Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 4 | April 2025 -Peer-Reviewed Journal

ROLE OF OPTIONS GREEKS BEFORE ANY FINANCIAL EVENT

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Article DOI: https://doi.org/10.36713/epra21255
DOI No: 10.36713/epra21255

ABSTRACT

This study has been undertaken to analyse event strategy with option trading for Nifty 50 and Bank Nifty Option analysis. The study collected data of nifty 50 and Bank Nifty Option prices for the purpose of analysis. The study considered Delta, Vega, implied volatility and implied volatility percentage for analysis. Short straddle modelling is used before General election and Union budget in both Nifty 50 and Bank Nifty. The study found that before every economic event the implied volatility tends to increase and once the event is over the implied volatility tends to move down and so happens with the premium of the option. During the event implied volatility percent tends to crash along with the implied volatility and premium also start decaying. Therefore creating a short straddle before every economic event is highly profitable. The study implies that a retail participant must focus on option Greeks and risk management in order to trade any economic Event.

KEYWORDS: *Event Day, Short Straddle, Implied Volatility, Delta, Theta, Vega.*

INTRODUCTION

Futures and options trading serve as crucial financial instruments for hedging price risks while also providing investment opportunities for speculators willing to assume risks for potential returns. A derivative is a contract whose value is derived from the performance of an underlying asset, index, or interest rate. Options, a type of derivative contract, grant the holder the right—but not the obligation—to buy or sell an underlying asset, such as a security, ETF, or index, at a predetermined price within a specific time frame. These contracts are traded in the options market and differ from stocks, as they do not confer ownership in a company. Additionally, while both options and futures are based on contractual agreements, options are generally considered lower-risk instruments since traders can choose to exit the contract at any time. The value of an option, known as the premium, is a fraction of the price of the underlying security.

This study aims to examine the challenges associated with the acceptance of options trading as a risk management tool in India. Although options trading has been a part of the Indian financial market for nearly two decades, its adoption remains relatively lower compared to global markets. To assess the growth potential and broader adoption of options trading, a preliminary review of secondary data was conducted. This was followed by a primary study focusing on individuals and entities directly or indirectly involved in options trading to identify barriers to its acceptance and recommend strategies for overcoming these challenges.

This research considers two primary financial derivatives:

- Futures: A standardized contract obligating the parties involved to buy or sell an asset at a predetermined price on a specified future date. These contracts typically involve commodities or financial instruments.
- Options: A financial contract that grants the holder the right, but not the obligation, to buy or sell an underlying asset at a specific strike price before or on a predetermined date, depending on the type of option.

As noted in previous studies, one of the significant challenges faced by traders—especially retail traders—is capital loss due to inadequate risk management strategies. The frequent triggering of stop-loss orders, particularly during economic events, contributes to these losses, highlighting the need for improved trading strategies and risk mitigation measures.

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LITERATURE REVIEW

The capital market has become increasingly complex and volatile, making it difficult for retail investors to track market movements effectively (Dilip P.M. & Raju G., 2001). According to Richards et al. (2017), investors who rely on stop-loss strategies generally have less expertise, and those who avoid using stop losses tend to be more reluctant to acknowledge losses compared to other investors. Ahuja (2006) emphasized that futures and options trading serve as crucial instruments for hedging price risks while also presenting opportunities for speculators who are willing to undertake risks for potential returns.

Bartram (2004) examined the reasons non-financial firms engage in derivatives trading, particularly options, as part of their risk management practices. His study provided an extensive overview of the empirical evidence regarding derivative usage across different industries and countries. Similarly, Agarwal and Naik (2004) analyzed risk exposure and hedge fund portfolio choices, highlighting that investors seeking risk premia need to adopt distinct hedging strategies.

Shalini H. S. and Duraipandian R. (2014) explored the application of various options trading strategies as an essential tool in financial engineering, facilitating risk management in both bullish and bearish markets. Chan et al. (2008) investigated the economic benefits of utilizing total volatility to forecast future implied volatility, particularly in pricing, trading, and hedging within the S&P 500 index options market. Jameson and Wilhelm (1992) assessed the unique risks faced by options market makers, demonstrating that these risks arise due to the stochastic volatility of stock returns and the challenges of continuously rebalancing option positions.

Ahn et al. (2003) analyzed optimal hedging strategies, concluding that the most effective hedge consists of a position with a strike price that remains independent of the expenditure an institution is prepared to allocate for its hedging program. Dmitriy and Neil (2020) studied options trading efficiency, noting that execution sizes are significantly smaller than those observed in conventional markets, with average effective spreads being approximately 25% narrower. Ryu and Yan (2020) examined the demand for options as a predictor of market volatility, finding that while it did not effectively forecast spot market volatility before regulatory reforms, it became a more reliable indicator post-reform.

Colette et al. (2019) identified key factors influencing options valuation and outlined several trading mechanisms that could benefit novice traders in refining their strategies. These strategies include long call, short put, bull call spread, short call, long put, bear put spread, short straddle, short strangle, long butterfly, long straddle, and long strangle. Bali et al. (2019) explored the relationship between volatility, skewness, and stock returns, while Bams et al. (2017) evaluated the effectiveness of implied and historical volatility models in accurately forecasting Value-at-Risk (VaR).

