

A study of the entry and exit point in buying Nifty Call or Put option with the help of Nifty 50 Index average daily rang

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Abstract- Options are a very popular financial derivative product. it attracts option traders because of their flexibility of investing low funds and getting high rewarding capability. if traded scientifically by honoring all the rules related to resistance, support, and their extension, diversion, end of diversion, and reversal. Nifty is very volatile and liquid; this makes it more attractive instrument for intraday trading in future and options segments. Researcher collected nine-year data of Nifty 50 from 2015 onward Central tendency values were calculated. On the basis of historical data for last three years (2020 to 2022) The grand average of the daily nifty range was found 195 points with an average and standard deviation of 86 points for these three years. There was no significant difference in the daily average movement range in nifty over the period of time. The information will be helpful for the traders to explore the entry and exit prices, and price for averaging of their trade. The trader will study the Nifty 50 option chain and find out the daily support and resistance based on Volume and open interest. Open interest is carried forward for the next day, but the volume is generated on daily basis and becomes zero at the end of the day. So, change in open interest and volume generated helps in identifying resistance and support strict prices. Since the market is dynamic in nature the OI and volume may shift from one Strick price to another Strick price in either direction (Up or Down) in the day during market hours. Traders have to accordingly take their position. The knowledge of average movement in the Nifty option chain safeguards the traders in the market and helps them in getting the optimum (20 to 40 points) multiple trades in a day.

Keywords – Future, Option, Call, Put, Open interest, Volume, Contract, implied volatility, resistance, and Support.

I. INTRODUCTION

Nifty options buying allows a trader to buy or sell the Nifty index at a desired price for a specific time period up to the expiry of the contract. Options trading provides flexibility to buyers to not buy the security at the specified price and date.

Although options trading is more complex than trading in equity. Options provide you an opportunity to make a relatively larger profit if the price of the option moves in the desired direction and magnitude as estimated by traders. Option trading permits the traders not to pay the full price of the option in the option contract. Buying of call or put provides an opportunity for the traders to purchase a lot by paying merely the premium of that Strick price. Here the investor can generate unlimited profit with a limited precalculated loss. It is generally said that options trading is a weapon of mass wealth creation provided with proper research and control over the magnitude of the price change, otherwise, it may act as a weapon of mass wealth destruction.

II. LITERATURE REVIEW

Black(1975 first claimed that informed traders could trade on the options market to achieve higher leverage opportunities. Mayhew et al.(1995) argued that informed investors will prefer to trade in the options market over the stock market due to higher leverage and low transaction cost. Figlewski and Webb(1993) suggested that options trading mitigates the effect of short sales constraints, which improves the informational and transactional efficiency of the stock market. Cao (1999) suggests that informed traders can trade more effectively on their information using options, improving equity price efficiency. Pan and Potesh-mam(2006) find that future order flow contains information on the future price of the underlying stock price's future price. Bali and Hovakimian(2009)and Cremers and Weinbaum(2010) find that changes in the option price and volatility can predict the underline equity price movement. Truong and Corrado(2014) find that higher abnormal option trading volume around earnings announcements speeds up the stock price adjustment to earnings news and thus reduces post-earnings announcement

drift. Board et al.(2000) Leggio& Lien(2002), Whaley (2002), Israelov& Nielsen(2015), O’Connell & O’Grady(2014), and Daiz & Kwon(2016) opinioned that covered call option strategy attracts investors by enhancing realized returns not much lower to index returns with minimal risk. However, these studies focused on applying a covered call option strategy to equity index

III. RESEARCH METHODOLOGY

Research Questions

- 1- What is the average daily movement in the Nifty index?
- 2- How do open interest and volume help in the prediction of daily probable lows and highs?

Objectives

- 1- To find the reversal and diversion points using option chain data.**

Research Methodology

Research is exploratory in nature. The historical data of the Nifty 50 option chain will be used for the study. LTP calculator of Investing Daddy will be used for predicting the range and reversal and diversion of the Nifty 50.

Historical Data collected from the options chain will be analyzed using central tendency and standard deviation for calculating the daily range of the nifty.

IV. DATA ANALYSIS

Average monthly Daily Movements in Nifty 50 with standard deviation and range

The average yearly range of the nifty 50 was calculated for last 9 years. The was collected from yahoofinance.com and summarize with the help of Microsoft excel, and the average daily range with standard deviation was calculated. The data suggest that there is significant jump in the average value from 2020 onward.

