

INTRODUCTION TO STOCK & INDEX OPTION

A stock option is the ability to purchase or sell a specific number of shares of a company's stock at a future date at a specific, pre-set price. In the Indian context, stock options are likely to be American style and can be exercised any day until expiry. If not exercised, stock options are automatically cash settled on expiry.

Options contracts, which are based on some index, are known as Index options contract. The buyer of index option contracts has only the right but not the obligation to buy or sell the underlying index on expiry. Index option contracts are generally European style options i.e. they can be exercised or assigned only on the expiry date. An index in turn derives its value from the prices of securities that constitute the index. By its very nature, an index **cannot be delivered** on maturity; therefore, these contracts are essentially cash settled on expiry.

Types of Options

- **Call option on a stock:** Suppose the lot size of Hindustan Lever is 1,000 and the March Hindustan Lever call option with a strike price of 300 is trading at 200, then you have a right to buy 1,000 shares of Hindustan Lever at Rs 300 per share on or before March 28, 2002, and for which you need to pay Rs. 200,000 (200×1000). In other words, you are a buyer of a call option on Hindustan Lever. The seller of this call option who has given you the right to buy from him is under obligation to sell 1,000 shares of Hindustan Lever at Rs250 per share on or before March 28, 2002 for which he has received a payment (premium) of 200,000. The buyer of the call has limited risk and unlimited potential gain. His risk is limited only to the amount of money he spent on purchasing the call option. His unlimited potential gain comes from the stock's upside growth potential. On the other hand, the seller has limited potential gain and unlimited potential loss. The seller can only gain what was paid to him for the call option. His unlimited risk comes from the stock price's ability to rise during the life of the contract.
- **Call option on an index:** Assume the lot size of Nifty is 200 and the March Nifty call option has a strike price of 1,100 and is trading at 1,000, then you have the right to buy 200 Nifty units at 1,100 for which you have to make a payment (premium) of 200,000 (200×1000). In other words, you are a buyer of a call option on Nifty. The seller of this call option who has given you the right to buy from him is under obligation to sell 200 units of Nifty at Rs1,100 per unit. The buyer of the call has limited risk and unlimited potential gain. Whereas, the seller has limited potential gain (premium) and unlimited potential loss.
- **Put option on a stock:** Suppose the lot size of Bharat Heavy Electricals is 1,600 and the March Bharat Heavy Electricals put option has a strike price of 140 and is currently trading at 200, then you have the right to sell 1,600 shares of Bharat Heavy Electricals at Rs140 per share on or before March 28, 2002 for which you will make a payment of 320,000 (1600×200). In other words, you are a buyer of a put option on Bharat Heavy Electricals. The seller of this put option who has given you the right to sell to him is under obligation to buy 1,600 shares of Bharat Heavy Electricals at Rs140 per share on or before March 28, 2002 whenever asked. The buyer usually has limited losses and his profit potential is also limited, whereas the seller has losses to the extent of the difference in strike price and 0.

- **Put option on an index:** Suppose the lot size of Nifty is 200 with a strike price of 1,200 and the March Nifty put option is currently trading at 1,000, then the buyer of the March Nifty put option has the right to sell 200 Nifty units at 1,200 and to buy that right the buyer will make a payment of 200,000 (200*1000). The seller of this call option who has given the buyer the right to sell to him is under obligation to buy 200 units of Nifty at Rs1,200 per unit. The buyer usually has limited losses and his profit potential is also limited, whereas the seller has losses to the extent of the difference in strike price and 0.

‘Moneyness’ of an Option:

- **Out of the money option:** All those call options which have their strike price higher than the spot price of the underlying are out of the money. Similarly, all those put options which have their strike price lower than the spot price of the underlying are out of the money.
- **In-the-money option:** All those call options which have their strike price lower than the spot price of the underlying are in the money. Similarly, all those put options which have their strike price higher than the spot price of the underlying are in the money.
- **Near or at the money:** Those options which have their strike price closest to the spot price of the underlying are called **near-the-money** options because these options are due to get in or out of the money. The options whose strike price is the same as the spot price of the underlying are called **at-the-money options**.

Specifications of Options

- **Available Contract Months:** There are one, two and three-month contracts available presently. It is expected that once these contracts become liquid, the exchanges would introduce contracts of longer-term expiry/maturity.
- **Strike Price/Exercise Price:** The price at which you have the right to buy or sell is called the strike price. The exchanges decide the strike price at which call and put options are traded. Generally to simplify matters, the exchanges specify the strike price interval for different levels of underlying prices, meaning the difference between one strike price and the next strike price over and below it. For example, the strike price interval for Bharat Heavy Electricals is Rs10. This means that there would be strike prices available with an interval of Rs10. Typically you can see options on Bharat Heavy Electricals with strike prices of Rs150, Rs160, Rs170, Rs180, Rs190 etc.
- **Lot Size/Contract Multiplier:** Lot size refers to the number of underlying securities in one contract. Additionally, for stock specific derivative contracts SEBI has specified that the lot size of the underlying individual security should be in multiples of 100. This requirement of SEBI coupled with the requirement of minimum contract size forms the basis of arriving at the lot size of a contract.
- **Tick size:** The tick size is "0.05". This means that the minimum price fluctuation in the value of an option can be only 0.05.
- **Margin System:** Since the risk of the buyer of an option is limited to the premium paid, there is no margin required from the buyer of the option. The risk of the option seller is unlimited and therefore he needs to pay the margin as prescribed by the exchange at the time of entering into an option contract. To reduce the default risk, the option position of the seller is marked to market every day.
- **Settlement of the option on exercise/expiry:** Presently stock options are settled in cash. This means that when the buyer of the option exercises an option, he receives the difference between the spot price and the strike price in cash. The seller of the option pays this difference. Index options are always cash settled

In the event of corporate announcements, the exchanges adjust the option positions such that the economical value of the position on the cum-benefit day and the ex-benefit day is the same.

According to Sebi regulations, if the value of the declared dividend is more than 10% of the spot price of the underlying on the day of dividend announcement, on ex-dividend date the strike price of the options on a stock is reduced by the dividend amount. In case the declared dividend is lower than 10% of the spot price, then there is no adjustment for the dividend by the exchange and the market adjusts the price of options taking the dividend into consideration.

Suppose Reliance is trading at Rs260 and it announces a dividend of Rs30 per share. Since it is more than 10% of the prevailing market price, all the available strike prices of the contracts of Reliance options get reduced by Rs30 on ex-dividend date. Hence, the option with a strike price of Rs260 stands at Rs230 and so on. If you have bought 600 Reliance call 260 options, your position on ex-dividend date would become 600 Reliance call 230.

Contrastingly, if ACC is trading at Rs160 and it announces a dividend of Rs2 per share, then since the dividend is lower than 10% of the underlying price, no change is made in the option contracts of ACC. The ACC option with a strike price of Rs160 on last cum-dividend date will remain as Rs160 strike price on ex-dividend date. The stock price reduces by the dividend amount on the ex-dividend date. This means the call option price decreases and the put option price increases on the ex-dividend date. In reality, the market adjusts the option price as soon as the dividend is announced.

