİLMƏSİ STRADDLE TRADING

Xülasə

Straddle, bazarın istiqamətindən asılı olmayaraq dəyişkənlikdən mənfəət əldə etmək üçün unikal imkan təklif edən məşhur ticarət strategiyasıdır. Bu yazıda qiymət və vaxt itkisi kimi çatışmazlıqlarla yanaşı risklərin idarə edilməsi kimi üstünlükləri vurğulayaraq straddle ticarəti təhlil edir. O, riyazi modelləri və real dünya nümunələrini özündə birləşdirərək bütün səviyyələrdə olan investorlar üçün qısa icmal təqdim edir.

Açar sözlər: *maliyyə, maliyyə bazarları, straddle, törəmələr.*