Table:-1 Monthly Summary of Historical Nifty 50 Data (2015 to March 2023)

Year	Mean Range	Standard Deviation
2015	100	45
2016	89	47
2017	71	35
2018	106	56
2019	124	64
2020	188	92
2021	189	92
2022	207	92
2023	188	84

Source: Primary Data

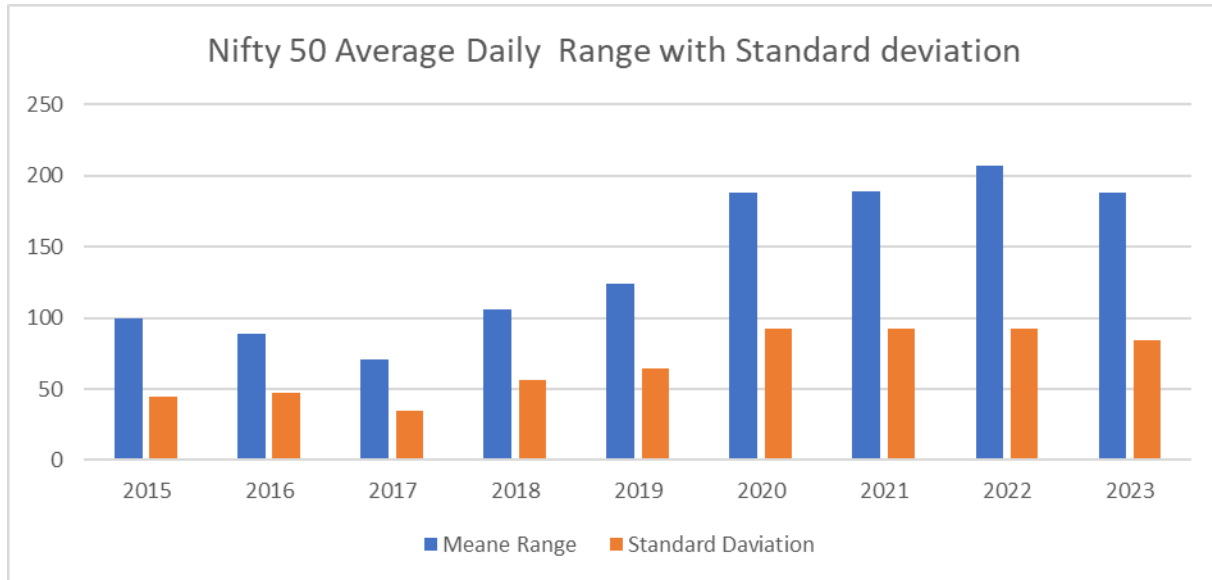


Chart-1 Nifty average daily range over time

We collected the data from 2020 to 2022. And explored value of mean, median, and mode

Table-2 Nifty Statistics 2020 to 2022

Year	Mean	SD	Median	Mode
2020	192	153	147	130
2021	189	91	167	167
2022	207	92	188	104

Source: Primary (Calculated from yahoo finance)

