Analysis Of Option Derivatives In Indian Capital Market

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Abstract

In this Paper the Butterfly strategy has been used for analysis and comparison of profitability of various Option derivatives. Options contracts in various sectors are been used in this paper, from Banking industry, Yes bank option; from Telecommunication industry, Idea; From Automobile industry, Ashok Leyland; from Financial services industry, Reliance Capital. The main Assumption is that the trader is willing to take a limited risk and earn a limited reward as this strategy is a neutral strategy. This research uses data like Maximum profit and Maximum Loss after the Net Payoff of the particular Option contract. There are mainly four spreads in this strategy i.e. Short call Butterfly, Long call Butterfly, Short iron Butterfly and Long iron Butterfly. Two option contract under each spread are been analyzed "in the money", "at the money", and "out the money" by taking into consideration of Strike prices, Last traded price, Lower breakeven point and Upper breakeven point.

Keywords: Butterfly strategy, profitability, option derivatives, risk, strike price

1. Introduction

Money plays a huge role in everyone's life. People are willing to get their savings double at any point of time. For all those people money market and capital market is Point of Interest. At the same time an option is a financial contract that gives an investor the right, but not the obligation, to either buy or sell an asset at a pre-determined price by a specified date. Which could be almost anything: stocks, bonds, currencies, indexes, commodities, etc. Options allow you to create unique strategies to take advantage of different characteristics of the market - like volatility and time decay and it allows you to take a position with very low capital requirements. Every game, we play need to have a strategy to win the game, in a same way if we want to trade in market we need to have a strategy to have a good return with a limited risk. So, while entering into option market, strategy plays an important role in determining our returns and reducing our risk. Our research is focusing on options market using Butterfly spread strategy and comparing the various option contract. Where the butterfly spread is a neutral strategy that is a combination of a bull spread and a bear spread. It is a limited profit, limited risk options strategy. By this comparison an investor can determine which option contract gives better return with a limited risk. An investor can also trade in by employing other strategies in option that have high risk and high returns.

2. Review of Literature

- **(S & Duraipandian, 2014)** this research paper does "Analysis Of Option Trading Strategies in arithmetic approach" and it addresses the issue that There are negative relationship between dependent variable, (alternative mechanisms) or (financial Engineering) and independent variables changes in

activities, option trading strategies, pricing methods to measure the economic, timing skills, transactions costs, option replication. There is positive impact of financial engineering on instruments as tools of public policy to promote regional development. Though this option trading strategies help the investors in order to manage their price risk they are not efficient in Reducing the cost because buying option contracts involves premium, in which if the option is not exercised then the holder will incur purchase cost. This research have not used butterfly spread strategy to analyze the option

- **(Shalini & Duraipandian, 2017)** the researcher focuses on "studying and Optimizing Returns through Developing Effective Option Trading strategy." This is made to make to identify an effective option trading strategy which is cost effective and convenient to the trader irrespective of the market conditions that are prevailing. To know that how much premium should be paid to the underlying assets. The research developed using Bull Put Ladder Option Trading Strategy .Bear Put Ladder Option Trading Strategy .Short Put Authentic Straddle Option Trading Strategy. Long Iron butterfly Option Trading Strategy.

- **(Edirsinghe,Chanaka; Naik,Vasanttilak;Uppal, n.d.)** In this research they have done "Optimal replication of option with transactions costs and trading restrictions." By forming Linear program formation model and there financial & quantitative analysis. The main issue they addressed is the problem of hedging call & put option in the presence of proportional transactions costs. So they analyzed the hedging payoff that occurs that the investor may have sold one would need to know the optimal exercise strategy of the buyer. And market imperfection gave been considered are the lot size constraints that all the traders must satisfy & trading cost must be paid for rebalancing one's portfolio.

- **(Shah, n.d.)** This study is an "attempt to prove that wealth creation can be done with the help of Derivatives." Nifty Index options are the most widely traded instrument in the Indian Capital markets. However these instruments have been perceived as a leveraged speculative tool rather than a hedging instrument. Different options can be combined to give a structured payoff which is also called a strategy. Every strategy begins with a view on the market. However option trading allows a speculator to take multiple views on the market, and hence there are numerous option strategies available for trading. The objective of this study is to back test the Bull Call debit spread strategy. The study does not look at any other factors such as market sentiments, the global scenarios, macro or micro economics, etc. The study focuses only on the price of the Nifty index. This paper concludes that The Bull call debit spread strategy is a very basic and easy to understand and implement options strategy and this strategy has proved to yield profits in the long run.

3. Research Design

For the research purpose we have used Quantitative data and we collected it as Secondary data from various websites. The data Analysis tool we have used is historical data of option contract like strike prices, expiry date, premium amount etc.

Scope of Study:

We have considered two option contracts for each of the strategy under butterfly spread.