Yang et al. (2016) examined whether option price monotonicity properties hold in highly liquid markets with minimal friction. The study also explored the validity of these properties in the context of various option market characteristics. One key takeaway from the literature is that while option buyers may not always realize maximum profits, they do face the risk of losing the premium paid for the contract. Understanding these market dynamics is essential for structuring effective options trades and enhancing risk management strategies in real-world trading scenarios.

OBJECTIVE OF THE STUDY

- To assess an Event strategy with options trading for Bank Nifty & Nifty 50.

HYPOTHESIS

H_0 - Short straddle option strategy is ineffective during an economic event.
H_0 - There is no significant relationship between option premium price and India VIX.

METHODOLOGY

Data: The study collected secondary data of (NIFTY & BANKNIFTY) options prices, Open interest, Option Greeks, Change in OI, Implied volatility. Event strategy means creating a strategy for an upcoming economic event. The events may have crucial impact on the sentiments of the participants. All historical contract data from NSE has been taken for analysis. Implied volatility data has been generated from sensibull.

Event Studied: The study analysed two recent important economic event – General election 2024 and Union budget 2025.

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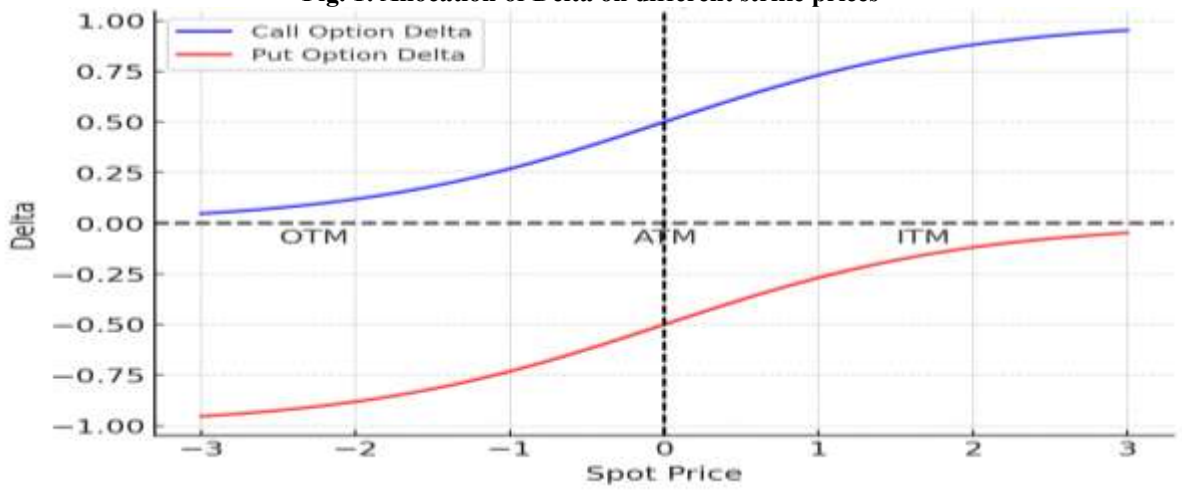
Model used: Short straddle. (neutral delta strategy)

Variable definition of the research

Option Greeks measure the different factors that affect the price of an option contract. We'll explore the key Greeks: Delta, Gamma, Theta, Vega and Rho. Armed with Greeks, an options trader can make more informed decisions about which options to trade, and when to trade them.

Delta: It is a degree of the alteration in an option's price (that is, the premium of an option) consequential from a change in the underlying security. The worth of delta choices from - 100 to 0 for put and 0 to 100 for call (-1.00 and 1.00 without the decimal shift, respectively). Puts create adverse delta as they have a inverse relationship with the underlying security—that is, put premiums drop when the underlying security upsurges, and vice versa.

Fig. 1: Allocation of Delta on different strike prices



From the Fig:1 we can conclude that at the money option has 0.5 delta which is nothing but 50% probability of the option to be in ITM & 50% probability to be in OTM. Similarly, Deep ITM option has a delta of 1 for call & -1 for Put. & OTM options has delta of less than 0.5 for both.

Theta: Theta calculates the degree of time decay in the cost of an option or its premium. Time decay signifies the destruction of an option's worth due to the waste/pass of time. As time passes, the probability of an option being profitable or in-the-money lessens. Time decay inclines to accelerate as the contract expiry date of an option draws nearer because there's low time value left to earn a profit from an option position.