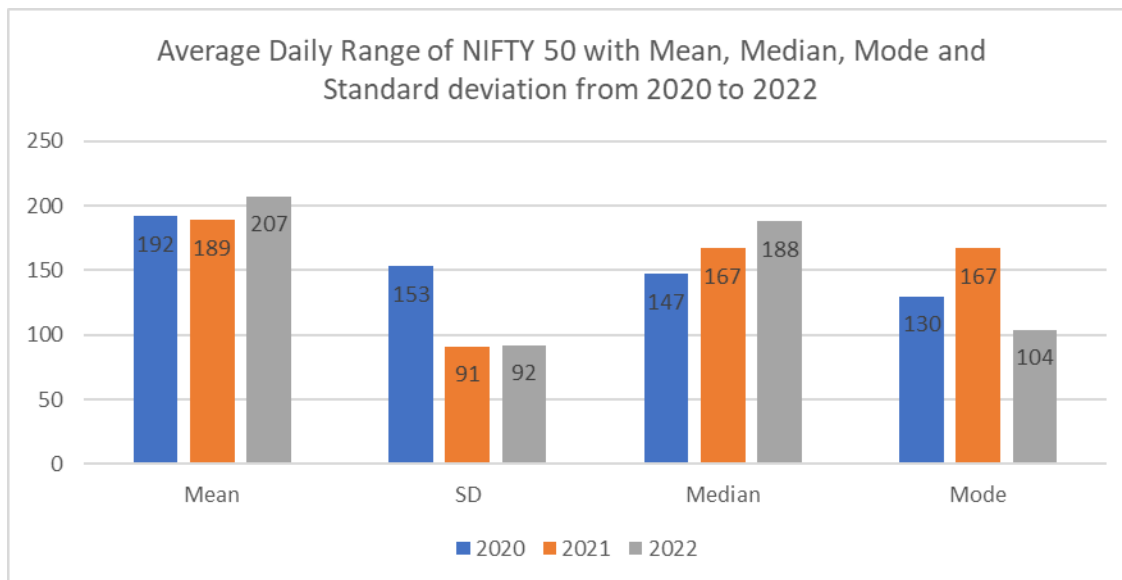


Chart-2 Graphical Presentation of data

We study the Nifty 50 option chain data from 2020 to 2023 and studied it by calculating daily range of Nifty 50 for the years and observed that the average daily range in 2020 was 192, in 2021 it was 189, in 2021 the average daily range was 207 points.

In 2021 due to global covid crisis brought down the average to 189 points.

Later on, a detailed study on the monthly was conducted from March 2022 to Feb.2023, where the data on monthly basis was compiled and analyze in the given table for exploring information regard mean and standard deviation of and monthly range. Later on, grand mean was calculated and the performance of the respective month is evaluated against the grand mean, and found very informative outcomes.

These outcomes will be beneficial for the investors and traders in making their mind for either buying or sell the call or put or take positional trade in nifty future.

Table:-3 Monthly Summary of Historical Nifty 50 Data (March2022- Feb. 2023)

Month	Average Monthly Mean	Average Monthly Standard Deviation	Average Monthly Range
Mar-22	248	87	320
Apr-22	213	83	323
May-22	252	89	360
Jun-22	204	86	416
Jul-22	168	47	186
Aug-22	178	81	301
Sep-22	212	87	367
Oct-22	157	56	241
Nov-22	143	50	169
Dec-22	188	74	247
Jan-23	195	75	300
Feb-23	189	110	543
Grand Mean	196	77	314

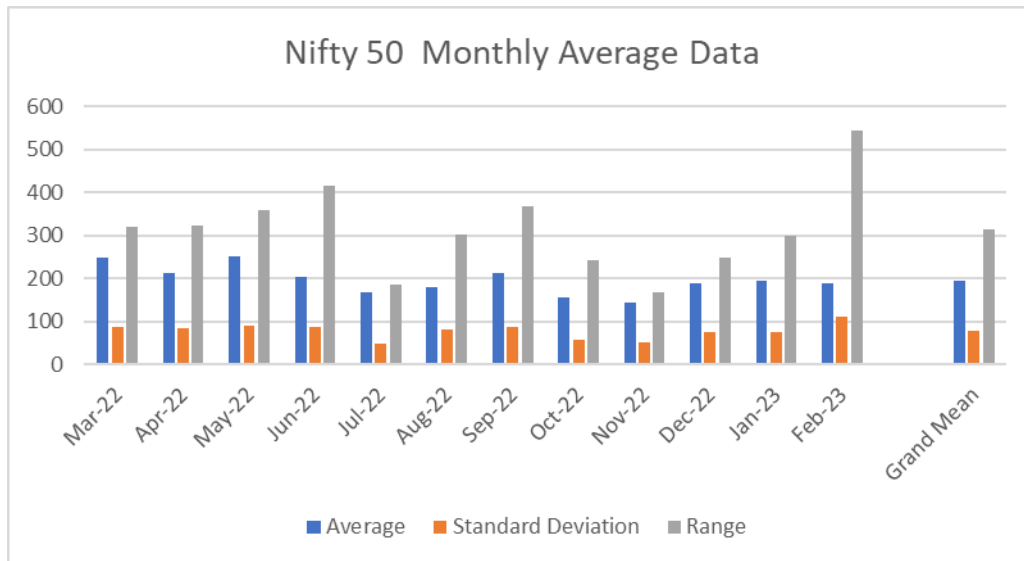


Chart-3 Monthly Summary of Historical Nifty 50 Data (March2022- Feb. 2023)

On inspection of the data from above table it is concluded that out of 12-month data the range has been more than 300 points in 8 Months (March, April, May, June, August, September 2022, January, and February 2023) and for 4

months (July, October, November, and December 2022) it is below 300 points. However, the average annual range was 314. Which indicates that market moves in the range of 300 points.

July, October, November, and December are the months where the traders should be cautious and advised to avoid large range trade. June and February are the months full of volatility and the range in these two months range above 400.

The average daily range between day high and day low is 196 with standard deviation of 77 point which suggest the range of 119 to 273.

Assuming a very conservative approach one should play in 120 range of the day. They should assume that market is offering them a safe range of 120 point. This helps in estimation the safe entry and exit.

If market open with gap up or gap down you should discount that value from the safe zone and take your trade accordingly.

