



## INDIAN STOCK MARKET OPTION TRADING STRATEGIES: WITH REFERENCE TO SELECTED INDIAN SECURITIES

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### **Abstract**

*The stock market as a market enables large number of investors and gamblers to invest their surplus funds in order to make returns as per their expectations. Stock market serves as good investment alternative whose return helps investors to beat the ongoing inflation. The stock exchanges acts as a platform for the traders to deal with stock markets. Investing in stock markets is beneficial as well as highly risky also because of the uncertainty and fluctuations of the share prices. To handle such risks one should plan well and follow some strategies. Derivatives as an instrument can help traders in managing the risk in stock markets. Traders can use derivatives as a hedging tool and thereby reduce the risk in their portfolio. To use derivatives one should have high knowledge about the derivatives markets and the strategies used, otherwise it may lead to huge losses. An option is a kind of derivative instrument which can be used as a powerful hedging tool if used properly. A study is done on the option trading strategies, as there are many such strategies, and tries to find out the optimum strategy. For this purpose we have taken seven option trading strategies and the spot prices of three companies and an analysis is done so as to find out the ideal strategy that can be used by the traders. This research seeks to utilize secondary method of data collection through journals, websites and books.*

**Keywords:** *Derivatives, Derivative Instruments, Options, Portfolio And Trading Strategies.*

### **Introduction**

Options Contract is a type of Derivatives Contract which gives the buyer/holder of the contract the right (but not the obligation) to buy/sell the underlying asset at a predetermined price within or at end of a specified period. The buyer / holder of the option purchase the right from the seller/writer for a consideration which is called the premium. The seller/writer of an option is obligated to settle the option as per the terms of the contract when the buyer/holder exercises his right. The underlying asset could include securities; an index of prices of securities purchasing calls has remained the most popular strategy with investors since listed options were first introduced. Before moving into more complex bullish and bearish strategies, an investor should thoroughly understand the fundamentals about buying and holding call options. Option strategies help investors in managing portfolio. Once investor has found a stock through research and analysis he can make estimate about the direction, magnitude, and timing as best as possible of the future price movement after that investors can choose an appropriate option strategy.

### **Option Trading Strategies Used In the Study**

**Long Call:** Purchasing calls has remained the most popular strategy with investors since listed options were first introduced. Before moving into more complex bullish and bearish strategies, an investor should thoroughly understand the fundamentals about buying and holding call options.

**Long Put:** A long put can be an ideal tool for an investor who wishes to participate profitably from a downward price move in the underlying stock. Before moving into more complex bearish strategies, an investor should thoroughly understand the fundamentals about buying and holding put options.

**Short Call:** A short call can be used when an investor is bearish about the stock. Short call involves selling a call option, but here the risk involved is unlimited and reward is limited to the premium.



**Short Put:** A short put is same as that of a short call except for the matter that in a short call put option is sold. Here also the risk is unlimited and reward is limited to the premium.

**Synthetic Long Call:** Synthetic long call involves buying the stock and buying a put option. Here the loss is limited to the stock price and the premium but the profit potential is unlimited.

**Covered Call:** The covered call is a strategy in which an investor writes a call option contract while at the same time owning an equivalent number of shares of the underlying stock, If this stock is purchased simultaneously with writing the call contract, the strategy is commonly referred to as a "buy-write." If the shares are already held from a previous purchase, it is commonly referred to an "overwrite."

**Collar:** A collar can be established by holding shares of an underlying stock, purchasing a protective put and writing a covered call on that stock. The option portions of this strategy are referred to as a combination.

**Option contract:** Options Contract is a type of Derivatives Contract which gives the buyer/holder of the contract the right (but not the obligation) to buy/sell the underlying asset at a predetermined price within or at end of a specified period. The buyer / holder of the option purchase the right from the seller/writer for a consideration which is called the premium. The seller/writer of an option is obligated to settle the option as per the terms of the contract when the buyer/holder exercises his right. The underlying asset could include securities, an index of prices of securities etc. An Option to buy is called Call option and option to sell is called Put option. Further, if an option that is exercisable on or before the expiry date is called American option and one that is exercisable only on expiry date, is called European option. The price at which the option is to be exercised is called Strike price or Exercise price

### Options Terminology

**Underlying** - The specific security / asset on which an options contract is based.

**Option Premium** - Premium is the price paid by the buyer (of the option) to the seller to acquire the right to buy or sell.

**Strike Price or Exercise Price** - The strike or exercise price of an option is the specified/ pre-determined price of the underlying asset at which the same can be bought or sold if the option buyer exercises his right to buy/ sell on or before the expiration day.