Fig.2: Impact of Theta

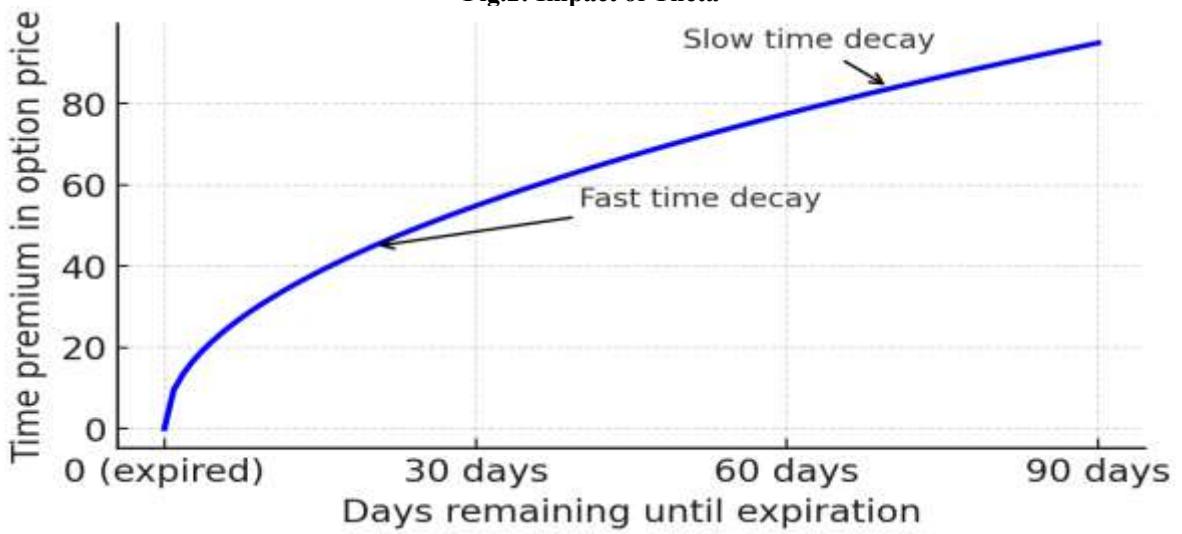


Fig (2) depicts that lesser the time to expiry higher the theta & higher theta results in premium erosion. Higher the time to expiry lesser the theta & less theta won't result in premium erosion.

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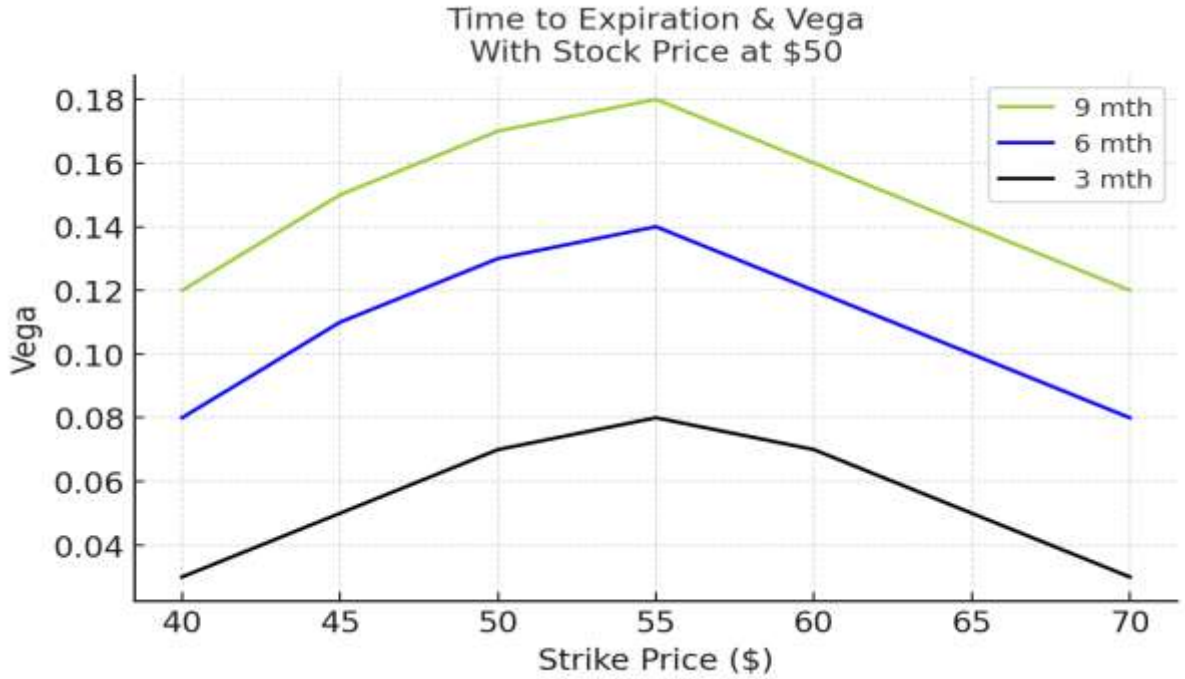
Vega: Vega computes the degree of change in implied volatility or the forward-looking probable volatility of the underlying asset price. While delta signifies actual price changes, Vega is focused on deviations in potentials for future volatility. Higher volatility makes options more expensive since there is a larger likelihood of beating the strike price at some point.

Fig. 3: Relationship between Volatility & Time to expiration



From fig:3 we can conclude that there is a higher Vega in the far expiry or next expiry contract as compare to current expiry. Higher the time to expiry higher the Vega, Lower the time to expiry lower the Vega.

Gamma: Gamma computes the degree of changes in delta over time. Since delta values are always changing with the underlying asset's price, gamma is used to quantify the degree of variation and provide traders with an idea of what to imagine in the future. Gamma figures are uppermost for at-the-money options and lowermost for those deep in- or out-of-the-money.

Rho: Rho (p), which signifies the degree of variation among an option's worth and a 1% variation in the interest rates. This quantifies the sensitivity to interest rates.