Short call Butterfly Strategy	Long call Butterfly Strategy	Short iron Butterfly Strategy	Long iron Butterfly Strategy

Yes Bank	Ashok Leyland	Ashok Leyland	Yes Bank
Idea	Reliance Capital	Reliance Capital	Idea

Statement of Problem: Traders face problems while entering into option contract and deciding to which option contract will minimize the expense to option holder. So in order to help traders determine which option contract to enter and to analyze the option contract using butterfly spread strategy. To know which position is best for trader to be in particular situation by taking limited risk.

Sources of Data: Secondary data has been taken for the purpose of this research. The data of Option contract and its strike prices, premium amount, expiry date are collected from following websites:

- https://www.bseindia.com/
- https://www.nseindia.com/
- https://www.moneycontrol.com/

Objective of study: To analyze, evaluate and compare the various option contracts by using Butterfly strategy.

Expected Outcome: To clearly understand option contract and to arrive at investment decision in option contract by using Butterfly strategy

Limitations:

1. Only two option contract are been selected for each strategy under butterfly spread
2. The expiry date of option contract we considered is 27th September, 2018 which may not give complete profitability of the option.
3. The research are probabilities and not certain.

4. Data Analysis and Interpretation

1. Short Call Butterfly Strategy:

Moneyness	Stock/Particulars	Yes Bank	Idea
	Expiry date	27/09/2018	27/09/2018
	Spot Price on 22-09-12	230	45
	Lot	1750	7000
In The Money	Last Traded Price	18.9	5.05
	Strike Price	220	37.5
At The Money	Last Traded Price	13.45	1.2
	Strike Price	230	45
Out The Money	Last Traded Price	9.4	0.15
	Strike Price	240	52.5
	Construction Of Strategy, However upper strike & lower strike price must be equidistant from middle strike price.	Sell 1 ITM Call, Buy 2 ATM Call and Sell 1 OTM Call	Sell 1 ITM Call, Buy 2 ATM Call and Sell 1 OTM Call

	Max. Profit	**1.4**	**3.25**
	Max. Loss	**-8.6**	**-4.25**
	Lower BEP	221.4	40.75
	Upper BEP	238.5	49.25

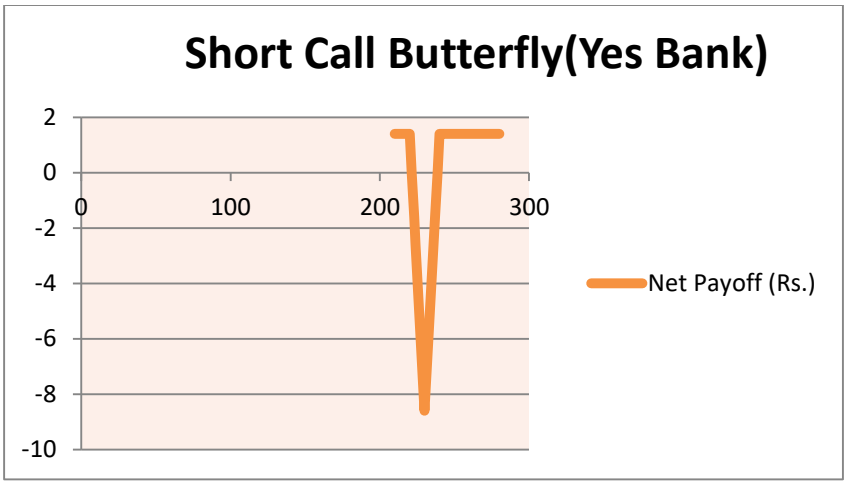
A Short call Butterfly is implemented when an investor is expecting volatility in the underlying assets. This strategy is initiated to capture the movement outside the wings of the options at expiration. It is a limited risk and limited reward strategy.

Short Call Butterfly can generate returns when the price of an underlying security moves moderately in either direction. It means that you don't have to forecast the trend of the market, but you have to bet on volatility. When the implied volatility of the underlying assets is low and you expect volatility to shoot up, then you can apply Short Butterfly Strategy. The Best time to use butterfly Strategy is at the end of maturity of an option. So Based on The observation of 5 days movement of a stock price, we have picked above two underlying stocks .i.e. Yes bank and idea, as their movements of the share price were in ups and downs. Due to this uncertainty we had minimize the risk of it by following the strategy we have mentioned above. Following Tables shows the clear description of inflow and outflow of the possible outcomes at the end of maturity of an option.

Pay off Table:

- **Yes Bank**

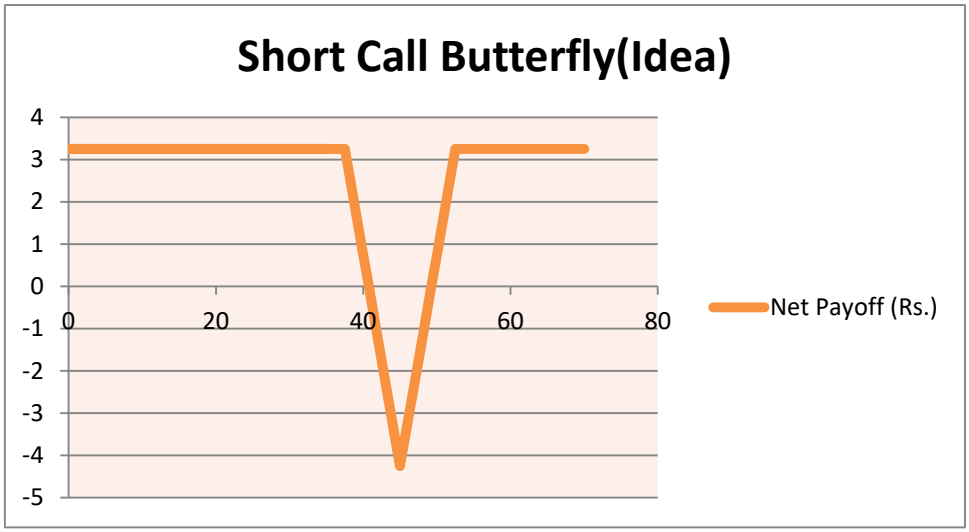
On Expiry of Option	Net Payoff From 1 ITM call Sold(220)	Net Payoff from 2 ATM call bought (230)	Net Payoff from 1 OTM call Sold (240)	Net Payoff (Rs.)	Net Payoff to **Max. Profit** (%)	Net Payoff to **Max. Loss** (%)
210	18.9	-26.9	9.4	1.4	100	
220	18.9	-26.9	9.4	1.4	100	
221.4	**17.5**	**-26.9**	**9.4**	**0 (Lower BEP)**	**0**	**0**
222	16.9	-26.9	9.4	-0.6		6.97
223	15.9	-26.9	9.4	-1.6		18.6
224	14.9	-26.9	9.4	-2.6		30.23
230	8.9	-26.9	9.4	-8.6		100
237	1.9	-12.9	9.4	-1.6		18.6
238	0.9	-10.9	9.4	-0.6		6.97
238.6	**0.3**	**-9.7**	**9.4**	**0(Upper BEP)**	**0**	**0**
240	-1.1	-6.9	9.4	1.4	100	
250	-11.1	13.1	-0.6	1.4	100	
260	-21.1	33.1	-10.6	1.4	100	
270	-31.1	53.1	-20.6	1.4	100	
280	-41.1	73.1	-30.6	1.4	100	



By Employing the above Strategy an investor can limit his risk to Rs 8.6 and can earn maximum reward up to Rs 1.4 in uncertain moment of **Yes bank** Stock Price. When the Option expires at any price less than the **Lower BEP** than he continues to earn profit but if it goes in the other way round than he continues loss till he reach's **Upper BEP .i.e.** if option expiries between the 221.4 To 238.6 , Then later on he earns **Profit**.

- **Idea**

On Expiry of Option	Net Payoff From 1 ITM call Sold(37.5)	Net Payoff from 2 ATM call bought (45)	Net Payoff from 1 OTM call Sold (52.5)	Net Payoff (Rs.)	Net Payoff to **Max. Profit** %	Net Payoff to **Max. Loss** %
35	5.5	-2.4	0.15	3.25	100	
37.5	5.5	-2.4	0.15	3.25	100	
40	3	-2.4	0.15	0.75	23.07	
40.75	**2.25**	**-2.4**	**0.15**	**0 (Lower BEP)**	**0**	**0**
42	1	-2.4	0.15	-1.25		29.41
43	0	-2.4	0.15	-2.25		52.94
45	-2	-2.4	0.15	-4.25		100
48	-5	3.6	0.15	-1.25		29.41
49.25	**-6.25**	**6.1**	**0.15**	**0.00 (Upper BEP)**	**0**	**0**
50	-7	7.6	0.15	0.75	23.07	
52.5	-9.5	12.6	0.15	3.25	100	
55	-12	17.6	-2.35	3.25	100	
60	-17	27.6	-7.35	3.25	100	
70	-27	47.6	-17.35	3.25	100	



By Employing the above Strategy an investor can limit his risk to Rs 4.25 and can earn maximum reward up to Rs 3.25 in uncertain moment of **Idea** Stock Price. When the Option expires at any price less than the **Lower BEP** than he continues to earn profit but if it goes in the other way round than he continues loss till he reach's **Upper BEP .i.e.** if option expiries between the **40.75 To 49.25** , Then later on he earns **Profit**.

2. **Long Call Butterfly Strategy:**

Moneyness	Stock/Particulars	Ashok Leyland	Reliance Capital
	Expiry date	27/09/2018	27/09/2018
	Spot Price on 22-09-12	120	340
	Lot	4000	1500
In The Money	Last Traded Price	42.5	15.9
	Strike Price	110	330
At The Money	Last Traded Price	4.1	9.7
	Strike Price	120	340
Out The Money	Last Traded Price	0.05	5.7
	Strike Price	130	350
	Construction Of Strategy, However upper strike & lower strike price must be equidistant from middle strike price.	Buy 1 ITM Call, Sell 2 ATM Call and Buy 1 OTM Call	Buy 1 ITM Call, Sell 2 ATM Call and Buy 1 OTM Call
	Max. Profit	**6.2**	**7.8**
	Max. Loss	**-3.8**	**-2.2**
	Lower BEP	113.8	332.2
	Upper BEP	126.2	347.8