Median value is 192 and mode is 184 this indicate that 50% of the values are below 192 and remaining 50% values are above 192. The maximum time market was in the range of 184 points.

How do open interest and volume help in the prediction of daily probable lows and highs?

Open interest data provide a range within which the market may move or in other words it provides resistance and support of the Nifty for particular expiry period. As traders are aware that Nifty, Bank Nifty, & Fin nifty have weekly expiry. The writing of the call and put option play a vital role in the defining the range of the market in that particular expiry. But how much the market will move depends on the no of volume generated on the Strick prices.

Both open interest and volume may play the role of resistance and support on the respective call and put side.

It is assumed that highest no of volume or the OI, on the nearest Strick price of at the money is called resistance in the call side and support in the put side.

Open interest on either Call or Put side gives the range to the market where as the flow of volume on stick prices gives the maximum possible movement nifty can do in one trading day. Both volume and OI jointly or independently act as resistance and support.

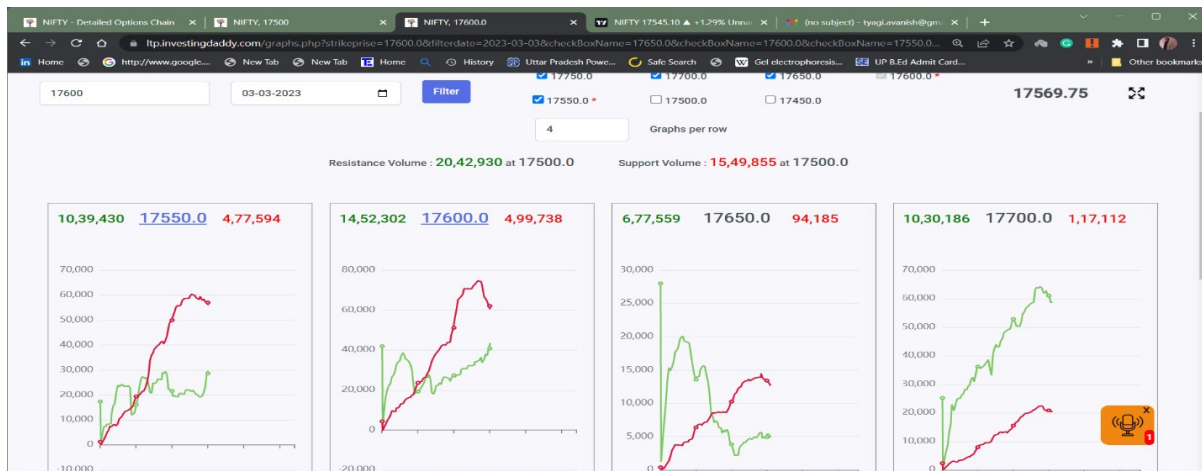


Chart -4 OI data Chart-LTP calculator

On reviewing the chart of OI it is clear that market will not fall below the Range of the 17650 Strick price and there is no probability that market will cross the range of 17700 Strick price until the OI chart of the put (represented by red colour) does not cross the OI chart of call (represented by green colour). This input will help the trader that until there is no change in the OI chart market will be in the range of 16625 to 16675.

On the basis of this analysis a trader can buy a call at 16625 and exit at 16775. This will provide a safe trade of 50 points. If, there is no change in the chart of the OIs the market will swing between the values 16625 and 16675, and trader may plan their trade accordingly.

V. SCOPE OF RESEARCH

In this study researcher has considered only Nifty 50 Index option. There is a huge scope of the study for Bank Nifty, Fin nifty, other indexes and stock which are tradable in option. In this study on the simple average is used for analyzing the data. However, more statistical tools may be applied for analyzing the data. Structure equation modelling may be used for establishing cause and effect relationship among the variables and their subsequent impact on the last traded price.

VI. LIMITATIONS

- 1- Only Microsoft excel was used for data study, if the SPSS would have been used, the study could be more extensive and more information could have been explored.
- 2- The study is based on the historical data. The outcome could not be tested for the validity of the magnitude of range.

VII. CONCLUSION

On the basis of above discussion, it is clear that daily average range gives a valuable insight to the trader. On the basis of input of opening price of the day and the range trader can calculate the maximum day high and maximum day low. On the basis of these two values the trader can plane daily trading strategy.

After knowing the probable day range trader will look at the resistance and support, and direction of nifty movement, traders can plane accordingly buying call or put.

At the same time trader will be able to know how many points can be earned from a particular trade. The call and put OI chart help them in knowing whether the market will be able to gross the respective Strick price or not.

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