Options Trading Explained For Beginners

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1 Introduction

Options, as one of the most common financial derivatives, are relatively complex subjects, certainly when compared to some of forms of investment such as stocks.

The goal of this article is to introduce you, who particularly have very little relevant knowledge and experience, to options trading as quickly as possible. In this introduction we aim to present a plain approach to the theory, without any mathematical formulas involved.

2 Definition

An option is a non-binding agreement, that is being said, a right but not obligation. Once you purchase an option with a certain fee, you automatically become the option buyer, and you can either exercise or abandon it.

Note: *exercise* refers to the act of using.

This specific agreement allows you to buy or sell an asset *in the future* at a price *set today*.

Again, you are not required to exercise options unless you intend to.

3 Option terminology

- **Option price**: amount paid *today* from option buyer to option seller, for the right to buy or sell asset in the future.
- **Exercise/Strike price** (K): amount exchanged for asset, if option buyer decide to buy or sell asset.
- **Expiration/Maturity date** (T): date by which option must be exercised or become worthless.

4 Types of Options

There are two general types of options (Calls and Puts), depends on the right to buy or sell asset.

4.1 Call Options

Non-binding agreement to *buy* asset at expiration for strike price.

Remark: since you are the call option buyer, namely, you expect the price of asset will *go up* in the future, so that you set up a price which is the amount of money you *buy* for the asset in the future.

Note: you are the option buyer, the potential *asset buyer* as well.

4.2 Put Options

Non-binding agreement to *sell* asset at expiration for strike price.

Remark: since you are the put option buyer, namely, you expect the price of asset will *go down* in the future, so that you set up a price which is the amount of money you *sell* for the asset in the future.

Note: you are the option buyer, the potential *asset seller* as well.

4.3 Example

Consider a call option on one share of a stock with: Strike price (K) is \$100, Expiration date (T) is 1 year, and the option price is \$10.

- **Today**: you, as the call option buyer, pay \$10 to option seller, for the right to buy asset in the future.
- **Expiration date ($T = 1$ year)**:
  - if the stock price is higher than strike price ($K = \$100$), then you will exercise it. You will pay the option seller, aka stock seller, \$100, in return of one share of a stock.
  - if the stock price is lower than strike price ($K = \$100$), then you will choose NOT to exercise it.

Now let us consider a put option on one share of a stock with: Strike price (K) is \$100, Expiration date (T) is 1 year, and the option price is \$10.

- **Today**: you, as the put option buyer, pay \$10 to option seller, for the right to sell asset in the future.
- **Expiration date ($T = 1$ year)**:
  - if the stock price is higher than strike price ($K = \$100$), then you will choose NOT to exercise it.
  - if the stock price is lower than strike price ($K = \$100$), then you will exercise it. You will sell one share of a stock at \$100 to option seller, aka stock buyer.

5 Risks

Obviously, we shall realize that the market does not necessarily go to the direction as we expect. Hence, there is no guarantee that you would make money by options trading, except your guess is right (sometimes, direction is right does not imply you will make money neither). For example, if the asset price goes down after you purchase call options, then your options will be worthless, because it is more profitable to buy the asset from the market. Conversely, it also works for put options, since you would probably sell it at market price.

6 Intrinsic Value

As we discuss in the above section, how much intrinsic value of an option is, depends on the difference of strike price and current asset price. To be more precise, intrinsic value is defined as the profit that the option buyer would make if exercising immediately.

For example, suppose you have a call option based on stock in Company A with a strike price of \$20, while Company A stock is actually trading at \$25. The options has intrinsic value of \$5, as you could theoretically make \$5 profit by exercising your option to buy the stock at \$20 and then sell it at \$25. If Company A stock was trading at \$30, then the intrinsic value would be \$10.

Similarly, imagine a put option based on stock in Company B with a strike price of \$50, while Company B stock is actually trading at \$48. The intrinsic value here is \$2, as you could theoretically make \$2 profit by buying the stock at \$48 and then exercising your option to sell it at \$50.

Remark: it's possible, of course, for an options contract to have no intrinsic value.

7 Time Value

Needless to say, you are highly unlikely to purchase an option at its intrinsic value.

You are given a right to exercise in the future, and the price of asset may change during this time caused by volatility, therefore, there is always probability of you benefit from the time.

Briefly, you have to pay for this potential value, and that is what we called the time value.

Generally speaking, the time value will be higher when there is more time left. As a trade moves toward the expiration date, the time value will typically decrease due to time decay, and there's less time for the price of the underlying asset to move.

8 Summary

Since the option is a right instead of obligation, your maximum loss is bounded, which is the option price. As for you maximum profit, however, theoretically, it is unlimited (especially for call options).