Option Chain: Option chain is a list or table of all available option contracts. It includes stocks & index with Put & call option for every F&O listed security. The table will contain information on open interest, Implied volatility, Change in Open interest, LTP (Last traded price), Change in Price, Bid-Ask etc. for a given expiration date. **In the Money (ITM)** Options: - In the money options are those options where Spot>Strike for call options. For Put options, It's spot<Strike.

At the Money (ATM) options: - These are those options where Spot= Strike price. **Out of Money (OTM)** options: These are those options where Spot<strike for call & spot>strike for put options. **Option chain Analysis**: Option chain is a list or table of all available option contracts. It includes stocks & index with Put & call option for every F&O listed security. The table will contain information on open interest, Implied volatility, Change in Open interest, LTP (Last traded price), Change in Price, Bid -Ask etc. for a given expiration date.

The main data which must be focused can be how much Market maker move is pricing the range? By focusing on at the money straddle i.e., ATM CALL+PUT combining together how much is costing. which strikes are having highest Open interest on both call & put side? The strikes which are having the highest OI for both call & put will be considered to as a range for the market. How much the strangle is costing? The costing of the strangle is the range which actually provides a clear idea of bigger range. How is volatility skew? Volatility skewness will help in identifying whether the option is cheaper or expensive.

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How is volatility smile? A volatility smile basically tells if the implied volatility is equally distributed at all levels of the strikes where ATM option will have the highest IV. Look at IV skew Implied volatility skewness tells which side volatility is concentrated & skewed. whether the option is backward skewed or forward skewed. It will tell whether the option is cheaper or expensive. Maximum pain level is a level of strike price at which Option buyer will lose the maximum & option seller will lose minimum. Change in Open Interest Change in open interest will help in identifying the trend. If the price of the underlying is moving up but there is not shift in PUT OI towards downside, one should not trust this upside & vice-versa.

Call Option: A call option, often simply labelled a "call", is a contract, between the buyer and the seller of the call option, to exchange a security at a set price.

Put option: A put option is a tool which provides the holder the right to sell an asset, at a definite price, by a stated date to the writer of the put. The purchasing of a put option is perceived as a negative notion about the future estimation of the hidden scrip.

Bullish: Bullish means participants are expecting that the price will move further upward. **Bearish**: Bearish means participants are expecting that the price will move downward. **Non-Directional**: Not clear about the direction of the movement of the underlying. Options should be traded by participants because it may provide cost efficiency, it may be less risky than cash & futures, it has the potential to deliver higher percentage returns, it offers a number of strategic alternatives

Vix is popularly known as Volatility index. It is also known as fear index. It's a regular measure of stock market's expectation of volatility indicated by Nifty 50. Because Vix can show the turmoil in the market. We can interpret that Vega is having a characteristic of mean reverting.

One more thing, Vega can spend endless time on the downside.
To Structure an event strategy:
Event strategy means any economic event which have an impact on the economic stability of the country. For structuring an event strategy, we first need to know how implied volatility respond before any economic event. Further, we need to use derivative of the Implied volatility for formulating strategy. The main derivatives of implied volatility are:
Implied volatility Percentage- IVP tells you the actual percentage of days in the past that a stock IV was lower or lesser than its current implied volatility.

Fig. 4 : IV Chart NIFTYFig. 4 : IV Chart NIFTY

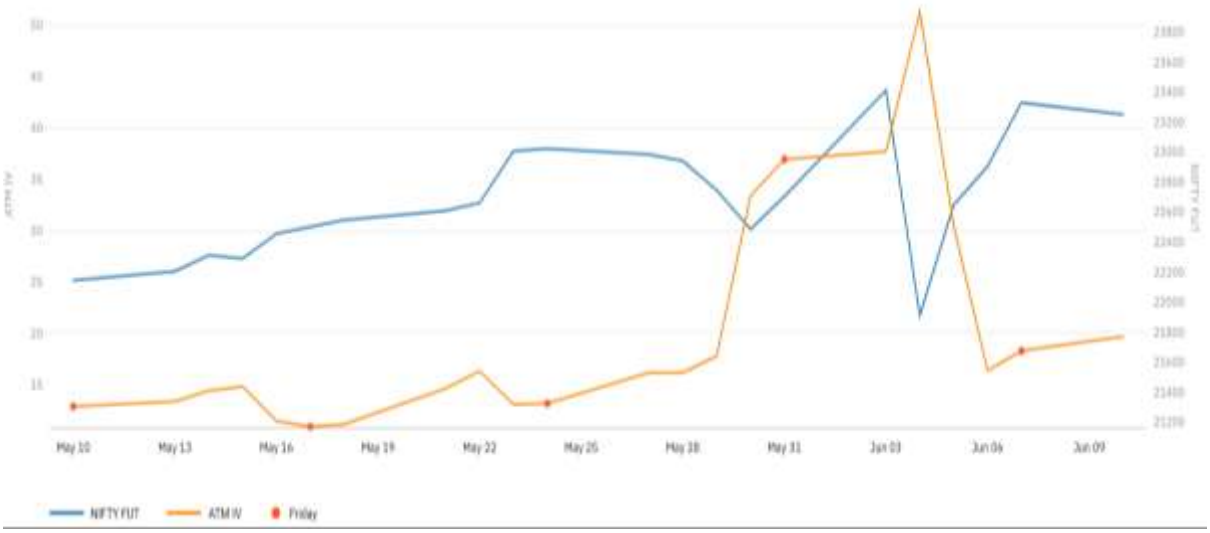

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Fig 5: IV chart BANKNIFTY

From Fig 4 & 5, We can infer from the above-mentioned graph is that Implied volatility increases before every event (Budget) & got cool-off once the event is over. The best strategy is to short the volatility with risk management, but as we aren't sure about the direction of the underlying. We will go for neutral delta strategy. Now we know that IV rises near to expiry, now the main thing which comes in play are the derivatives of Implied volatility.

