A

PROJECT REPORT

ON

"**BASICS OF FINANCIAL DERIVATIVES**
AND
FUTURES & OPTIONS STRATEGIES"

FROM

"**ANGEL BROKING LIMITED**''

In the partial fulfillment of the degree of

MASTER OF BUSINESS ADMINISTRATION

To

UNIVERSITY OF _____.

By

(Name)
MBA (FINANCE)
(20 -20)

Under the guidance of
Prof. _____.

(INSTITUTE NAME)

ACKNOWLEDGEMENT

I wish to express my deep sense of gratitude to the University of Pune for giving me the opportunity for taking up the projects work.

I take this opportunity to express my sincere thanks to Prof. _____ the Director, who has given me an opportunity to do this project work.

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I express my sincere thanks to:

Mr. _____ (Sr. Branch Manager, Angel Broking Ltd.),

Mr. _____ (Asst. Branch Manager, Angel Broking Ltd.),

Mr. _____ (B.E. Production, MBA Finance, IDBI Bank, Nasik),

And the all staff of Angel Broking Ltd.

(Name)

MBA (Finance)

(Institute name)

DECLARATION

I _____, a student of MBA (20 -20) hereby declare that the, project report entitled

"Basics of Financial Derivatives and Futures & Options Strategies"

is the authentic work done by me at

ANGEL BROKING LTD., NASHIK.

Report is submitted in partial fulfillment of the requirement of the award of Master of Business Administration (M.B.A.) degree abide by Pune University rules.

(Name)

MBA (Finance)

(_____)

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1.1 OBJECT OF THE PROJECT

"Management consists of getting things done through others". These are the great words of Sir. S. George. A manager is one who accomplishes the objectives by directing the efforts of others. In today's competitive world, management has to perform variety of functions and responsibilities. Theoretical knowledge of such functions and responsibilities can be obtained in the institute. But practically when this knowledge is applied in the corporate world, many difficulties are faced by the managers.

Hence in order to get an insight into the practical knowledge, communication skills and to develop the analytical aspects, the University has provided an opportunity to improve in this corporate world.

1.2 OBJECTIVES OF THE PROJECT REPORT:-

a. To study and understand the concepts of the "Derivative market"

b. To study and analyze the various strategies of Derivative market segment.

c. To study the trading segment of Derivative market.

d. To analyze and interpret the data i.e. strategies.

e. To find out the risk of profit and loss of the traders.

f. To make recommendations if any, to improve the investment portfolio of the investors.

1.3 SELECTION OF THE TOPIC:-

During last semester of graduation we had a subject, Financial Management and Cost control, which I found it very interesting. From where my interest in stock market in increased. Then after that working for two years, I decided to pursue MBA, and from the first semester itself I had decided to take Finance as my specialization.

From first semester itself I started taking more interest in stock market, reading & watching the news about the stock market became my regular activity. When first semester was over in January my friend told me some topics for the project and asked to read and take the subject in which I am interested in. He gave me four to five topics; one of them was Derivatives Strategies. Then I read the book i.e. Futures, Options and other Derivatives by John C. Hull and I found this topic to be very interesting and then I had decided to take that topic for my summer project. After that I had approached broking firms but no one was ready to give me this topic, finally Angel Broking Ltd gave me the this topic where I had done my summer project.

1.4 SCOPE OF THE STUDY:-

The study is divided in two parts:

a. **Basics of financial derivatives**

This part of the project deals with basics of the derivatives market. All the basic concepts and terminologies of the derivatives are discussed in the first part of the project.

b. **Futures & options strategies**

All the basic and some advanced strategies of the futures and options are discussed in the second part of the project.

1.5 RESEARCH METHODOLOGY:-

a. For studying the basics of financial derivatives and studying the trading in derivatives I worked on the derivative bolt of Angel Broking and referred various books and websites of derivatives.

b. For studying and interpreting the various strategies of futures and options I worked with the clients of Angel Broking.

c. I used different players of F&O market for explaining the strategies.

d. Conclusions are drawn from the interpreted data.

1.6 LIMITATIONS OF THE STUDY:-

a. The study of the project is subject to the time constraints as only two contract period is taken into consideration.

b. Only few companies and Index i.e. Nifty are taken for interpreting and explaining the strategies.

c. Premiums and margins taken for explaining the strategies are not accurate but at the same time it is made sure that it is not imaginary.

