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Options Trading Strategies for the Indian Market-An effective Financial Derivative Tool

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ABSTRACT: *Human beings are always engaged to generate new ideas and innovations. These are the hallmark of progress at every stage of development. The financial market is no exception of it. Maximization of return and minimization of risk are the main drivers for generating new ideas and innovations. Derivatives are one of the very important segments of the financial market and are a very old concept. A lot of innovations are going on for developing financial products and its practical application. The purpose of research obviously to increase return and reducing risk. Another objective of generating new ideas and innovations is to find out the different ways to reduce the risk of the investors such as different hedging techniques.*

Derivative market has been very popular across the glove. India is no exception of that. To match with international financial market derivative trading was introduced in our country from June 2000. Over the time period different futures and options were introduced. The option market contributes a significant part of total derivative market in India. Nearly 70 to 80% of derivatives are traded through options. Option trading in India was started in the year 2001 by NSE with the introduction of Index Option followed by Individual Stock Options, Weekly Options on the Nifty Index, Gold option trading by MCX, Option trading in guarseed by NCDEX etc.

There are different option strategies based on market volatility/sentiments. These strategies are complex one and learning of these strategies helps investors to make profit with little risk.

In this paper, attempt has been made to understand

(i) Option-introduction

(ii) Type of Option Contracts

(iii) Coverage of underlying assets

(iv) Various Option Trading Strategies in Indian market based on market volatility/Sentiments.

(v) Conclusions.

Keywords: Strike Price, In-the-money (ITM), Out-of-the–money (OTM), At-the–money (ATM), Option Premium, Call Option, Put Option, Breakeven point, American Option, European Option, Bullish strategy, Bearish strategy, Neutral strategy, Long Call, Long Put, Short Call, Short Put, Option Writer, Option Holder.

I Option- Introduction

Option is one of the most important instruments of derivative contract. Option is the most scientific and relevant area in modern finance. Now, what is option? What are its features? To understand the meaning of option first I will cite two example:

Scenario 1: Mr. X owns a house. He expects that price of real estate will decrease over next six months. Mr. Y a neighbor of X has a reverse expectation and thinks that price of real estate will go up over the next six months. The present market price of X's house is Rs 15,00,000. Now, suppose both X and Y have make a contract whereby X will give right to Y to purchase his house at an exercise price of Rs 15,50,000 but not an obligation if price within the six months time is just Rs 15,50,000 or below it. Now, suppose if it is seen that after four months the price of house stands to Rs 17,00,000 Y will exercise his right i.e. he will purchase it at a strike price of Rs 15,50,000 and will sell in the market at Rs 17,00,000. But for this X will demand some premium. Suppose the premium amount is Rs 25,000 which Y has to pay to X irrespective of exercising the contract or not. Hence the net pay-off from this option contract is Rs 1,25,000. Think about the reverse situation. If the market price stands to Rs 15,00,000 or below, Y will not exercise the contract i.e. he will go out of the option (cancel it) hence option gives a right but not an obligation. In our example X is the call writer and Y is the call holder.

Scenario 2: M holds 500 shares of Reliance Industries. The spot price is Rs 10 per share. He is expecting that price will fall within 6 months time and make a contract with N to sell his share at a strike price of Rs 9. N is the writer of the put option whereby he has given a right to M to sell 500 shares at a strike price of Rs 9 per share. M is the option holder. Now, suppose within three months share price has come down to Rs 8.25 per share, M will exercise his option to sell 500 shares @ Rs 9 per share and purchase the same share from the market at Rs 8.25 per share provided M has to pay premium to N because option gives a right but not an obligation.

From the above discussion the readers are able to understand the meaning of option contract.

II Methodology

The study is fully based on secondary sources. Different websites, journals and books have been consulted to get valuable information and data's to prepare this study.

We have organized the whole study into three sections.

Section 1 deals with meaning, concept, types and coverage of underlying assets, Section 2 deals with different option strategies followed in the Indian market and Section 3 deals with Conclusion and references.