**Expiration date** - The date on which the option expires is known as Expiration Date. On Expiration date, either the option is exercised or it expires worthless.

**Exercise Date** - The date on which the option is actually exercised.

**Open Interest** - The total number of options contracts outstanding in the market at any given point of time. Option Holder is the one who buys an option, which can be a call, or a put option. He enjoys the right to buy or sell the underlying asset at a specified price on or before specified time. His upside potential (the ability to reap profits) is unlimited while losses are limited to the premium paid by him to the option writer.

**Option Seller/ Writer** is the one who is obligated to buy (in case of Put option) or to sell (in case of call option), the underlying asset in case the buyer of the option decides to exercise his option. His profits are limited to the premium received from the buyer while his downside is unlimited.

**Option Class** - All listed options of a particular type (i.e., call or put) on a particular underlying instrument, e.g., all Nifty Call Options (or) all Nifty Put Options.

**Option Series** - An option series consists of all the options of a given class with the same expiration date and strike price. e.g., Nifty-1100-February-Call is an options series which includes all Nifty Call options that are traded with strike price of 1100 and expiry in February.



**Call Options** - A call option gives the holder (buyer/ one who is long call), the right to buy a specified quantity of the underlying asset at the strike price on or before the expiration date. Note: The seller (one who is short call) however, has the obligation to sell the underlying asset if the buyer of the call option decides to exercise his option to buy.

**Put options** - A Put option gives the holder (buyer/ one who is long Put), the right to sell specified quantity of the underlying asset at the strike price on or before the expiry date. Note: The seller of the put option (one who is short Put) however, has the obligation to buy the underlying asset at the strike price if the buyer decides to exercise his option to sell.

### Methodology

Research means scientific and systematic search for pertinent information on a specific topic. The Advanced Learners Dictionary of current English lays down the meaning of research as a “careful investigation or an enquiry especially through search for new facts in any branch of knowledge”. Research comprises of defining and redefining problems, formulating hypothesis or suggesting solutions; collecting, organizing and evaluating data; making decisions and reaching conclusions, and at last carefully testing the conclusion to determine whether they fit the formulating hypothesis. Research is thus an original contribution to the existing stock of knowledge making for its advancement. The research is descriptive in nature. The study is based on facts and figure, and with the help of primary and secondary data, the required information is obtained for the study

### Sampling Plan

Only 202 securities are available for the study because only those securities are allowed by SEBI for option trading. Out of this 3 companies are taken for study because of time constraint. These 3 companies are selected on the basis of their trade volume

### Literature Review

**National Stock Exchange Of India Ltd (2009)** in “Option Strategy” revealed the optionality characteristic of options results in a non-linear payoff for options. In simple words, it means that the losses for the buyer of an option are limited; however the profits are potentially unlimited. For a writer (seller), the payoff is exactly the opposite. His profits are limited to the option premium; however his losses are potentially unlimited. These nonlinear payoffs are fascinating as they lend themselves to be used to generate various payoffs by using combinations of options and the underlying. We look here at the six basic payoffs (pay close attention to these pay-offs, since all the strategies in the book are derived out of these basic payoffs).

**Carolyn Anderson (2009)** in his study “Option Trading Is another Investment Vehicle” he discusses basic concepts of trading options are the put and call options, short and long positions, intrinsic and time value, and speculation and hedging. Options have more risk than stocks because their initial value declines as day passes until it becomes worthless when it expires thus, the sooner you sell them the better. Remember also that those that are always nearest to the money trade have the lower risk and the ultimate power of options lies solely in their versatility.

**Mr. Hans Stoll (1969)** in his research “The Relation between Put and Call Prices” finds out how the premium of a call option implies a certain fair price for the corresponding put option having the same strike price and expiration date, and vice versa. Support for this pricing relationship is based upon the argument that arbitrage opportunities would materialize if there is a divergence between the value of calls and puts. Arbitrageurs would come in to make profitable, riskless trades until the put-call parity is restored. the two portfolios have the same expiration value, then they must have the same present value. Otherwise, an arbitrage trader can go long on the undervalued portfolio and short the overvalued portfolio to make a risk free profit on expiration day. Hence, taking into account the need to calculate the present value of the cash component using a suitable risk-free interest rate, we have the following price equality.