A Long Call Butterfly is implemented when the investor is expecting very little or no movement in the underlying assets. The motive behind initiating this strategy is to rightly predict the stock price till expiration and gain from time value with limited risk. A Long Call Butterfly spread should be initiated when you expect the underlying assets to trade in a narrow range as this strategy benefits from time decay factor. However, unlike Short Strangle or Short Straddle, the potential risk in a Long Call Butterfly is limited. Also, when the implied volatility of the underlying assets increases unexpectedly and you expect volatility to

come down, then you can apply Long Call Butterfly strategy. The Best time to use butterfly Strategy is at the end of maturity of an option. So Based on The observation of 5 days moment of a stock price, we have picked above two underlying stocks .i.e. Ashok Leyland and Reliance Capital as there was only slight movement in direction of its stock price. By this an investor can take advantage by employing the above strategy. Following Tables shows the clear description of inflow and outflow of the possible outcomes at the end of maturity of an option.

Pay off Table:

- **Ashok Leyland**

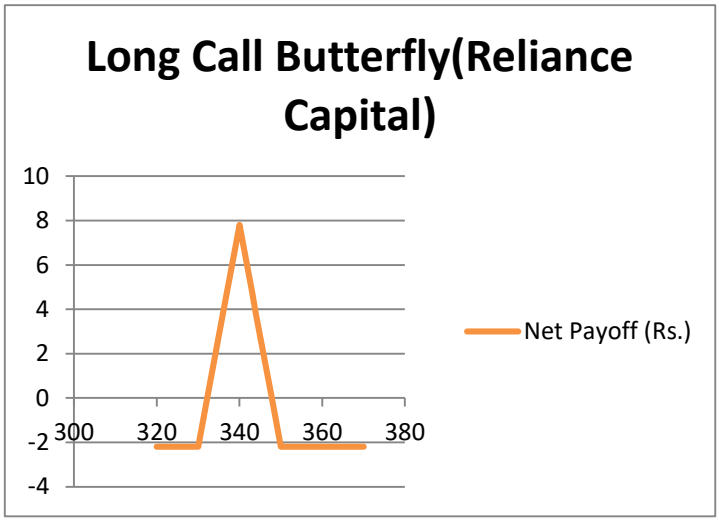
On Expiry of Option	Net Payoff From 1 ITM call bought(110)	Net Payoff from 2 ATM call sold (120)	Net Payoff from 1 OTM call bought (130)	Net Payoff (Rs.)	Net Payoff to **Max. Profit** %	Net Payoff to **Max. Loss** %
90	-11.4	8.2	-0.6	-3.8		100
100	-11.4	8.2	-0.6	-3.8		100
110	-11.4	8.2	-0.6	-3.8		100
113.8	**-7.6**	**8.2**	**-0.6**	**0.00 (Lower BEP)**	**0**	**0**
116	-5.4	8.2	-0.6	2.2	35.48	
117	-4.4	8.2	-0.6	3.2	51.61	
118	-3.4	8.2	-0.6	4.2	67.74	
119	-2.4	8.2	-0.6	5.2	83.87	
120	-1.4	8.2	-0.6	6.2	100	
126.2	**4.8**	**-4.2**	**-0.6**	**0.00 (Upper BEP)**	**0**	**0**
130	8.6	-11.8	-0.6	-3.8		100
140	18.6	-31.8	9.4	-3.8		100
150	28.6	-51.8	19.4	-3.8		100

By employing the above Strategy an investor can limit his risk to Rs 3.8 and can earn maximum reward up to Rs 6.2 in Slight moment of **Ashok Leyland** Stock Price. When the Option expires at any price less than the **Lower BEP** than he continues to land in loss but if it goes in the other way round than he continuously earn profit till he reach's **Upper BEP .i.e.** if option expiries between the **113.8 To 126.2** , Then later on he suffers **Loss**.

- **Reliance Capital**

On Expiry of Option	Net Payoff From 1 ITM call bought(330)	Net Payoff from 2 ATM call sold (340)	Net Payoff from 1 OTM call bought (350)	Net Payoff (Rs.)	Net Payoff to **Max. Profit** %	Net Payoff to **Max. Loss** %
320	-15.9	19.4	-5.7	-2.2		100
328	-15.9	19.4	-5.7	-2.2		100
330	-15.9	19.4	-5.7	-2.2		100
332.2	**-13.7**	**19.4**	**-5.7**	**0.00 (Lower BEP)**	**0**	**0**
337	-8.9	19.4	-5.7	4.8	61.53	
338	-7.9	19.4	-5.7	5.8	74.35	

339	-6.9	19.4	-5.7	6.8	87.17	
340	-5.9	19.4	-5.7	7.8	100	
342	-3.9	15.4	-5.7	5.8	74.35	
343	-2.9	13.4	-5.7	4.8	61.53	
344	-1.9	11.4	-5.7	3.8	48.71	
347.8	**1.9**	**3.8**	**-5.7**	**0.00 (Upper BEP)**	**0**	**0**
350	4.1	-0.6	-5.7	-2.2		100
360	14.1	-20.6	4.3	-2.2		100
370	24.1	-40.6	14.3	-2.2		100