If the implied volatility percentile is above 80 & there is a result/event is going to out. It's a perfect strategy to go short Volatility as it's too high. This is the main reason why is Option price fall when result or any event is out. Now some strategies with short Vega but with neutral delta are:

Short straddle Model

Short Straddle: - This strategy deals with shorting out the both ATM CE & PE. By doing this, we will get neutral delta, Theta & negative Vega. As the event will be over majorly, the position will be in profit/positive.

EVENT I: General Election 2024 (option premium data)

Table:1

SYMBOL	DATE (2024)	EXPIRY (2024)	OPTION TYPE	STRIKE PRICE	CLOSE	LTP	OPEN INT	CHANGE IN OI
NIFTY	10-May	06-June	PE	22600	742.3	742.3	225	175
NIFTY	13-May	06-June	PE	22600	702.15	702.15	250	25
NIFTY	14-May	06-June	PE	22600	632.3	630	450	200
NIFTY	15-May	06-June	PE	22600	615	615	875	425
NIFTY	16-May	06-June	PE	22600	519.55	507	3050	2175
NIFTY	17-May	06-June	PE	22600	479.5	469.55	11650	8600
NIFTY	18-May	06-June	PE	22600	452.2	460	16050	4400
NIFTY	21-May	06-June	PE	22600	423.65	425	34750	18700
NIFTY	22-May	06-June	PE	22600	377.4	371	122350	87600
NIFTY	23-May	06-June	PE	22600	254.4	249	215075	92725
NIFTY	24-May	06-Jun	PE	22600	242.4	242.85	254425	39350
NIFTY	27-May	06-Jun	PE	22600	262.6	257.7	271550	17125
NIFTY	28-May	06-Jun	PE	22600	298.2	300.95	274875	3325
NIFTY	29-May	06-Jun	PE	22600	352.75	357.8	345850	70975
NIFTY	30-May	06-Jun	PE	22600	449.65	447.85	988100	642250
NIFTY	31-Ma	06-June	PE	22600	420.7	418	2018950	1030850
NIFTY	03-June	06-June	PE	22600	103.3	91.95	2019275	325

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NIFTY	04-June	06-June	PE	22600	878.3	810.15	704825	-1314450
NIFTY	05-Jun	06-June	PE	22600	187.5	201.15	2218100	1513275
NIFTY	06-June	06-June	PE	22600	0.35	0.05	6088300	3870200

(Source: NSE historical contract)

Table:2

SYMBOL	DATE (2024)	EXPIRY (2024)	OPTION TYPE	STRIKE PRICE	CLOSE	LTP	OPEN INT	CHANGE IN OI
NIFTY	10-May	06-June	CE	22600	301.85	301	4625	1350
NIFTY	13-May	06-June	CE	22600	361.3	370	8275	3650
NIFTY	14-May	06-June	CE	22600	389.95	396.15	15350	7075
NIFTY	15-May	06-June	CE	22600	366.6	366.3	21425	6075
NIFTY	16-May	06-Jun	CE	22600	427.95	430	21200	-225
NIFTY	17-May	06-June	CE	22600	417.9	416	31800	10600
NIFTY	18-May	06-June	CE	22600	445.75	449.95	35400	3600
NIFTY	21-May	06-June	CE	22600	475.6	472.55	74400	39000
NIFTY	22-May	06-June	CE	22600	479.7	487	100400	26000
NIFTY	23-May	06-June	CE	22600	694.8	700.15	109325	8925
NIFTY	24-May	06-June	CE	22600	703.45	698.25	103525	-5800
NIFTY	27-May	06-June	CE	22600	698.9	707.75	109150	5625
NIFTY	28-May	06-June	CE	22600	672.05	668.55	100525	-8625
NIFTY	29-May	06-June	CE	22600	553.45	541.9	145675	45150
NIFTY	30-May	06-June	CE	22600	409.2	424.8	1342700	1197025
NIFTY	31-May	06-June	CE	22600	430	423.05	2141225	798525
NIFTY	03-June	06-June	CE	22600	781.4	817	1304075	-837150
NIFTY	04-June	06-June	CE	22600	90.4	81.05	1429100	125025
NIFTY	05-June	06-June	CE	22600	142.5	115	3185425	1756325
NIFTY	06-June	06-June	CE	22600	206.35	221	1798100	-1387325

(Source: NSE historical contract)

Table:3 (option premium data of banknifty)