Section I

1.1 Option- Meaning & Concept

Option is a contract between two parties whereby the writer of the option gives right but not an obligation to the holder to buy or sell a specific quantity of an underlying asset at an agreed price on or before the agreed option date. The underlying assets may be shares, index, future, commodity debentures, bonds or anything else. The holder of the option may exercise the contract or can go out of the contract (whichever is beneficial to him). A person who buys an option is said to be long in the option and the person who sells (or writes) an option is said to be short in the option.

1.2 Type of Option Contract:

Call and Put Option:

1.2.1 Call Option: A call option is a contract between the call writer and the call holder whereby the call writer gives a right to the call holder to buy an underlying asset at an agreed price on or before the expiration date in consideration of premium money.

1.2.2 Put Option: A put option is a contract between the put writer and the put holder whereby the put writer gives a right to the put holder to sell an underlying asset at an agreed price on or before the expiration date in consideration of premium money.

American Option and European Option (according to time)

There are two type of option contract according to the time of the contract which is discussed below:

1.2.3 American Option: Under this option, the option holder has a right to exercise the contract (according to his financial advantage) any time before the expiration date, e.g. in case of call option if the price of the underlying asset increases within 3 months above the strike price the call option holder has a right to buy the asset according to his financial benefit accrued within the specified time.

American option is very popular in the whole world due to its flexibility of exercising right by the option holder at or any time before the expiration date because the option holder can make an unlimited profit from the underlying assets according to the opportunity prevailing in the market.

1.2.4 European Option: Under this option the option holder has a right to exercise the contract only on the expiry date. In other words, right cannot be exercised any time before expiration under European option. Hence, the chances of making unlimited financial benefit are restricted to the option holder and depend on luck factor.

On the basis of market:

1.2.5 OTC Contract: Option may be between two parties known to each other and which is mutually settled known as over the counter (OTC) contract. This OTC contract is like forward contract where two parties make a contract according to their matching requirement i.e. OTC contract are tailor made contract.

1.2.6 Exchange Settled: Option contract may be exchange settled where two contracting parties do not know each other and each party has to make a contract with the exchange which is similar to future contract and everything is standardized in terms of quantity, time, price etc.

1.3 Coverage of Underlying Assets:

(a) Option contract can be made on any asset like forward and future. Option can be made on commodity, stock, indices, currencies, interest rate etc.

(b) Option on commodities is available on several products like agro products, food product, stock energy, metal etc.

(c) Option on currencies is mainly OTC contract. The underlying asset may be in respect of Euro, dollar, pound, yen etc which is traded in different major exchanges in the world.

(d) Option on indices and stock are very popular throughout the world. National Stock Exchange (NSE) has introduced different indices such as Nifty and Bombay Stock Exchange (BSE) has introduced different indices such as Sensex index.

Option has a variety of applications like hedging, arbitraging, future etc. Selection of appropriate option strategy protected the loss of underlying assets. Various alternative strategies can be formulated by combining options with assets. Option strategy can be used for different purposes such as speculation, hedging, combinations and spreading.

Section 2

Options Trading Strategies for the Indian Market

1. Bullish strategies

When investors or hedgers predicts that there is a chance of increasing price of stocks for an underlying assets Bullish strategy is applied. This strategy may be categorized under the following forms:

(i) Buy a Call Option (Long Call): When an investor is bullish about the stock of a particular company may go for long call option. This strategy may bring the upside potential with limited downside risk. If price of share increases at maturity, he may exercise the call option i.e. he will purchase stock / index at strike price and sell it at higher price. In the reverse case, he will be out of option contract. The loss to the holder is equal to the call premium paid.

Reward: Unlimited

Risk: Limited to the premium paid.

Breakeven: Strike price + Premium

Example: An investor is bullish about the NIFTY and wants to purchase a 3 month call option with an exercise price of Rs 800 and premium of Rs 60 per share. The Net pay-off if at expiration NIFTY stood at Rs 760, Rs 800, 860, 900 and 1000?