By Employing the above Strategy an investor can limit his risk to Rs 2.2 and can earn maximum reward up to Rs 7.8 in Slight moment of **Reliance Capital** Stock Price. When the Option expires at any price less than the **Lower BEP** than he continues to land in loss but if it goes in the other way round than he continuously earn profit till he reach's **Upper BEP .i.e.** if option expiries between the **332.2 To 347.8** , Then later on he suffers **Loss.**

3. Long Iron Butterfly Strategy:

Moneyness	Stock/Particulars	Yes Bank	Idea
	Expiry date	9/27/2018	9/27/2018
	Spot Price on 22-09-12	230	45
	Lot	1750	7000
At The Money CALL	Last Traded Price	13.45	1.2
	Strike Price	230	45
At The Money PUT	Last Traded Price	17.2	0.95
	Strike Price	230	45
Out The Money CALL	Last Traded Price	9.40	0.5
	Strike Price	240	47.5
Out The Money PUT	Last Traded Price	17.2	0.5
	Strike Price	220	42.5

	Construction Of Strategy, However upper strike & lower strike price must be equidistant from middle strike price.	Buy 1 ATM Call, Sell 1 OTM Call, Buy 1 ATM Put and Sell 1 OTM Put	Buy 1 ATM Call, Sell 1 OTM Call, Buy 1 ATM Put and Sell 1 OTM Put
	Max. Profit	**5.95**	**1.35**
	Max. Loss	**-4.05**	**-1.15**
	Lower BEP	234.05	46.15
	Upper BEP	225.95	43.85

A Long Iron Butterfly is implemented when an investor is expecting volatility in the underlying assets. This strategy is initiated to capture the movement outside the wings of options at expiration. It is a limited risk and a limited reward strategy. A Long Iron Butterfly could also be considered as a combination of bull call spread and bear put spread.

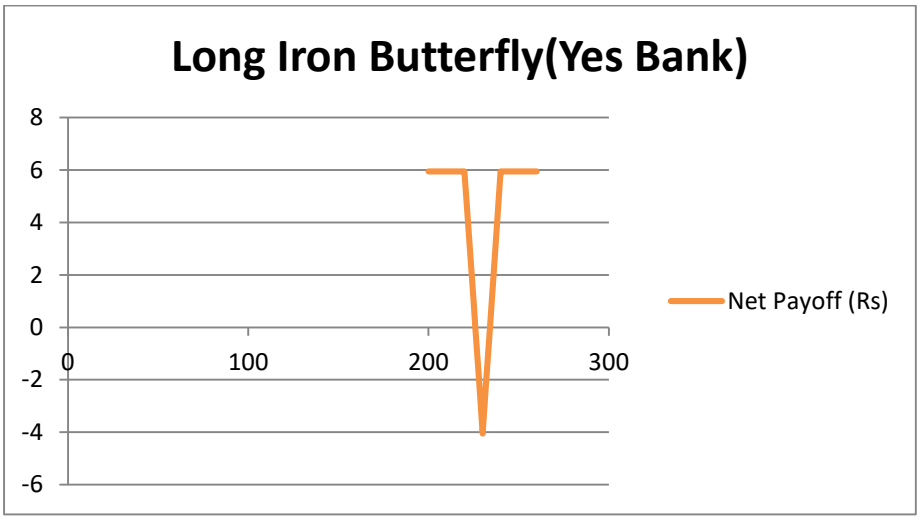
A Long Iron Butterfly spread is best to use when you expect the underlying assets to move sharply higher or lower but you are uncertain about direction. Also, when the implied volatility of the underlying assets falls unexpectedly and you expect volatility to shoot up, then you can apply Long Iron Butterfly strategy. Based on The observation of 5 days movement of a stock price, we have picked above two underlying stocks .i.e. Yes Bank and Idea, as their movements of the share price were in ups and downs. Due to this uncertainty we had minimize the risk of it by following the strategy we have mentioned above. Following Tables shows the clear description of inflow and outflow of the possible outcomes at the end of maturity of an option.

Pay off Table:

- **Yes Bank:**

On Expiry of Option	Net Payoff From 1 ATM call bought(230)	Net Payoff from 1 OTM call sold(240)	Net Payoff from 1 ATM put bought (230)	Net Payoff from 1 OTM put sold (220)	Net Payoff (Rs.)	Net Payoff to **Max. Profit** %	Net Payoff to **Max. Loss** %
200	-13.45	9.4	12.8	-2.8	5.95	100	
210	-13.45	9.4	2.8	7.2	5.95	100	
220	-13.45	9.4	-7.2	17.2	5.95	100	
225	-13.45	9.4	-12.2	17.2	0.95	15.96	
225.95	**-13.45**	**9.4**	**-13.15**	**17.2**	**0**	**0**	**0**
228	-13.45	9.4	-15.2	17.2	-2.05		50.61
230	-13.45	9.4	-17.2	17.2	-4.05		100
232	-11.45	9.4	-17.2	17.2	-2.05		50.61
234.05	**-9.4**	**9.4**	**-17.2**	**17.2**	**0**	**0**	**0**
238	-5.45	9.4	-17.2	17.2	3.95	66.38	
240	-3.45	9.4	-17.2	17.2	5.95	100	
250	6.55	-0.6	-17.2	17.2	5.95	100	
260	16.55	-10.6	-17.2	17.2	5.95	100	