SYMBOL	DATE (2024)	EXPIRY (2024)	OPTION TYPE	STRIKE PRICE	CLOSE	LTP	OPEN INT	CHANGE IN OI
BANKNIFTY	10-May	05-June	CE	48800	809.95	839.3	420	-15
BANKNIFTY	13-May	05-June	CE	48800	929.4	990	510	90
BANKNIFTY	14-May	05-June	CE	48800	929.4	990	510	-
BANKNIFTY	15-May	05-June	CE	48800	929.4	990	510	-
BANKNIFTY	16-May	05-June	CE	48800	796.3	796.3	525	15
BANKNIFTY	17-May	05-June	CE	48800	940.9	945	840	315
BANKNIFTY	18-May	05-June	CE	48800	953.05	1009.75	915	75
BANKNIFTY	21-May	05-June	CE	48800	892.55	887.8	2040	1125
BANKNIFTY	22-May	05-June	CE	48800	784	823.55	3555	1515
BANKNIFTY	23-May	05-June	CE	48800	1133.85	1144.15	16230	12675
BANKNIFTY	24-May	05-June	CE	48800	1241	1217.45	21390	5160
BANKNIFTY	27-May	05-June	CE	48800	1350.15	1415.1	16395	-4995

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BANKNIFTY	28-May	05-June	CE	48800	1337	1323.75	17325	930
BANKNIFTY	29-May	05-June	CE	48800	1010.25	1021	124560	107235
BANKNIFTY	30-May	05-June	CE	48800	975.55	1018.5	288495	163935
BANKNIFTY	31-May	05-June	CE	48800	1161.25	1182.1	364230	75735
BANKNIFTY	03-June	05-June	CE	48800	2360.7	2556.35	303765	-60465
BANKNIFTY	04-June	05-June	CE	48800	147.85	151.6	306750	2985
BANKNIFTY	05-June	05-June	CE	48800	311.3	255.75	532035	225285

(Source: NSE historical contract)

Table:4

SYMBOL	DATE (2024)	EXPIRY (2024)	OPTION TYPE	STRIKE PRICE	CLOSE
BANKNIFTY	10-May 2024	05-Jun-2024	PE	48800	726.4
BANKNIFTY	13-May 2024	05-Jun-2024	PE	48800	726.4
BANKNIFTY	14-May 2024	05-Jun-2024	PE	48800	726.4
BANKNIFTY	15-May-2024	05-Jun-2024	PE	48800	726.4
BANKNIFTY	16-May-2024	05-Jun-2024	PE	48800	1558.35
BANKNIFTY	17-May-2024	05-Jun-2024	PE	48800	1454.8
BANKNIFTY	18-May-2024	05-Jun-2024	PE	48800	1374.95
BANKNIFTY	21-May-2024	05-Jun-2024	PE	48800	1454.45
BANKNIFTY	22-May-2024	05-Jun-2024	PE	48800	1535.85
BANKNIFTY	23-May-2024	05-Jun-2024	PE	48800	988.45
BANKNIFTY	24-May-2024	05-Jun-2024	PE	48800	871.45
BANKNIFTY	27-May-2024	05-Jun-2024	PE	48800	766.35
BANKNIFTY	28-May-2024	05-Jun-2024	PE	48800	838.2
BANKNIFTY	29-May-2024	05-Jun-2024	PE	48800	1022.45
BANKNIFTY	30-May-2024	05-Jun-2024	PE	48800	909.65
BANKNIFTY	31-May-2024	05-Jun-2024	PE	48800	824.45
BANKNIFTY	03-Jun-2024	05-Jun-2024	PE	48800	148.3
BANKNIFTY	04-Jun-2024	05-Jun-2024	PE	48800	2093.9
BANKNIFTY	05-Jun-2024	05-Jun-2024	PE	48800	3.7

(Source: NSE historical contract)

Table: 5 Union budget (option premium data for Nifty)

SYMBOL	DATE (2025)	EXPIRY (2025)	OPTION TYPE	STRIKE PRICE	CLOSE	LTP	OPEN INT	CHANGE IN OI
NIFTY	10-Jan	06-Feb	CE	23300	1171.65	-	-	-
NIFTY	13-Jan	06-Feb	CE	23300	373.6	375.9	9075	9075
NIFTY	14-Jan	06-Feb	CE	23300	401	410.5	10575	1500
NIFTY	15-Jan	06-Feb	CE	23300	376.8	380.95	15825	5250
NIFTY	16-Jan	06-Feb	CE	23300	440	449.55	27675	11850
NIFTY	17-Jan	06-Feb	CE	23300	377.9	377.35	176475	148800
NIFTY	20-Ja	06-Feb	CE	23300	451.15	445.65	214425	37950
NIFTY	21-Jan	06-Feb	CE	23300	303.8	301.7	273675	59250
NIFTY	22-Jan	06-Feb	CE	23300	327.6	326.8	289650	15975
NIFTY	23-Jan	06-Feb	CE	23300	344.95	342	391800	102150