2.1 HISTORY & BACKGROUND OF ANGEL BROKING LTD.:-

In short span of 20 years since inception the Angel Group has emerged as one of the top three retail broking houses in India. Incorporated in 1987, it has memberships on BSE, NSE and the two leading commodity exchanges in India i.e. NCDEX & MCX. Angel is also registered as a depository participant with CDSL.

The group is promoted by Mr. Dinesh Thakker, who started this business as sub-broker in 1987 with a team of 3. Today the Angel Group is managed by a team of 5000+ direct employees and has a nation wide network comprising of 12 Regional hubs, 3 Private Client Group Offices, 125 Branches, 4000+ Sub-brokers & business associates. The group currently services more than 3.3lac+ retail clients.

VISION:-

"To Provide Best Value for Money to Investors
Through Innovative Products,
Trading /Investment Strategies
State of the Art Technology And
Personalized Service."

BUSINESS PHILOSOPHY:-

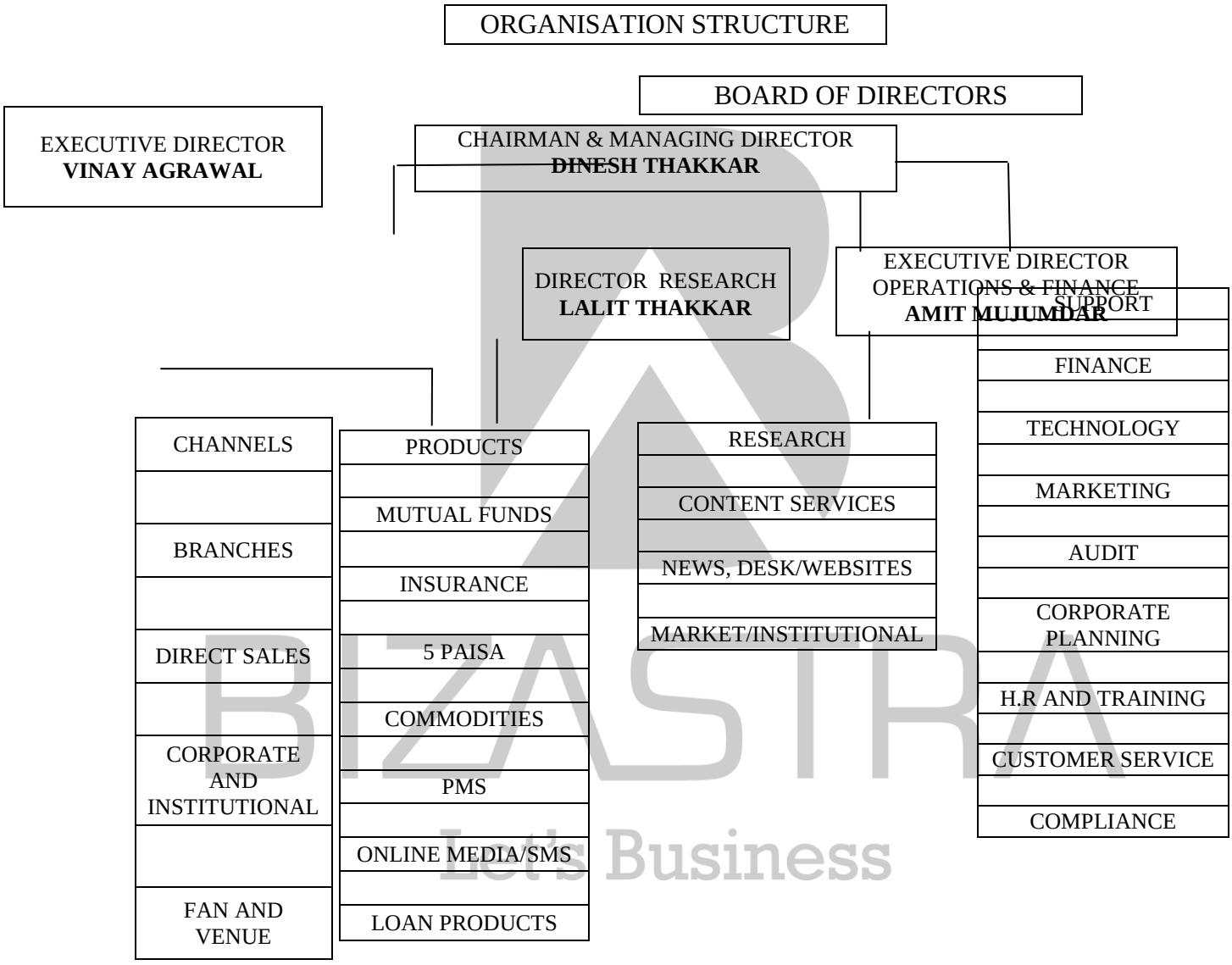
"Ethical Practices & Transparency In All Our Dealings