**Tim Plaehn in the year 2006** published a article on “Stock Options, Strategies” which says that Stock options are derivative securities that give the holder the right to buy or sell the underlying stock at a set price, called the exercise price, for a fixed period. There are developed strategies using options for both conservative and aggressive investors. Different option strategies will provide profits in rising, falling or neutral markets. The beginning option investor needs to do her homework and pick strategies that fit her investment goals. The effect of broker commissions must be accounted for when calculating possible returns of different option strategies. Commissions and bid/ask spreads can have a significant impact on final profitability.

**Results and Discussions**

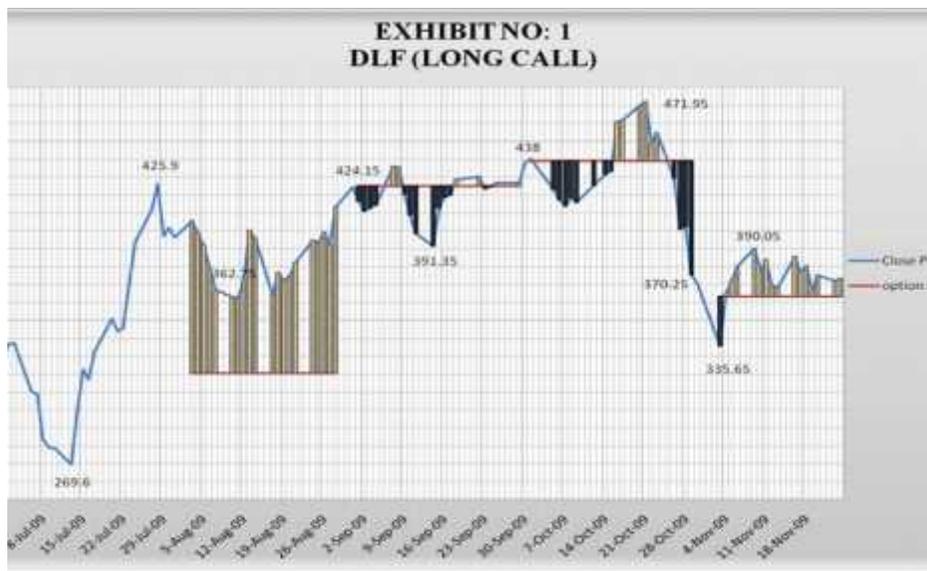
**Table: 1 - Dlf - Long Call (Strategy: Buy Call Option)**

Month	Premium	Breakeven point	Spot price	Pay off
May	50.3	320.3	424.15	103.85
June	55	425	438	13
July	49	439	471.95	32.95
August	23.3	363.3	390.05	26.75

**When to Use:** Investor is very **bullish** on the DLF stock. **Risk:** Limited to the Premium. (Maximum loss if market expires at or below the option strike price). **Reward:** Unlimited  
**Breakeven:** Strike Price + Premium

		April	May	June	July	Augus
Spot price	Low	269.6	362.1	391.35	370.25	335.65
Spot price	High	425.9	424.15	438	471.95	390.05

The above table 1 shows the payoff for four months from May to August. Based on April months low and high price the long call option is bought in the month of august in this option strategy the investor is bullish. So he can buy option at strike price 270 for a premium of 50.3 .august month highest spot price is 424.15 if the call option is assigned against the seller of call option the profit for the investor is 103.85.



**Dlf- Short Call**

The following table 2 shows the short call strategy of Delhi Lease and Finance (DLF)

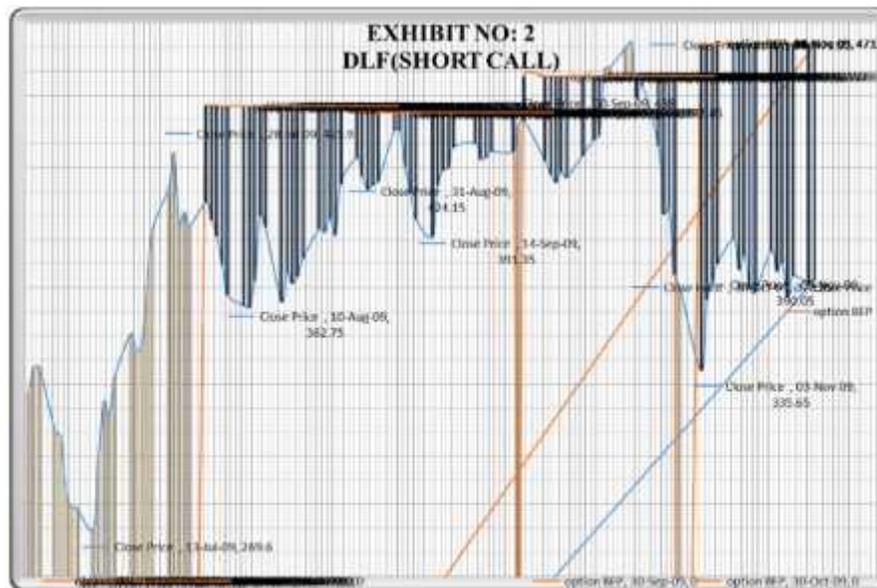
August	470	1.5	471.5	335.65	135.85	1.5
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**When to use:** Investor is very aggressive and he is **verybearish** about the DLF stock. **Risk:** Unlimited. **Reward:** Limited to the amount of premium. **Break-even Point:** Strike Price + Premium