Table-1

Statement showing Net Pay-off for a Long Call

Market Price	Call premium	Exercise Call	Net Cash Flow (Market Price – Strike Price)	Net Pay-off (Net Cash Flow – Premium)
760	60	No	0	(60)
800	60	No	0	(60)
860	60	Yes	60	0
900	60	Yes	100	40
1000	60	Yes	200	140

(ii) Sell a Put option (Short Put): If an investor is very bullish (expected increase in price) about a stock / index the strategy may be to write a put option. The purpose is to earn premium paid by the put holder. This is a short term income strategy. If stock price at expiration date is at or above strike price, the call holder will not exercise the option and premium is the net income to the put writer. But if spot price of stock is below the strike price the put writer will face a risk of loss which is equal to maximum of Put Strike price less put premium received.

Reward: Restricted to the amount of premium received

Risk: Put Strike Price minus Put Premium

Breakeven: Put Strike Price minus Put Premium

Example: An investor is very bullish about the price of Bank NIFTY within 3 months from now. He wants to sell a 3 month put option with a strike price of Rs 350 and premium received for this is Rs 24 per share. The Net pay-off if at expiration share price stood at Rs 312, 320, 326, 360, and Rs 400.

Table-2

Statement showing Net Pay-off of a Short Put

Market Price	Put premium	Exercise Put	Net Cash Flow (Strike Price – Spot price)	Net Pay-off (Net cash flow + Put Premium)
312	24	Yes	(38)	(14)
320	24	Yes	(30)	6
326	24	Yes	(24)	0
360	24	No	0	24
400	24	No	0	24

(iii) Bull Call Spread (Buy ITM Call Option, Sell OTM Call Option):

A bull call spread consists of buying a call at lower exercise price and selling a call at a higher exercise price for the same expiration period. This strategy is adopted when there is a chance of increasing prices i.e. moderately bullish. Lower exercise price means higher premium and higher exercise price means lower premium.

Reward: Restricted to the difference between higher exercise price and lower exercise price over net Premium Cost. Maximum profit occurs where the underlying increases to the level of the higher strike or above.

Risk: Limited to any initial premium paid. Maximum loss occurs when the underlying decreases to the level of the lower strike or below.

Breakeven: Strike Price of purchased call + Net Premium paid

Example of Bull Call Spread:

Following figures are available at NSE of 2 months call option on its Nifty Index on 1st June, 2021.

Buy one call of Rs 3,000 at Rs 116

Sold one call of Rs 3,300 at Rs 85

The Net pay-off of a Bull Spread of call option if price prevail after 2 months are Rs 2,800, Rs 3,031, Rs 3,150, Rs 3,200, Rs 3,340, Rs 3,400 and Rs 3,500.

Initial Outlay:

Buy one Call at Rs 3,000	Rs (-) 116
Sold one call at Rs 3,300	Rs (+) 85

Initial Outlay	(-) 31

Breakeven: Strike Price of purchased call + Net Premium paid

= Rs 3,000 + Rs 31= Rs 3031

Table-3

Statement showing Net Pay-off for Bull Call Spread

Market Price	Buy Call (Rs 3,000)	Sell Call (Rs 3,300)	Net Cash Flow	Net Pay-off
2800	0	0	0	(31)
3031	31	0	31	0
3150	150	0	150	119
3200	200	0	200	169
3340	340	(40)	300	269
3400	400	(100)	300	269
3500	500	(200)	300	269

(iv) Bull Put Spread Strategy [Buy OTM Put Option, Sell ITM Put Option]

A Bull Put spread consists of buying a put at a lower exercise price and selling a put at a higher exercise price. A Bull spread is profitable when the underlying stock / index are either range bound or increasing. If the spot price increases but put expire valueless the investor can keep the profit. In other words, when an investor is moderately bullish about a stock / index may apply this strategy.

Reward: Limited to the net premium received. Maximum profit occurs when underlying reaches to the level of the higher strike or above.

Risk: Limited. Maximum loss occurs where the underlying reaches to the level of the lower strike or below.

BEP: Strike price of Short Put – Net Premium Received.