Customer Interest above Our Own

Always Deliver What We Promise

Effective Cost Management."

2.2 ORGANISATION FLOW CHART:-



2.3 SERVICES:-

- Top quality Research & Advisory Services
  - Fundamental Research Services
  - Technical Research Services
  - Investment Advisory Desk
- Portfolio Management Services
- Mutual Fund And IPO Advisory
- Online Trading
- Commodities
- DP Services
- Funding

3.1 BASICS OF DERIVATIVES:-

Introduction to derivatives:-

The emergence of the market of derivative products, most notably forwards, futures and options, can be traced back to the willingness of risk-averse economic agents to guard themselves against uncertainties arising out of fluctuations in asset prices. By their very nature, the financial markets are marked by a very high degree of volatility. Through the use of derivative products, it is possible to partially or fully transfer price risks by locking-in asset prices. As instruments of risk management, these generally do not influence the fluctuations in the underlying asset prices. However, by locking-in asset prices, derivative products minimize the impact of fluctuations in asset prices on the profitability and cash flow situation of risk-averse investors.

Definition of derivatives:-

Derivative is a product whose value is derived from the value of one or more basic variables, called bases (underlying asset, index, or reference rate), in a contractual manner.

The underlying asset can be equity, forex, commodity or any other asset. For e.g.: Wheat farmers may wish to sell their harvest at a future date to eliminate the risk of a change in prices by that date. Such a transaction is an example of a derivative.

The price of this derivative is driven by the spot price of wheat which is the "Underlying".

In the Indian context the Securities Contracts (Regulation) Act, 1956 (SC(R) A) defines "derivative" to include—

A Security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security.

A contract which derivatives its value from the prices, or index of prices, of underlying securities.

Derivatives are securities under the (SC(R)A) and hence the trading of derivatives is governed by the regulatory framework under the (SC(R)A).Derivative Products initially emerged as hedging devices against fluctuations in commodity prices, and commodity-linked derivatives remained the sole form of such products for almost 300 years. Financial derivatives came into spotlight in the post 1970 period due to growing instability in the financial markets. However, since their emergence, these products have become very popular and by 1990's, they accounted for about two-thirds, of total transactions in derivative products. In recent times, the market for financial derivatives has grown tremendously in terms of variety of instruments available, their complexity and also turnover. In the class of Equity derivatives world over, futures & options on stock indices have gained more popularity than on individual stocks, especially among institutional investors, who are major users of index-linked derivatives. Even small investors find these useful due to high correlation of the popular indexes with various portfolios & ease of use.

Derivative products:-

Derivative Contracts have several variants. The most common variants are forwards, futures, options & swaps.

Forwards:-

A Forward contract is a customized contract between 2 entities, where settlement takes place on a specific date in the future at today's pre-agreed price.

Futures:-

A futures Contract is an agreement between 2 parties to buy or sell an asset at a certain time in future at a certain price. Futures contract are special type of Forward contracts in the sense that the former are standardized exchange-traded contracts.

Options:-

Options are of 2 types- calls and puts. Calls give the buyer the right but not the obligation to buy a given quantity of the underlying asset, at a given price on or before a given future date. Puts give the buyer the right but not the obligation to sell a given quantity of the underlying asset, at a given price on or before a given date.

Swaps:-

Swaps are private agreements between 2 parties to exchange cash flows in the future according to a prearranged formula. They can be regarded as portfolios of forward contracts. The 2 commonly used Swaps are

Interest rate swaps:-

These entail swapping only the interest related cash flows between the parties in the same currency.

Currency swaps:-

These entail swapping both principal and interest between the parties, with the cash flows in 1 direction being in a different currency than those in the opposite direction.