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NIFTY	24-Jan	06-Feb	CE	23300	263.3	259	669300	277500
NIFTY	27-Jan	06-Feb	CE	23300	159.7	152.65	771375	102075
NIFTY	28-Jan	06-Feb	CE	23300	201.65	205.5	678150	-93225
NIFTY	29-Jan	06-Feb	CE	23300	294.3	310	728475	50325
NIFTY	30-Jan	06-Feb	CE	23300	324.9	345	1862925	1134450
NIFTY	31-Jan	06-Feb	CE	23300	412.3	421.55	2521350	658425
NIFTY	01-Feb	06-Feb	CE	23300	274	264.6	2154000	-367350
NIFTY	03-Feb	06-Feb	CE	23300	167.15	167.65	3757050	1603050
NIFTY	04-Feb	06-Feb	CE	23300	413.2	416	1622775	-2134275
NIFTY	05-Feb	06-Feb	CE	23300	389.25	367.95	1312050	-310725
NIFTY	06-Feb	06-Feb	CE	23300	293.35	303.05	1077075	-234975

(Source: NSE historical contract)

Table: 6

SYMBOL	DATE (2025)	EXPIRY (2025)	OPTION TYPE	STRIKE PRICE	CLOSE	LTP	OPEN INT	CHANGE IN OI
NIFTY	10-Jan	06-Feb	PE	23300	316.35	312.15	4725	3975
NIFTY	13-Jan	06-Feb	PE	23300	447.65	445.7	9450	4725
NIFTY	14-Jan	06-Feb	PE	23300	372.3	373.55	21150	11700
NIFTY	15-Jan	06-Feb	PE	23300	365.9	358.45	23250	2100
NIFTY	16-Jan	06-Feb	PE	23300	312.7	300	31200	7950
NIFTY	17-Jan	06-Feb	PE	23300	358	351.1	155475	124275
NIFTY	20-Jan	06-Feb	PE	23300	300.1	302.3	182775	27300
NIFTY	21-Jan	06-Feb	PE	23300	443.05	443	226125	43350
NIFTY	22-Jan	06-Feb	PE	23300	376.6	376.55	225900	-225
NIFTY	23-Jan	06-Feb	PE	23300	333.4	334	338250	112350
NIFTY	24-Jan	06-Feb	PE	23300	397.95	396	561900	223650
NIFTY	27-Jan	06-Feb	PE	23300	570.85	581.9	517275	-44625
NIFTY	28-Jan	06-Feb	PE	23300	479	471.15	398400	-118875
NIFTY	29-Jan	06-Feb	PE	23300	390.15	375.95	473550	75150
NIFTY	30-Jan	06-Feb	PE	23300	289.5	273.85	1518900	1045350
NIFTY	31-Jan	06-Feb	PE	23300	145.65	132.9	4471725	2952825
NIFTY	01-Feb	06-Feb	PE	23300	71.6	65.05	5596950	1125225
NIFTY	03-Feb	06-Feb	PE	23300	79.8	77	7453350	1856400
NIFTY	04-Feb	06-Feb	PE	23300	12.1	10.8	7535775	82425
NIFTY	05-Feb	06-Feb	PE	23300	6.1	5.95	7994550	458775
NIFTY	06-Feb	06-Feb	PE	23300	0.1	0.05	5522175	-2472375

(Source: NSE historical contract)

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2025): 8.619 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 12 | Issue: 4 | April 2025 -Peer-Reviewed Journal

Table: 7 Union Budget 2025 (Option premium data of bank nifty)

SYMBOL	DATE (2025)	EXPIRY (2025)	OPTION TYPE	STRIKE PRICE	CLOSE	LTP	OPEN INT	CHANGE IN OI
BANKNIFTY	10-Jan	27-Feb	CE	49100	1381.65	1379.5	3720	3270
BANKNIFTY	13-Jan	27-Feb	CE	49100	1071.8	1098.9	4530	810
BANKNIFTY	14-Jan	27-Feb	CE	49100	1399.2	1420	5190	660
BANKNIFTY	15-Jan	27-Feb	CE	49100	1293.3	1311.05	5190	-
BANKNIFTY	16-Jan	27-Feb	CE	49100	1590.8	1622.85	4320	-870
BANKNIFTY	17-Jan	27-Feb	CE	49100	1216.5	1215.5	5250	930
BANKNIFTY	20-Jan	27-Feb	CE	49100	1614.9	1615	6660	1410
BANKNIFTY	21-Jan	27-Feb	CE	49100	1249.85	1263.35	9180	2520
BANKNIFTY	22-Jan	27-Feb	CE	49100	1269.25	1268	11820	2640
BANKNIFTY	23-Jan	27-Feb	CE	49100	1180.1	1162.9	15450	3630
BANKNIFTY	24-Jan	27-Feb	CE	49100	1018	1001.35	14400	-1050
BANKNIFTY	27-Jan	27-Feb	CE	49100	893.8	877	15420	1020
BANKNIFTY	28-Jan	27-Feb	CE	49100	1213.8	1243	27060	11640
BANKNIFTY	29-Jan	27-Feb	CE	49100	1381.55	1410	41940	14880
BANKNIFTY	30-Jan	27-Feb	CE	49100	1472.85	1508	48480	6540
BANKNIFTY	31-Jan	27-Feb	CE	49100	1504.6	1518	70830	22350
BANKNIFTY	01-Feb	27-Feb	CE	49100	1290.6	1286.05	68520	-2310
BANKNIFTY	03-Feb	27-Feb	CE	49100	1100.7	1103	112380	43860
BANKNIFTY	04-Feb	27-Feb	CE	49100	1600.8	1606.25	83430	-28950
BANKNIFTY	05-Feb	27-Feb	CE	49100	1738.35	1704.7	83850	420
BANKNIFTY	06-Feb	27-Feb	CE	49100	1797.5	1812	80520	-3330
BANKNIFTY	07-Feb	27-Feb	CE	49100	1548.95	1567.8	81390	870
BANKNIFTY	10-Feb	27-Feb	CE	49100	1441.25	1438.45	79380	-2010