Example of Bull Spread with Put Option

The following figures are available at BSE for 2 months call and put option on its sensex on 4th April, 2010:

Strike Price	Call Option	Put Option
3,200	140	60
3,300	80	115

The Net pay-off of a Bull Spread using Put Option if price prevail at the end of 2 months are: Rs 2,900, 3000, 3,100, 3,245, 3,275, 3,300, 3,400 and Rs 3,500

Bull spread with put option can be created by buying a put with lower strike price and selling a put at higher strike price. Hence, the investor will buy a put at Rs 3,200 and sell a put at Rs 3,300.

Initial Outlay:

Buy a Put of Rs 3,200 = Rs (-) 60

Sell a Put of Rs 3,300 = (+) 115

Initial Outlay 55

BEP: Strike price of Short Put – Net Premium Received.

= Rs 3,300 – Rs 55 = Rs 3,245; Maximum Profit = Rs 55; Maximum Loss = Rs 45

Table-4

Statement showing Net Pay-off for Bull Put spread

Market Price	Buy Put (Rs 3,200)	Sell Put (Rs 3,300)	Net Cash Flow	Net Pay-off
2900	300	(400)	(100)	(45)
3000	200	(300)	(100)	(45)
3100	100	(200)	(100)	(45)
3245	0	(55)	(55)	0
3275	0	(25)	(25)	30
3300	0	0	0	55
3400	0	0	0	55
3500	0	0	0	55

2. Bearish strategies

When investors or hedgers predicts that there is a chance of falling prices of stocks for an underlying assets Bearish strategy is applied. This strategy may be categorized under the following forms:

(i) Buy a Put Option (Long Put): This strategy is applied when an investor predicts that price of a company's share may fall within a very short time say within 3 months. In other words a long put strategy is a bearish strategy and the investor may take the opportunity of falling market by purchasing Put option.

Reward: Maximum of (Strike Price minus Put Premium paid)

Risk: Limited to the amount of premium paid.

Breakeven: Strike price - Premium

Example: An investor is expecting a decline in the price of GAIL Company's share within 3 months from now. He wants to buy a 3 month put option with a strike price of Rs 350 and premium paid for this is Rs 24 per share. The net pay-off if at expiration share price stood at Rs 312, 320, 326, 360, and Rs 400.

Table-5

Statement showing Net Pay-off for a Long Put

Market Price	Put premium	Exercise Put	Net Cash Flow (Strike Price – Market Price)	Net Pay-off (Net Cash Flow – Premium)
312	24	Yes	38	14
320	24	Yes	30	6
326	24	Yes	24	0
360	24	No	0	(24)
400	24	No	0	(24)

(ii) Bear Put Spread Strategy [Buy an ITM Put, Sell an OTM Put]

This strategy requires the investor to buy an in-the-money (higher) put option and sell an out-of-the-money (lower) put option on the same stock with the same expiration date. The strategy needs a moderately bearish outlook since the investor will gain only when the stock price /Index falls.

Reward: Limited to the net premium received for the position i.e. premium received for the short call minus the premium paid for the long put.

Risk: Limited to the difference between the two strikes minus the net premium.

Break Even Point: Higher Strike + Net Credit

Example of Bear Spread with Put Option:

The following figures are available at BSE for 2 months call and put option on its sensex on 4th April, 2021:

Strike Price	Call Option	Put Option
3,200	140	140
3,300	80	165

The net pay-off of a Bear Spread using Put Option if price prevail at the end of 2 months are: Rs 2,900, 3000, 3,100, 3,260, 3,275, 3,300, 3,400 and Rs 3,500.

Bear spread with put option can be created by selling a put at lower strike price and buying a put at higher strike price. Hence, the investor will sell a put at Rs 3,200 and buy a put at Rs 3,300.