Participants in the derivatives markets:-

The following 3 broad categories of participants- Hedgers, Speculators, and Arbitrageurs trade in derivatives market. Hedgers face risk associated with the price of an asset. They use futures or options market to reduce or eliminate this risk. Speculators wish to bet on future movements in the price of an asset. Futures & Options contracts can give them an extra leverage; that is, they can increase both the potential gains and potential losses in a speculative venture. Arbitrageurs are in business to take advantage of a discrepancy between prices in 2 different markets. If, for e.g., they see the futures price of an asset getting out of line with the cash price, they will take offsetting positions in the 2 markets to lock in a profit.

Futures terminology:-

Spot price: The price at which an asset trades in the spot market.

Future price: The price at which the future contract trades in the future market.

Contract cycle: The period over which a contract trades. The index futures contracts on the NSE have one- month, two-months, three-month expiry cycles which expire on the last Thursday of the month.

Contract size: The amount of asset that has to be delivered under one contract.

Initial margin: The amount that must be deposited in the margin account at the time a futures contract is first entered into is known as initial margin.

Marking-to-market: In the futures market, at the end of each trading day, the margin account is adjusted to reflect the investor's gain or loss depending upon the futures closing price. This is called marking-to-market.

Expiry date: It is the date specified in the futures contract. This is the last day on which the contract will be traded, at the end of which it will cease to exist.

Options terminology:-

Index options: These options have the index as the underlying.

Stock options: Stock options are options on individual stocks.

Buyer of an option: The buyer of an option is the one who by paying the option premium buys the right but not the obligation to exercise his option on the seller/ writer.

Writer of an option: The writer of a call/put option is the one who receives the option premium and is thereby obliged to sell/buy the asset if the buyer exercises on him.

Option price/premium: Option price is the price which the option buyer pays to the option seller. It is also referred to as the option premium.

Strike price: The price specified in the options contract is known as the strike price or the exercise price.

Expiration date: The date specified in the options contract is known as the expiration date, the exercise date, the strike date or the maturity.

- **American options:** American options are options that can be exercised at any time up to the expiration date. Most exchange-traded options are American.
- **European options:** European options are options that can be exercised only on the expiration date itself. European options are easier to analyze than American options, and properties of an American option are frequently deduced from those of its European counterpart.
- **In-the-money option:** An in-the-money (ITM) option is an option that would lead to a positive cash flow to the holder if it were exercised immediately. A call option on the index is said to be in-the-money when the current index stands at a level higher than the strike price (i.e. spot price> strike price). If the index is much higher than the

strike price, the call is said to be deep ITM. In the case of a put, the put is ITM if the index is below the strike price.

- **At-the-money option:** An at-the-money (ATM) option is an option that would lead to zero cash flow if it were exercised immediately. An option on the index is at-the-money when the current index equals the strike price (i.e. spot price=strike price).
- **Out-of-the-money option:** An out-of-the-money (OTM) option is an option that would lead to a negative cash flow it was exercised immediately. A call option on the index is out-of-the-money when the current index stands at a level, which is less than the strike price (i.e. spot price < strike price). If the index is much lower than the strike price, the call is said to be deep OTM. In the case of a put, the put is OTM if the index is above the strike price.
- **Intrinsic value of an option:** The option premium can be broken down into two components-intrinsic value and time value. The intrinsic value of a call is the amount the option is ITM, if it is ITM. If the call is OTM, its intrinsic value is zero. Putting it another way, the intrinsic value of a call is Max[0,(St---K)] which means the intrinsic value of a call is the greater of 0 or (St---K). Similarly, the intrinsic value of a put is Max [0, K----St], i.e. the greater of 0 or (K---St). K is the strike price and St is the spot price.
- **Time value of an option:** The time value of an option is the difference between its premium and its intrinsic value. Both calls and puts have time value. An option that is OTM or ATM has only time value. Usually, the maximum time value exists when the option is ATM. The longer the time to expiration, the greater is an option's time value, all else equal. At expiration, an option should have no time value.

Payoff for derivatives contracts:-

A payoff is the likely profit/loss that would accrue to a market participant with change in the price of the underlying asset. This is generally depicted in the form of payoff diagrams, which show the price of the underlying asset on the X-axis and the profits/losses on the Y-axis. Here are the payoffs for buyers and seller of futures and options.

