

Introduction to Option Chain Terminologies

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ABSTRACT

Option chains are used widely by the investors and options traders to analyse the available options for a particular asset, identify trading opportunities, and manage risk. The article study in details about Option chains. It concluded that Option chains can offer insightful information on the state of the market, levels of support and resistance, anticipated volatility, option pricing, and possible trading tactics. It's a powerful tool for options traders and investors to make informed decisions.

Keyword: Option chains, investors, options traders, asset

INTRODUCTION

Option chains are used widely by the investors and options traders to analyse the available options for a particular asset, identify trading opportunities, and manage risk. For the purpose of making well-informed trading decisions, traders frequently combine option chains with other instruments for technical and fundamental analysis. An option chain is a listing of all the available option contracts for a particular underlying asset, such as a stock or an index, organized by expiration date and strike price. It provides a comprehensive view of the options market for that specific asset at a specific moment in time. The National Stock Exchange of India (NSE) provides option chain data for various securities traded on its platform. Option chain data includes information about all the available option contracts for a particular security, including put options and call options, along with their respective strike prices and expiration dates.

NSE's option chain data typically includes the following information for each option contract:

Symbol: In the National Stock Exchange of India (NSE), the symbol for an option contract consists of several parts that identify the underlying asset, the type of option, the expiration date, and the strike price.

Here's a breakdown of the typical format for an option symbol in the NSE:

Underlying Asset Symbol: This is a unique symbol representing the underlying asset. For example, the symbol for the Nifty 50 index is "NIFTY."

Expiry Date: It is the expiration date of the option contract. In NSE data, the expiry date for options contracts is typically represented in a standardized format. For monthly options, the expiry date is the last Thursday of the contract month. Here's how the expiry date is usually represented in NSE data.

Index Options: The last Thursday of the contract month represents the expiry date. For example, if the last

Thursday of the month falls on the 25th, the expiry date for that month's contracts would be represented as "25."

Stock Options: The expiry date is represented similarly to index options, as the last Thursday of the contract month. In addition to the last Thursday expiry, NSE also offers weekly options with expiry dates on every Thursday of the week. These weekly options provide more flexibility for traders and are represented in NSE data accordingly.

Option Type: Whether it is a call option or a put option. In the National Stock Exchange of India (NSE), options are classified into two main types based on the exercise style: European-style options and American-style options. Here's a brief explanation of each:

- **European-style options:** In this, the holder can exercise the option only when the said option reaches its expiry date. The same cannot be done before the said date. This means at maturity only. Most index options traded on the NSE, such as Nifty and Bank Nifty options, are European-style options.
- **American-style options:** In this, the holder can exercise the option at any desired time either on the expiry date or even before the said date. This provides more flexibility to the option holder, as they can choose the most advantageous time to exercise the option. However, most stock options traded on the NSE are European-style, even though the underlying stocks themselves may be American-style options.

Strike Price: It refers to the cost at which the option contract can be utilized. In the NSE option chain, the option holder can either sell or buy the underlying asset if they choose to exercise the option. The price at which they do so is the strike price. It is an important parameter in options trading, as it determines the option's intrinsic value along with its relationship to the present market price.

In the option chain, the strike prices are typically listed in ascending order, with call options on one side and put options on the other. Each strike price corresponds to a specific options contract. Traders can select from various strike prices based on their trading strategy and market outlook.

The strike price helps to determine the profitability of an options trade, as it influences the possibility of the option being exercised and the potential payoff if it is exercised.

Open Interest: When a typical trading day, culminates, with reference to options and futures contracts, the entire amount of outstanding contracts that market players own is known as open interest. This figure denotes the total number of contracts that remain unfulfilled due to delivery or trade closures. High open interest generally indicates that a contract has a lot of market activity, with many traders opening and closing positions. Low open interest, on the other hand, suggests limited interest in the contract and potentially lower liquidity.

Change in OI: It is the difference in the open interest from the day before trade. In the context of the NSE (National Stock Exchange of India) option chain, "Change in OI" refers to the change in open interest for a particular options contract from the day before the trade to the current trading day. The total number of outstanding options contracts for a particular strike price and expiry date is referred to as open interest (OI).

Increase in OI: If there is an increase in open interest for a specific strike price and expiry date, it suggests that new positions are being created, indicating trader interest in that particular option. It can be considered as a bullish or bearish signal, depending on whether the positions are long (buy) or short (sell).

Decrease in OI: A decrease in open interest indicates that existing positions are being closed. This could be due to profit-taking or a change in market sentiment. A decreasing OI could suggest a reversal in the trend, especially if it is accompanied by a change in the underlying asset's price.

No Change in OI: If there is no change in open interest, it suggests that the number of long and short positions in that option has remained the same. This could indicate a period of consolidation or a lack of significant new positions being added.