Initial Outlay:

Sell a put at Rs 3,200 = Rs (+) 140

Buy a put at Rs 3,300 = Rs (-) 165

Initial Outlay (-) 25

Table-6

Statement showing Net Pay-off for Bear Put Spread Strategy

Market Price	Sell Put (Rs 3,200)	Buy Put (Rs 3,300)	Net Cash Flow	Net Pay-off
2,900	(300)	400	100	75
3,000	(200)	300	100	75
3,100	(100)	200	100	75
3,260	0	40	40	15
3,275	0	25	25	0
3,300	0	0	0	(25)
3,400	0	0	0	(25)
3,500	0	0	0	(25)

(iii) Sell a Call Option (Short Call): If an investor is very aggressive and bearish about the underlying asset or index and is expecting a fall in the price, can sell call option. Under this strategy a call may be written without owning the underlying asset. The call writer will make profit (equal to premium received) if on the expiration date the stock price does not exceed the exercise price i.e. the option will be valueless to the call holder. In the reverse situation (if market price is greater than Strike price) the call writer will make loss because the call holder will exercise the call option. This is a very risky strategy to the call writer because he may be exposed to unlimited risk.

Reward: Limited to the amount of premium received.

Risk: Unlimited

Breakeven: Strike price + Premium

Example: An investor is very bearish about the stock of SAIL and wants to sell a 3 month call option with an exercise price of Rs 800 and premium of Rs 60 per share. The net pay-off if at expiration share price stood at Rs 760, Rs 800, 860, 900 and 1000?

Table-7

Statement showing Net Pay-off for a Short Call

Market Price	Call premium	Call exercised by the holder	Net Cash Flow (Market Price – Strike Price)	Net Pay-off (Net cash flow + Premium)
760	60	No	0	60
800	60	No	0	60
860	60	Yes	(60)	0
900	60	Yes	(100)	(40)
1000	60	Yes	(200)	(140)

(iv) Bear Call Spread Strategy [Sell ITM Call, Buy OTM Call]

A bear spread consist of buying a call at higher exercise price and selling a call at a lower exercise price for the same expiration period. This strategy is adopted when there is a chance of decreasing prices. In other words, when the investor is mildly bearing about the market this strategy can be applied. Higher exercise price means lower premium and lower exercise price means higher premium.

Reward: Limited to the net premium received for the position i.e. premium received for the short call minus the premium paid for the long call.

Risk: Limited to the difference between the two strikes minus the net premium.

Break Even Point: Lower Strike + Net Credit

Example:

Following figures are available at NSE of 2 months call option on its Nifty Index on 1st June, 2010.

Sold one call of Rs 3,000 at Rs 116

Buy one call of Rs 3,300 at Rs 85

The net pay-off of a Bear Spread call option if price prevail after 2 months are Rs 2,700, Rs 2,800, Rs 3,031, Rs 3,200, Rs 3,340, Rs 3,400 and Rs 3,500.

Initial Outlay:

Sold one Call at Rs 3,000	Rs (+) 116
Buy one call at Rs 3,300	Rs (-) 85

Initial Outlay	(+) 31

Table-8

Statement showing Net Pay-off for Bear Call Spread Strategy

Market Price	Sell Call (Rs 3,000)	Buy Call (Rs 3,300)	Net Cash Flow	Net Pay-off
2700	0	0	0	31
2800	0	0	0	31
3031	(31)	0	31	0
3,200	(200)	0	(200)	(169)
3,340	(340)	40	(300)	(269)
3400	(400)	100	(300)	(269)
3500	(500)	200	(300)	(269)

3. Neutral strategies:

When investors or hedgers cannot predict about the price volatility of increasing or falling prices of stocks for an underlying assets Neutral strategy is applied. This strategy may be categorized under the following forms:

Butterfly Spread:

(i) Butterfly spread for Call Option/ Long Butterfly [Sell 2 ATM Call, Buy 1 ITM Call, and Buy 1 OTM Call Option]

A butterfly spread consist of by buying a call option at a lower exercise price (X1) and another call option at a higher exercise price (X2) and selling two calls at an exercise price between L and H. A Long Call Butterfly is to be adopted when the investor expect that there should not be any large fluctuation in the stock/index prices i.e. bearish on volatility. The investor is taking opportunity to gain from low volatility at a low cost.