Payoff for futures:-

Futures contracts have linear payoffs. In simple words, it means that the losses as well as profits for the buyer and the seller of a futures contract are unlimited. These linear payoffs are fascinating as they can be combined with options and the underlying to generate various complex payoffs.

Payoff for buyer of futures: Long futures

The payoff for a person who buys a futures contract is similar to the payoff for a person who holds an asset. He has a potentially unlimited upside as well as a potentially unlimited downside. Take the case of a speculator who buys a two-month Nifty index futures contract when the Nifty stands at 4220. The underlying asset in this case is the Nifty portfolio. When the index moves up, the long futures position starts making profits, and when the index moves down it starts making losses.

Payoff for seller of futures: Short futures

The payoff for a person who sells a futures contract is similar to the payoff for a person who shorts an asset. He has a potentially unlimited upside as well as a potentially unlimited downside. Take the case of a speculator who sells a two-month Nifty index futures contract when the Nifty stands at 4220. The underlying asset in this case is the Nifty portfolio. When the index moves down, the short futures position starts making profits, and when the index moves up, it starts making losses.

Options payoffs:-

The optionally 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, the payoff is exactly the opposite. His profits are limited to the option premium; however his losses are potentially unlimited. These non-linear 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.

Payoff profile of buyer of asset: Long asset

In this basic position, an investor buys the underlying asst, Nifty for instance, for 4220, and sells it at a future date at an unknown price, St. Once it is purchased, the investor is said to be "long" the asset.

Payoff profile for seller of asset: Short asset

In this basic position, an investor shorts the underlying asset, Nifty for instance, for 4220, and buys it back at a future date at an unknown price, St. Once it is sold, the investor is said to be "short" the asset.

Payoff profile for buyer of calls options: Long call

A call option gives the buyer the right to buy the underlying asset at the strike price specified in the option. The profit/loss that the buyer makes on the option depends on the spot price of the underlying. If upon expiration, the spot price exceeds the strike price, he makes a profit. Higher the spot price more is the profit he makes. If the spot price of the underlying is less than the strike price, he let his option expire un-exercised. His loss in this case is the premium he paid for buying the option.

Payoff profile for writer of call options: Short call

A call option gives the buyer the right to buy the underlying asset at the strike price specified in the option. For selling the option, the writer of the option charges a premium. The profit/loss that the buyer makes on the option depends on the spot price of the underlying. Whatever is the buyer's profit is the seller's loss. If upon expiration, the spot price exceeds the strike price, the buyer will exercise the option on the writer. Hence as the spot price increases the writer of the option starts making losses. Higher the spot price more is the loss he makes. If upon expiration the spot price of the underlying is less than the strike price, the buyer lets his option expire un-exercised and the writer gets to keep the premium.

Payoff profile for buyer of put options: Long put

A put option gives the buyer the right to sell the underlying asset at the strike price specified in the option. The profit/loss that the buyer makes on the option depends on the spot price of the underlying. If upon expiration, the spot price is below the strike price, he makes a profit. Lower the spot price more is the profit he makes. If the spot price of the underlying is higher than the strike price, he lets his option expire un-exercised. His loss in this case is the premium he paid for buying the option.

Payoff profile for writer of put options: Short put

A put option gives the buyer the right to sell the underlying asset at the strike price specified in the option. For selling the option, the writer of the option charges a premium. The profit/loss that the buyer makes on the option depends on the spot price of the underlying.

Whatever is the buyer's profit is the seller's loss. If upon expiration, the spot price happens to be below the strike price, the buyer will exercise the option on the writer. If upon expiration the spot price of the underlying is more than the strike price, the buyer lets his option expire unexercised and the writer gets to keep the premium.

Pricing of futures

Stock index futures began trading on NSE on the 12th June 2000. Stock futures were launched on 9th November 2001. The volumes and open interest on this market has been steadily growing. Looking at the futures prices on NSE's market, have you ever felt the need to know whether the quoted prices are a true reflection of the price of the underlying index/stock? Have you wondered whether you could make risk-less profits by arbitraging between the underlying and futures markets? If so, you need to know the cost-of-carry to understand the dynamics of pricing that constitute the estimation of fair value of futures.