(Source: NSE historical contract)

Table: 8

SYMBOL	DATE (2025)	EXPIRY (2025)	OPTION TYPE	STRIKE PRICE	CLOSE	LTP	OPEN INT	CHANGE IN OI
BANKNIFTY	10-Jan	27-Feb	PE	49100	1221.05	1203.5	3690	1740
BANKNIFTY	13-Jan	27-Feb	PE	49100	1544.25	1525.95	4890	1200
BANKNIFTY	14-Jan	27-Feb	PE	49100	1120.5	1086.85	5970	1080
BANKNIFTY	15-Jan	27-Feb	PE	49100	1148.8	1156.5	6060	90
BANKNIFTY	16-Jan	27-Feb	PE	49100	907.9	893.9	6390	330
BANKNIFTY	17-Jan	27-Feb	PE	49100	1252.7	1244.45	6600	210
BANKNIFTY	20-Jan	27-Feb	PE	49100	906.75	912.2	7740	1140
BANKNIFTY	21-Jan	27-Feb	PE	49100	1234.2	1243.25	12210	4470
BANKNIFTY	22-Jan	27-Feb	PE	49100	1149.6	1168.85	10980	-1230
BANKNIFTY	23-Jan	27-Feb	PE	49100	1230.3	1220.8	10800	-180
BANKNIFTY	24-Jan	27-Feb	PE	49100	1376.45	1388.4	10860	60
BANKNIFTY	27-Jan	27-Feb	PE	49100	1558.95	1576	12150	1290
BANKNIFTY	28-Jan	27-Feb	PE	49100	1138.5	1137	24210	12060
BANKNIFTY	29-Jan	27-Feb	PE	49100	1041.05	1015	36150	11940

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BANKNIFTY	30-Jan	27-Feb	PE	49100	879.65	871.1	109110	72960
BANKNIFTY	31-Jan	27-Feb	PE	49100	729.95	724.2	111120	2010
BANKNIFTY	01-Feb	27-Feb	PE	49100	615.4	626	109320	-1800
BANKNIFTY	03-Feb	27-Feb	PE	49100	690.9	680.2	140700	31380
BANKNIFTY	04-Feb	27-Feb	PE	49100	393.2	388.3	141030	330
BANKNIFTY	05-Feb	27-Feb	PE	49100	315.4	322.2	146400	5370
BANKNIFTY	06-Feb	27-Feb	PE	49100	300.65	294.8	154320	7920
BANKNIFTY	07-Feb	27-Feb	PE	49100	294.7	291	143100	-11220
BANKNIFTY	10-Feb	27-Feb	PE	49100	302.3	309.5	141510	-1590

(Source: NSE historical contract)

Analysis

Table: 9 (Event – General Election)

Strategy	Index	Strike Price (ATM)	Combined Premium for Short Straddle on 13 may 2024	Combined premium for short straddle on date of expiry of contract	Profit
Short Straddle	NIFTY 50	22600 CE	1072.15	206.40	**865.75**
		22600 PE			
Short Straddle	BANKNIFTY	48800 CE	1655.4	315	**1340.40**
		48800 CE			

(Source: Compiled by researcher)

Table: 10 (Event – Union Budget 2025)

Strategy	Index	Strike Price (ATM)	Combined Premium for Short Straddle on 13 Jan 2025	Combined premium for short straddle on date of expiry of contract	Profit
Short Straddle	NIFTY 50	23300 CE	821.25	293.45	**527.80**
		23300 PE			
Short Straddle	BANKNIFTY	49100 CE	2521.65	1905.4	**616.25**
		49100 PE			

(Source: Compiled by researcher)

FINDINGS & DISCUSSION

The study has mainly focused on the better risk management associated with a trade. The overall study found that Implied volatility use to shoot up before any economic event & that can be used to make worth of the option position with better risk management. Once the event is occurring or is over Implied volatility percentile tends to move down which ultimately helps in falling premium of the options as value Vega tends to decline. In our study reference table:8,9 & 10, we conclude that making short straddle few days before an economic event date is profitable due to high IVP & fall in IVP during the event & even after that. Because Implied volatility is directly related to the option premium. Due to hope and fear factor the IV rises before any economic event making option premium expensive, so selling option few days before any economic event is highly profitable as we have seen in our analysis. Short straddle of **22600** in nifty and **48800** in banknifty before general election has generated profit of **865.75** & **1340.40** in one lot respectively. In union budget also the short straddle found out to be profitable in both nifty50 & banknifty providing profit of **527.80** & **616.25** in a lot respectively.

CONCLUSION

This study provides a comprehensive discussion on the risk management though options. In doing so, some key features of options like Greeks, Implied Volatility & its derivatives are used. Based on the discussion, it is observed that options can be used as a tool for risk management & broader range play. However, since risk

is associated to it but we are trying to mitigate the risk. Hence, this study discussed some of the key characteristics of the options for risk management.

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