Reward: Difference between adjacent strikes minus net premium paid

Risk: Net premium paid

Break Even Point: Upper BEP: Strike price of higher strike Long Call – Net Premium paid

Lower BEP: Strike price of lower strike Long Call + Net premium paid

Example of Long Butterfly: A broker has given three call options on a share at exercise price (S) of Rs 60, Rs 65 and Rs 70 with maturity date in three months and the premium of Rs 5, Rs 3 and Rs 2 respectively. Show how the option can be used to create a butterfly spread. The net pay-off with different market prices ranging from Rs 50 to 80 for the butterfly spread is:

Statement showing Initial Cash Flow

Buy one 60 call	(-) 5
Sell two 65 call (Rs 3 x 2)	(+) 6
Buy one 70 call	(-) 2

Initial Investment [CF (o)]	(-) 1

Break Even Point: Upper BEP: Strike price of higher strike Long Call – Net Premium paid

= Rs 70 – Re 1 = Rs 69

Lower BEP: Strike price of lower strike Long Call + Net premium paid

= Rs 60 + Re 1 = Rs 61

Table-9

Statement showing Net Pay-off for Butterfly Spread for Call Option

Market Price	S = Rs 60 Buy one call	S = Rs 65 Sold two call	S = 70 Buy one call	Net Cash Flow	Net Pay-off
50	0	0	0	0	(1)
56	0	0	0	0	(1)
60	0	0	0	0	(1)
61	1	0	0	0	0
65	5	0	0	5	4

69	9	(8)	0	1	0
76	16	(22)	6	0	(1)
80	20	(30)	10	0	(1)

(ii) Butterfly spread for Put Option/ Short Butterfly [Buy 2 ATM Call Option, Sell 1 ITM Call Option and Sell 1 OTM Call Option]

The short call butterfly is consist of by selling one lower striking in-the-money call, buying two at-the-money calls and selling another higher strike out-of-the-money call. A short call Butterfly is a strategy for volatile markets. It is the opposite of Long Call Butterfly, which is a range bound strategy. When an investor is neutral on market movement (may move in either direction) and bullish on volatility, this strategy is suitable.

Reward: Restricted to the net premium received for the option spread.

Risk: Limited to the net difference between the adjacent strikes (Rs 100 in this example) less the premium received for the position.

Break Even Point: Upper BEP: = Strike Price of highest Strike Short Call – Net Premium Received

Lower BEP: = Strike Price of Lowest strike Short Call + Net Premium Received

Example: A broker has given three put options on a share at exercise price (S) of Rs 60, Rs 65 and Rs 70 with maturity date in three months and the premium of Rs 5, Rs 3 and Rs 2 respectively. . Show how the option can be used to create a butterfly spread. The net pay-off with different market prices ranging from Rs 50 to 80 for the butterfly spread is:

Statement showing Initial Cash Flow

Buy one 60 put	(-) 5
Sell two 65 put (Rs 3 x 2)	(+) 6
Buy one 70 put	(-) 2

Initial Investment [CF (o)]	(-) 1

Break Even Point: Upper BEP: = Strike Price of highest Strike Short Call – Net Premium Received

= Rs 70 – 1 = Rs 69

Lower BEP: = Strike Price of Lowest strike Short Call + Net Premium Received

= Rs 60 + Re 1 = Rs 61

Table-10

Statement showing Net Pay-off for Butterfly Spread for Put Option

Market Price	S = Rs 60 Buy one put	S = Rs 65 Sold two put	S = 70 Buy one put	Cash Flow CF(t)	Net Pay-off
50	10	(30)	20	0	(1)
56	4	(18)	14	0	(1)
60	0	(10)	10	0	(1)
61	0	(8)	9	1	0
65	0	0	5	5	4
69	0	0	1	1	0
76	0	0	0	0	(1)
80	0	0	0	0	(1)

Straddle:

Straddle is a strategy of combining of simultaneous holding of both call and put option for same underlying asset and same expiry period.

(i) Long Straddle:[Long call and Long Put] A long straddle consists of simultaneous holding of long call and long put on the same asset, at same exercise price and at same expiry period.

Objects: Long straddle is suitably applies where there is an expected price fluctuation (significant volatility) in the underlying assets i.e. price moves a long way from the exercise price, either above or below. Under both the extreme situation one can exercise call option or put option i.e. if market price is higher than exercise price; call option is exercised and in the reverse situation put option is exercised. Hence in any situation the investor is benefited and is suitable when there is uncertainty in the movement in price. The maximum loss to the investor is call premium and put premium.