Volume in contracts: The total number of option contracts traded for that strike price and expiry date. In the context of the NSE (National Stock Exchange of India) option chain, "Volume in Contracts" pertains to the overall quantity of contracts that have been traded for a particular options contract within a certain time frame, usually a trading day.

Volume is an important metric in options trading as it indicates the level of market activity for a particular option. Higher volume generally indicates higher liquidity, which can result in better execution for traders along with tighter bid-ask spreads.

IV (Implied Volatility): The market's projection of the security's volatility going forward, as determined by the option's pricing. In the context of the NSE (National Stock Exchange of India) option chain, "IV (Implied Volatility)" indicates the estimated volatility of a security's price that is implied by the market prices of its options. In the pricing of options, it is a key component that leads to higher option premiums and vice versa.

Traders and analysts use implied volatility as a gauge of market expectations for price volatility of the underlying asset in the future.

1. **LTP (Last Traded Price):** The price at which the last trade for that option contract occurred. In the NSE (National Stock Exchange of India) option chain, "LTP" stands for "Last Traded Price." This refers to the price at which the most recent trade of a particular options contract took place.
2. **Last Change:** The change in the option's price from the previous trading day's closing price. In the context of the NSE (National Stock Exchange of India) option chain, "Last Change" typically refers to the change in the Last Traded Price (LTP) of an options contract compared to the previous trading day.

For example, if the LTP of a call option was ₹50 at the end of the previous trading day and it is ₹55 at the current trading day's close, the Last Change would be +₹5, indicating a ₹5 increase in the LTP compared to the previous day.

Option chain data characteristics

In the context of options trading, "alpha," "beta," "theta," and "delta" are all terms used to describe various aspects of an option's characteristics and how they change in relation to different factors. Here's a brief explanation of each:

- 1) **Alpha:** The expected difference in the price of the option from the price change of one unit of the target asset is measured by alpha. Basically, it describes how the said option can fluctuate with respect to the differences that occur in the underlying asset's price.
- 2) **Beta:** The volatility of an option is measured by the volatility of the underlying asset based on its beta value. It shows the expected price of the option in response to fluctuations in the underlying price volatility.
- 3) **Theta:** Theta calculates the rate at which the value of an option will decrease over time, assuming no other variables change. This means the effect of time on the price of the option and is also called the time gap.
- 4) **Delta:** The delta function calculates the rate at which the cost of an option varies relative to the change in the price of the underlying asset. It shows the expected change in the option price for each unit change in the price of the underlying asset.

These terms are commonly used by traders to evaluate and manage their options positions based on their desired risk and return profiles.

Future contracts

In an option chain, future contracts are not typically included. Future contracts are a different type of derivative instrument than options. Futures contracts require the buyer to purchase the underlying asset and tie the seller to sell it at a certain price at a later time.

Unlike options trading, where the holder has the option to exercise the contract or not, participants in futures trading are required to buy or sell the underlying asset at the predetermined price and date. Consequently, rather than listing futures contracts, option chains usually concentrate on listing call and put options, along with their strike prices and expiration dates.

In futures trading, the expiry of a futures contract refers to the date on which the contract ceases to exist. On the expiry date, the contract holder is obligated to either fulfil the terms of the contract by buying or selling the underlying asset at the agreed-upon price, or to offset the contract by entering into an equal and opposite transaction before the expiry.

For most futures contracts, there are several expiry dates throughout the year, with each expiry corresponding to a specific contract month. The most actively traded contracts are usually the near-term or front-month contracts, which the contracts are expiring soonest. As the expiry date approaches, if the traders and investors want to keep their exposure to the underlying asset, they usually roll over their bets to the next contract month.

CONCLUSION AND SUGGESTIONS

The conclusion drawn from analysing an option chain can differ depending on the specific goals and strategies of the analysis. One can draw the following possible conclusions

1. **Market Sentiment:** By analysing the distribution of open interest across different strike prices, one can gauge the overall sentiment of market participants. For example, a high open interest at a particular strike price could indicate a strong bullish or bearish sentiment, depending on whether it's for calls or puts.
2. **Support and Resistance Levels:** Option chains can help identify the possible support and resistance levels based on the concentration of open interest. High open interest at a particular strike price may indicate a level where traders expect the price to stabilize or reverse.
3. **Volatility Expectations:** The option chain's implied volatility levels can reveal information about what the market anticipates will happen to prices in the future. A significant increase in implied volatility may indicate expectations of a volatile market ahead.
4. **Option Pricing:** One can determine if options are overpriced or under-priced in relation to the expected price movement of the underlying asset by comparing the pricing of options with various strike prices and expiration dates.
5. **Trading Strategies:** Using option chain analysis to predict price movement and volatility can assist in creating trading strategies including covered calls, straddles, and strangles.

To sum up, option chain research can offer insightful information on the state of the market, levels of support and resistance, anticipated volatility, option pricing, and possible trading tactics. It's a powerful tool for options traders and investors to make informed decisions.

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