**Table: 2 - DLF – Short Call (Strategy: Buy Call Option)**

		April	May	June	July	August
Spot price	Low	269.6	362.1	391.35	370.25	335.65
Spot price	High	425.9	424.15	438	471.95	390.05

The above table 2 shows the payoff for four months from May to August. In short call the maximum profit is limited to premium amount received by the investor because he is bearish he is going to short call. This option are selected by last month's highest price close call is taken. This table shows a clear picture of the profit. But in this the risk is unlimited so if the price of the share increases then the investor will suffer loss. In November the investor has only less premium amount just 1.5.



### Infosys- Long Call

The following table 3 shows the long call strategy of INFOSYS

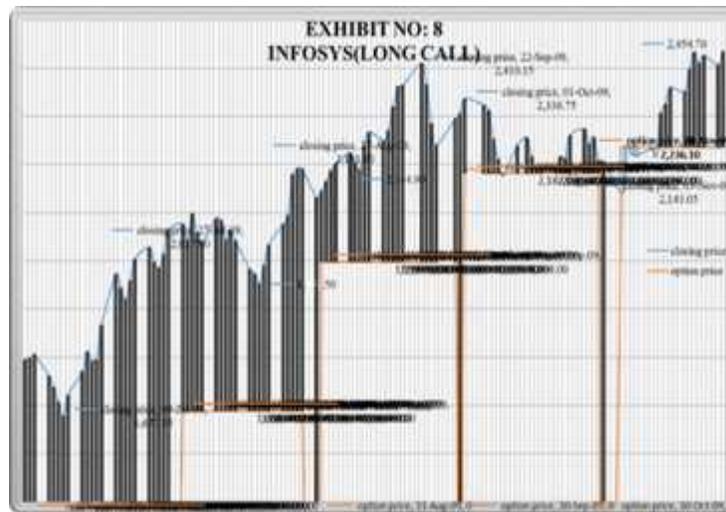
**Table: 3 - Infosys- Long Call (Strategy: Buy Call Option)**

Month	Strike price	Premium	Breakeven point	Spot price	Pay off
May	1680	100	1780	2,191.80	411.8
June	1980	239	2219	2,410.15	191.15
July	2160	116	2276	2,336.75	60.75
Augus	2190	92.1	2282.1	2,434.70	152.6

**When to Use:** Investor is very **bullish** on the Infosys stock. **Risk:** Limited to the Premium. (Maximum loss if market expires at or below the option strike price). **Reward:** Unlimited **Breakeven:** Strike Price + Premium.

		April	May	June	July	August
Spot price	Low	1,677.55	1,951.50	2,144.90	2,177.60	2,143.05
Spot price	High	2,027.90	2,191.80	2,410.15	2,336.75	2,434.70

The above table 3 shows the payoff for four months from May to August. This strategy limits the downside risk to the extent of premium paid by investor. But the potential return is unlimited in case of rise in stock price. A long call option is the simplest way to benefit if you believe that the market will make an upward move and is the most common choice among first time investors in Options. As the stock price rise the long Call moves into profit more and more quickly



### Infosys- Short Call

The following table 4 shows the short call strategy of INFOSY

**Table: 4 - Infosys-Short Call(Strategy : Sell Call Option)**

Month	Strike price	Premium	Breakeven point	Spot price	Pay off	Max profit
May	2010	114.9	2124.9	1,951.50	173.4	114.9
June	2190	50.75	2240.75	2,144.90	95.85	50.75
July	2400	43.85	2443.85	2,177.60	266.25	43.85
August	2340	35.9	2375.9	2,143.05	232.85	35.9

**When to use:** Investor is very aggressive and he is **very bearish** about the Infosys stock. **Risk:** Unlimited. **Reward:**





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