Reward: Unlimited

Risk: Limited to the initial premium paid (i.e. Call premium + Put premium)

Breakeven: Upper BEP = Strike Price of Long Call + Net Premium paid

Lower BEP = Strike Price of Long Put – Net premium paid

Example of Long Straddle Strategy:

Buy a Nov. 220 call and buy a Nov 220 Put at Rs 10 and Rs 18 per share respectively assume the option is a European option. The net pay-off if the market price after 4 months is 130, 170, 192, 220, 248, 270 and 300.

Statement showing Initial Cash Flow

Buy a Nov. 220 call (-) 10

Buy a Nov. 220 Put (-) 18

Initial Investment [CF (o)] (-) 28

Breakeven: Upper BEP = Strike Price of Long Call + Net Premium paid

= Rs 220 + 28 = Rs 248

Lower BEP = Strike Price of Long Put – Net premium paid

= Rs 220 – Rs 28 = Rs 192

Table-11

Statement showing Net Pay-off for a Long Straddle Strategy

Market Price	Buy Call (Strike Price 220)	Buy Put (Strike Price 220)	Net Cash Flow	Net Pay-off
130	0	90	90	62
170	0	50	50	22
192	0	28	28	0
220	0	0	0	(28)
248	28	0	28	0
270	50	0	50	22
300	80	0	80	52

From the above calculation it is seen that profit arises where the prices are extremely lower or higher than strike price. This strategy is most suitable where the investor have no clear idea about the increase or decrease in prices i.e. volatile.

(ii) Short Straddle: [Short Call and short Put] a short straddle strategy is made by simultaneous selling both call and put option for the same asset at same exercise price and same expiry period.

Objects: This strategy is suitable where there is stability in the movement in prices and the expected market price is very near with exercise price. In other words, when there is very small volatility in the price of underlying assets short straddle strategy is applied. The writer as an investor gets both the call and put premium for writing the option. Short straddle situation is highly risky (due to wrong prediction regarding the stability of price) as may cause unlimited loss to the writer of the option but brings only limited gain by the initial sale of the options.

Reward: Limited to the premium received

Risk: Unlimited

Breakeven: Upper BEP = Strike Price of Short Call + Net Premium Received

Lower BEP = Strike Price of Short Put – Net Premium Received

Example of Short Straddle Strategy

Write a Nov. 220 call and write a Nov 220 Put at Rs 15 and Rs 28 per share respectively assumes, the option is a European option. The net pay-off if the market price after 4 months is 130, 170, 177, 220, 248, 263, and 290.

Statement showing Initial Cash Flow

Write a Nov. 220 call (+) 15

Write a Nov. 220 Put (+) 28

Initial Investment per share [CF (o)] 43

Breakeven: Upper BEP = Strike Price of Short Call + Net Premium Received

= Rs 220 + 43 = Rs 263

Lower BEP = Strike Price of Short Put – Net Premium Received

= Rs 220 – Rs 43 = Rs 177

Table-12

Statement showing Net Pay-off for a Short Straddle Strategy

Market Price	Sell Call (Strike Price 220)	Sell Put (Strike Price 220)	Cash Flow	Net Pay-off
130	0	(90)	(90)	(47)
170	0	(50)	(50)	(7)
177	0	(43)	(43)	0
220	0	0	0	43
248	(28)	0	(28)	15
263	(43)	0	(43)	0
290	(70)	0	(70)	(27)

From the above calculation it is seen that the writer of the option contract faces significant losses where the prices are extremely lower or higher than strike price. Maximum loss is limited for decrease in price up to Rs 177 (- 220 + 43). This strategy is suitable where there is stability in the movement in prices and the actual price is near exercise price.

Section 3:

Conclusions:

The different strategies discussed above are not limited and may be many which an investor must understand and apply according to situation of the market so that hedgers can hedge their risk of holding assets and investors can speculate the market. A thorough knowledge and application of right strategies will ensure investors to make financial gain from derivative market.

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