The cost of carry model

We use fair value calculation of futures to decide the no-arbitrage limits on the price of a futures contract. This is the basis for the cost-of-carry model where the price of the contract is defined as:

$F = S + C$

Where

F: - Futures price

S: - Spot price

C: - Holding costs or carrying costs

This can also be expressed as:

$F = S (1+r)^t$

Where

r :- Cost of financing

t:- Time till expiration

If $F < S(1+r)^t$ or $F > S(1+r)^t$, arbitrage opportunities would exist i.e. whenever the futures price moves away from the fair value, there would be chances for arbitrage. We know what the spot and futures prices are, but what are the components of holding cost? The components of holding cost vary with contracts on different assets. At times the holding cost may even be negative. In the case of commodity futures, the holding cost is the cost of financing plus cost of storage and insurance purchased etc. (In the case of equity futures, the holding cost is the cost of financing minus the dividends returns.

Note: In the futures pricing examples worked out, we are using the concept of discrete compounding, where interest rates are compounded at discrete intervals, for example, annually or semiannually. Pricing of options and other complex derivative derivatives use continuous compounding for pricing futures too. However, we have used discrete compounding as it is more intuitive and simpler to work with. Had we to use the concept of continuous compounding, the above equation would have been expressed as:

$F = Se^{rt}$

Where

r:- Cost of financing (using continuously compounded interest rate)

t:- Time till expiration

e:- 2.71828

Pricing stock futures:-

A futures contract on a stock gives its owner the right and obligation to buy or sell the stocks. Like index futures, stock futures are also cash settled; there is no delivery of the underlying stocks. Just as in the case of index futures, the main differences between commodity and stock futures are that:

- There are no costs of storage involved in holding stock
- Stocks come with a dividend stream; which is a negative cost if you are long the stock and a positive cost if you are short the stock.

Therefore, Cost of carry = Financing cost – Dividends. Thus, a crucial aspect of dealing with stock futures as opposed to commodity futures is an accurate forecasting of dividends. The

better the forecast of dividend offered by a security, the better is the estimate of the futures price.

Options Pricing Models:-

There are various option pricing models which traders use to arrive at the right value of the option. Some of the most popular models have been enumerated below.

The Binomial Pricing Model:-

The binomial model is an options pricing model which was developed by William Sharpe in 1978. Today, one finds a large variety of pricing models which differ according to their hypotheses or the underlying instruments upon which they are based (stock options, currency options, options on interest rates).

The binomial model breaks down the time to expiration into potentially a very large number of time intervals, or steps. A tree of stock prices is initially produced working forward from the present to expiration. At each step it is assumed that the stock price will move up or down by an amount calculated using volatility and time to expiration. This produces a binomial distribution, or recombining tree, of underlying stock prices. The tree represents all the possible paths that the stock price could take during the life of the option.

At the end of the tree - i.e. at expiration of the option - all the terminal option prices for each of the final possible stock prices are known as they simply equal their intrinsic values.

Next the option prices at each step of the tree are calculated working back from expiration to the present. The option prices at each step are used to derive the option prices at the next step of the tree using risk neutral valuation based on the probabilities of the stock prices moving up or down, the risk free rate and the time interval of each step. Any adjustments to stock prices (at an ex-dividend date) or option prices (as a result of early exercise of American options) are worked into the calculations at the required point in time. At the top of the tree you are left with one option price.

Advantage: The big advantage the binomial model has over the Black-Scholes model is that it can be used to accurately price American options. This is because, with the binomial model it's possible to check at every point in an option's life (i.e. at every step of the binomial tree) for the possibility of early exercise (eg where, due to eg a dividend, or a put being deeply in the money the option price at that point is less than the its intrinsic value).

Where an early exercise point is found it is assumed that the option holder would elect to exercise and the option price can be adjusted to equal the intrinsic value at that point. This then flows into the calculations higher up the tree and so on.

Limitation: As mentioned before the main disadvantage of the binomial model is its relatively slow speed. It's great for half a dozen calculations at a time but even with today's fastest PCs it's not a practical solution for the calculation of thousands of prices in a few seconds which is what's required for the production of the animated charts in my strategy evaluation model

The Black & Scholes Model:-

The Black & Scholes model was published in 1973 by Fisher Black and Myron Scholes. It is one of the most popular options pricing models. It is noted for its relative simplicity and its fast mode of calculation: unlike the binomial model, it does not rely on calculation by iteration.