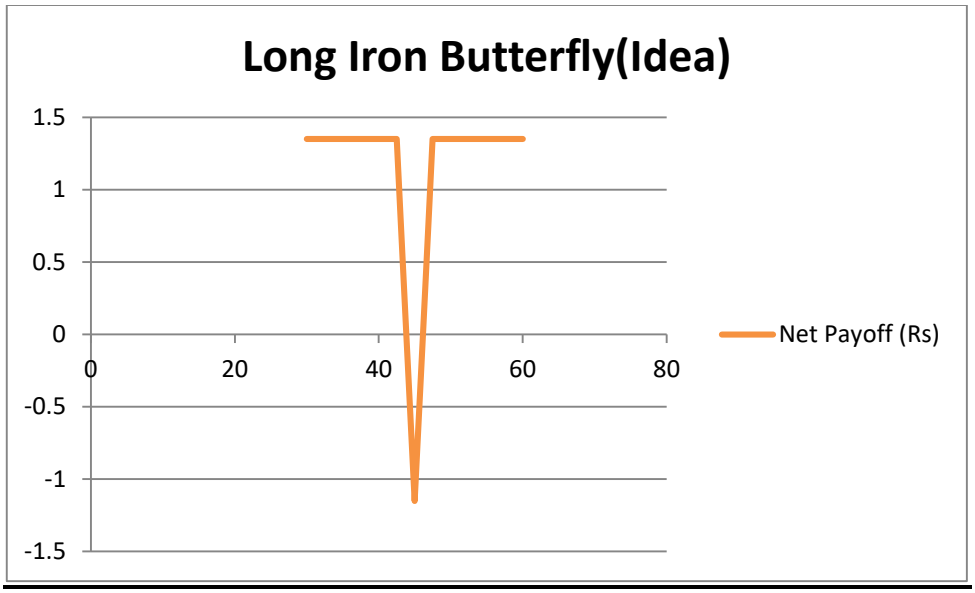
By Employing the above Strategy An investor can limit his risk to Rs 2.45 and can earn maximum reward up to Rs0 .05 in uncertain moment of **Yes Bank** Stock Price. When the Option expires at any price less than the **Lower BEP** than he continues to earn profit but if it goes in the other way round than he continues loss till he reach's **Upper BEP .i.e.** if option expiries between the **225.95 To 234.05** , Then later on he earns **Profit.**



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- **Idea:**

On Expiry of Option	Net Payoff From 1 ATM call bought(45)	Net Payoff from 1 OTM call sold(47.5)	Net Payoff from 1 ATM put bought (45)	Net Payoff from 1 OTM put sold (42.5)	Net Payoff (Rs.)	Net Payoff to **Max. Profit** %	Net Payoff to **Max. Loss** %
30	-1.2	0.5	14.05	-12	1.35	100	
40	-1.2	0.5	4.05	-2	1.35	100	
42.5	-1.2	0.5	1.55	0.5	1.35	100	
43	-1.2	0.5	1.05	0.5	0.85	62.96	
43.85	**-1.2**	**0.5**	**0.2**	**0.5**	**0.00**	**0**	**0**
45	-1.2	0.5	-0.95	0.5	-1.15		100
46.15	**-0.05**	**0.5**	**-0.95**	**0.5**	**0.00**	**0**	**0**
47	0.8	0.5	-0.95	0.5	0.85	62.96	
47.5	1.3	0.5	-0.95	0.5	1.35	100	
48	1.8	0	-0.95	0.5	1.35	100	
50	3.8	-2	-0.95	0.5	1.35	100	
60	13.8	-12	-0.95	0.5	1.35	100	



By Employing the above Strategy an investor can limit his risk to Rs 7.2 and can earn maximum reward up to Rs2.8 in uncertain moment of **Idea** Stock Price. When the Option expires at any price less than the **Lower BEP** than he continues to earn profit but if it goes in the other way round than he continues loss till he reach's **Upper BEP .i.e.** if option expiries between the **43.85 To 46.15** , Then later on he earns **Profit**.