The intention of this section is to introduce you to the basic premises upon which this pricing model rests. A complete coverage of this topic is material for an advanced course

The Black-Scholes model is used to calculate a theoretical call price (ignoring dividends paid during the life of the option) using the five key determinants of an option's price: stock price, strike price, volatility, time to expiration, and short-term (risk free) interest rate.

The original formula for calculating the theoretical option price (OP) is as follows:

$$OP = SN(d_1) - Xe^{-rt}N(d_2)$$

Where:

$$d_1 = \frac{\ln\left(\frac{S}{X}\right) + \left(r + \frac{v^2}{2}\right)t}{v\sqrt{t}}$$

$$d_2 = d_1 - v\sqrt{t}$$

The variables are:

S = stock price

X = strike price

t = time remaining until expiration, expressed as a percent of a year

r = current continuously compounded risk-free interest rate

v = annual volatility of stock price (the standard deviation of the short-term returns over one year).

ln = natural logarithm

N(x) = standard normal cumulative distribution function

e = the exponential function

Lognormal distribution: The model is based on a lognormal distribution of stock prices, as opposed to a normal, or bell-shaped, distribution. The lognormal distribution allows for a stock price distribution of between zero and infinity (i.e. no negative prices) and has an upward bias (representing the fact that a stock price can only drop 100 per cent but can rise by more than 100 per cent).

Risk-neutral valuation: The expected rate of return of the stock (i.e. the expected rate of growth of the underlying asset which equals the risk free rate plus a risk premium) is *not* one of the variables in the Black-Scholes model (or any other model for option valuation). The important implication is that the price of an option is completely independent of the expected growth of the underlying asset. Thus, while any two investors may strongly disagree on the rate of return they expect on a stock they will, given agreement to the assumptions of volatility and the risk free rate, always agree on the fair price of the option on that underlying asset.

The key concept underlying the valuation of all derivatives -- the fact that price of an option is independent of the risk preferences of investors -- is called *risk-neutral valuation*. It means that all derivatives can be valued by assuming that the return from their underlying assets is the risk free rate.

Advantage: The main advantage of the Black-Scholes model is speed -- it lets you calculate a very large number of option prices in a very short time. Since, high accuracy is not critical for American option pricing (e.g. when animating a chart to show the effects of time decay) using Black-Scholes is a good option. But, the option of using the binomial model is also advisable for the relatively few pricing and profitability numbers where accuracy may be important and speed is irrelevant. You can experiment with the Black-Scholes model using on-line options pricing calculator.

Limitation: Dividends are ignored in the basic Black-Scholes formula, but there are a number of widely used adaptations to the original formula, which I use in my models, which enable it to handle both discrete and continuous dividends accurately.

However, despite these adaptations the Black-Scholes model has one major limitation: it cannot be used to accurately price options with an American-style exercise as it only calculates the option price at one point in time -- at expiration. It does not consider the steps along the way where there could be the possibility of early exercise of an American option.

As all exchange traded equity options have American-style exercise (ie they can be exercised at any time as opposed to European options which can only be exercised at expiration) this is a significant limitation.

The exception to this is an American call on a non-dividend paying asset. In this case the call is always worth the same as its European equivalent as there is never any advantage in exercising early.

3.2 Futures strategies:-

Hedging:-

We have seen how one can take a view on the market with the help of index futures. The other benefit of trading in index futures is to hedge your portfolio against the risk of trading. In order to understand how one can protect his portfolio from value erosion let us take an example.

Illustration:

Ram enters into a contract with Shyam that six months from now he will sell to Shyam 10 dresses for Rs 4000. The cost of manufacturing for Ram is only Rs 1000 and he will make a profit of Rs 3000 if the sale is completed.

Cost (Rs)	Selling price	Profit
1000	4000	3000

However, Ram fears that Shyam may not honor his contract six months from now. So he inserts a new clause in the contract that if Shyam fails to honor the contract he will have to pay a penalty of Rs 1000. And if Shyam honors the contract Ram will offer a discount of Rs 1000 as incentive.