4. Short Iron Butterfly Strategy:

	Stock	Ashok Leyland	Reliance Capital
	Expiry date	27/09/2018	27/09/2018
	Spot Price on 22-09-12	120	340
	Lot	4000	1500
At The Money	Last Traded Price	4.1	9.7
	Strike Price	120	340
At The Money	Last Traded Price	1.5	13.75
	Strike Price	120	340
Out The Money	Last Traded Price	0.05	5.7
	Strike Price	130	350
Out The Money	Last Traded Price	0.3	9.1
	Strike Price	110	330
	Construction Of Strategy, However upper strike & lower strike price must be equidistant from middle strike price.	Sell 1 ATM Call, Buy 1 OTM Call, Sell 1 ATM Put and Buy 1 OTM Put	Sell 1 ATM Call, Buy 1 OTM Call, Sell 1 ATM Put and Buy 1 OTM Put
	Max. Profit	**5.2**	**8.65**
	Max. Loss	**-4.8**	**-1.35**
	Lower BEP	125.2	348.65
	Upper BEP	114.8	331.35

A Short Iron Butterfly strategy is implemented when an investor is expecting very little or no movement in the underlying assets. The motive behind initiating this strategy is to rightly predict the stock price till expiration and gain

from time value. It is a limited risk and a limited reward strategy, similar to Long Call Butterfly strategy. A Short Iron Butterfly could also be considered as a combination of Bear Call Spread and Bull Put Spread.

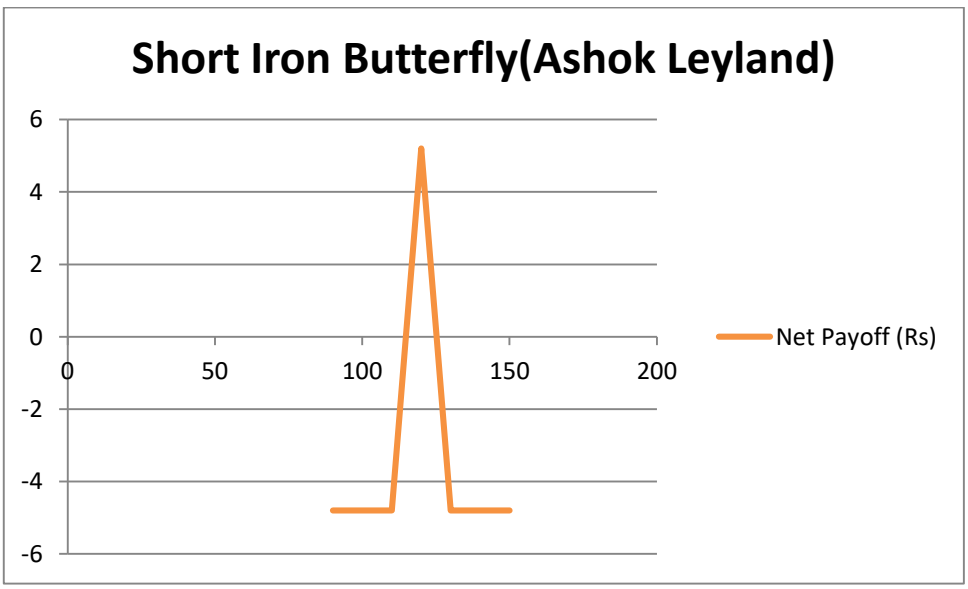
A Short Iron Butterfly spread is best to use when you expect the underlying assets to trade in a narrow range as this strategy benefits from time decay factor. Also, when the implied volatility of the underlying assets increases unexpectedly and you expect volatility to come down, then you can apply Short Iron Butterfly strategy.

The Best time to use butterfly Strategy is at the end of maturity of an option. So Based on The observation of 5 days moment of a stock price, we have picked above two underlying stocks .i.e. Ashok Leyland and Reliance Capital as there was only slight movement in direction of its stock price. By this an investor can take advantage by employing the above strategy. Following Tables shows the clear description of inflow and outflow of the possible outcomes at the end of maturity of an option.

Pay off Table:

➢ Ashok Leyland

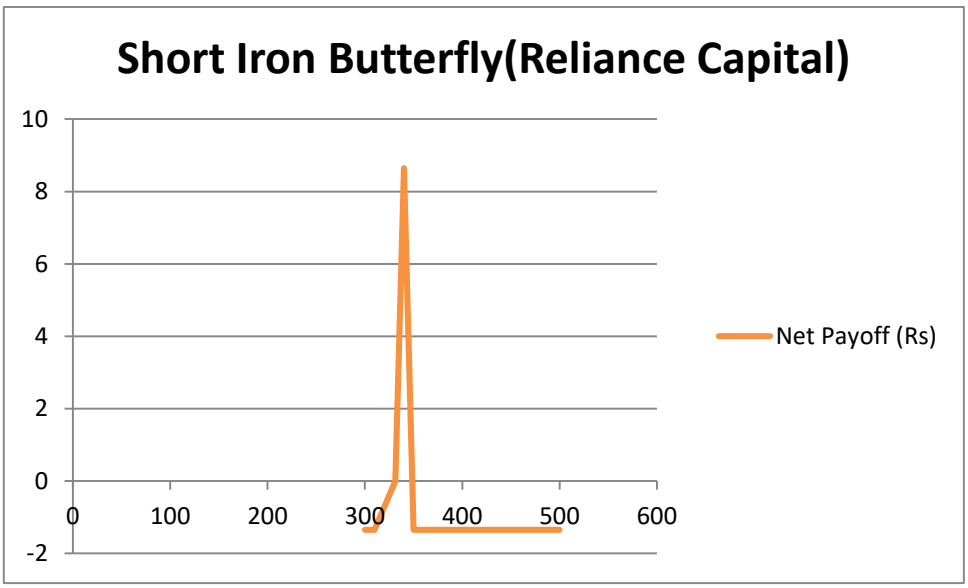
On Expiry of Option	Net Payoff From 1 ATM call sold(120)	Net Payoff from 1 OTM call bought(130)	Net Payoff from 1 ATM put sold (120)	Net Payoff from 1 OTM put bought (110)	Net Payoff (Rs.)	Net Payoff to **Max. Profit** %	Net Payoff to **Max. Loss** %
90	4.1	-0.1	-28.5	19.7	-4.8		100
100	4.1	-0.1	-18.5	9.7	-4.8		100
110	4.1	-0.1	-8.5	-0.3	-4.8		100
114.8	**4.1**	**-0.1**	**-3.7**	**-0.3**	**0.00 (Lower BEP)**	**0**	**0**
120	4.1	-0.1	1.5	-0.3	5.2	100	
125.2	**-1.1**	**-0.1**	**1.5**	**-0.3**	**0.00 (Upper BEP)**	**0**	**0**
130	-5.9	-0.1	1.5	-0.3	-4.8		100
140	-15.9	9.9	1.5	-0.3	-4.8		100
150	-25.9	19.9	1.5	-0.3	-4.8		100



By employing the above Strategy an investor can limit his risk to Rs 4.8 and can earn maximum reward up to Rs 5.2 in Slight moment of **Ashok Leyland** Stock Price. When the Option expires at any price less than the **Lower BEP** than he continues to land in loss but if it goes in the other way round than he continuously earn profit till he reach's **Upper BEP .i.e.** if option expiries between the **114.8 To 125.2** , Then later on he suffers **Loss**.

- **Reliance Capital**

On Expiry of Option	Net Payoff From 1 ATM call sold(340)	Net Payoff from 1 OTM call bought(350)	Net Payoff from 1 ATM put sold (340)	Net Payoff from 1 OTM put bought (330)	Net Payoff (Rs.)	Net Payoff to **Max. Profit** %	Net Payoff to **Max. Loss** %
300	9.7	-5.7	-26.25	20.9	-1.35		100
310	9.7	-5.7	-16.25	10.9	-1.35		100
331.35	**9.7**	**-5.7**	**5.1**	**-9.1**	**0.00 (Lower BEP)**	**0**	**0**
340	9.7	-5.7	13.75	-9.1	8.65	100	100
348.65	**1.05**	**-5.7**	**13.75**	**-9.1**	**0.00 (Upper BEP)**	**0**	**0**
350	-0.3	-5.7	13.75	-9.1	-1.35		100
360	-10.3	4.3	13.75	-9.1	-1.35		100
390	-40.3	34.3	13.75	-9.1	-1.35		100
400	-50.3	44.3	13.75	-9.1	-1.35		100
410	-60.3	54.3	13.75	-9.1	-1.35		100
500	-150.3	144.3	13.75	-9.1	-1.35		100



By Employing the above Strategy an investor can limit his risk to Rs 1.35 and can earn maximum reward up to Rs 8.65 in Slight moment of **Reliance Capital** Stock Price. When the Option expires at any price less than the **Lower BEP** than he continues to land in loss but if it goes in the other way round than he

continuously earn profit till he reach's **Upper BEP .i.e.** if option expiries between the **331.35 To 348.65** , Then later on he suffers **Loss.**

5. Findings and Suggestions

By analyzing the option contracts of various underlying assets using different spread under Butterfly Strategy our findings are that lower breakeven point and upper breakeven point serves as a line where either option will start earning profit or it start suffering losses this is clearly shown in the Payoff tables under all spreads. And most of the times maximum profits of option contract are been earned At the Money (ATM).

In the case of option of Yes bank and Idea both in Short call Butterfly & Long iron Butterfly it is making **Profit.** However the amount of risk taken and maximum reward is high in Short call Butterfly when compared to Long iron Butterfly**.** And in case of option of Ashok Leyland & Reliance capital both in Long call Butterfly & Short iron Butterfly it is making **Loss**. However with less risk taken Ashok Leyland earned better in Long call Butterfly when compared to Short iron Butterfly. And Reliance Capital earned more reward by taking less risk in Short iron Butterfly when compared to Long call Butterfly.

6. Conclusion

Butterfly strategy is one of the basic for financial system and it is a life blood to our research. Our findings are that Butterfly spread strategy will help trader to take decision rather than using many other complex strategies. This underlines the effectiveness of the call and put strategies in different positions of the trader by taking limited risk. And we conclude that Short call Butterfly and Long iron Butterfly are almost similar to each other, and Long call Butterfly and Short iron Butterfly are similar to each other and these are been compared in this research by taking real time example of various options. However traders need to be careful of how they use these financial instruments, and understand that all these findings must therefore be seen merely as a guidance of how the butterfly strategy will perform.

7. Bibliography

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