Shyam defaults	Shyam honours
1000 (Initial Investment)	3000 (Initial profit)
1000 (penalty from Shyam)	(-1000) discount given to Shyam
- (No gain/loss)	2000 (Net gain)

As we see above if Shyam defaults Ram will get a penalty of Rs 1000 but he will recover his initial investment. If Shyam honors the contract, Ram will still make a profit of Rs 2000. Thus, Ram has hedged his risk against default and protected his initial investment.

The above example explains the concept of hedging. Let us try understanding how one can use hedging in a real life scenario.

Stocks carry two types of risk – company specific and market risk. While company risk can be minimized by diversifying your portfolio market risk cannot be diversified but has to be hedged. So how does one measure the market risk? Market risk can be known from Beta.

Beta measures the relationship between movement of the index to the movement of the stock. The beta measures the percentage impact on the stock prices for 1% change in the index. Therefore, for a portfolio whose value goes down by 11% when the index goes

down by 10%, the beta would be 1.1. When the index increases by 10%, the value of the portfolio increases 11%. The idea is to make beta of your portfolio zero to nullify your losses.

Hedging involves protecting an existing asset position from future adverse price movements. In order to hedge a position, a market player needs to take an equal and opposite position in the futures market to the one held in the cash market.

Every portfolio has a hidden exposure to the index, which is denoted by the beta. Assuming you have a portfolio of Rs 1 million, which has a beta of 1.2, you can factor a complete hedge by selling Rs 1.2 mn of S&P CNX Nifty futures.

Steps:

a. Determine the beta of the portfolio. If the beta of any stock is not known, it is safe to assume that it is 1.
b. Short sell the index in such a quantum that the gain on a unit decrease in the index would offset the losses on the rest of his portfolio. This is achieved by multiplying the relative volatility of the portfolio by the market value of his holdings.

Therefore in the above scenario we have to short sell 1.2 * 1 million = 1.2 million worth of Nifty.

Now let us study the impact on the overall gain/loss that accrues:

	Index up 10%	Index down 10%
Gain/(Loss) in Portfolio	Rs 120,000	(Rs 120,000)
Gain/(Loss) in Futures	(Rs 120,000)	Rs 120,000
Net Effect	Nil	Nil

As we see, that portfolio is completely insulated from any losses arising out of a fall in market sentiment. But as a cost, one has to forego any gains that arise out of improvement in the overall sentiment. Then why does one invest in equities if all the gains will be offset by losses in futures market. The idea is that everyone expects his portfolio to outperform the market. Irrespective of whether the market goes up or not, his portfolio value would increase.

The same methodology can be applied to a single stock by deriving the beta of the scrip and taking a reverse position in the futures market.

Thus, we have seen how one can use hedging in the futures market to offset losses in the cash market.

Speculation:-

Speculators are those who do not have any position on which they enter in futures and options market. They only have a particular view on the market, stock, commodity etc. In short, speculators put their money at risk in the hope of profiting from an anticipated price change. They consider various factors such as demand supply, market positions, open interests, economic fundamentals and other data to take their positions.

Illustration:

Ram is a trader but has no time to track and analyze stocks. However, he fancies his chances in predicting the market trend. So instead of buying different stocks he buys Sensex Futures.

On May 1, 2001, he buys 100 Sensex futures @ 3600 on expectations that the index will rise in future. On June 1, 2001, the Sensex rises to 4000 and at that time he sells an equal number of contracts to close out his position.

Selling Price: 4000*100 = Rs 4, 00,000

Less: Purchase Cost: 3600*100 = Rs 3,60,000

Net gain = Rs 40,000

Ram has made a profit of Rs 40,000 by taking a call on the future value of the Sensex. However, if the Sensex had fallen he would have made a loss. Similarly, if would have been bearish he could have sold Sensex futures and made a profit from a falling profit. In index futures players can have a long-term view of the market up to at least 3 months

Arbitrage:-

An arbitrageur is basically risk averse. He enters into those contracts were he can earn risk less profits. When markets are imperfect, buying in one market and simultaneously selling in other market gives risk less profit. Arbitrageurs are always in the look out for such imperfections.

In the futures market one can take advantages of arbitrage opportunities by buying from lower priced market and selling at the higher priced market. In index futures arbitrage is possible between the spot market and the futures market (NSE has provided a special software for buying all 50 Nifty stocks in the spot market.

a. Take the case of the NSE Nifty.
b. Assume that Nifty is at 1200 and 3 month's Nifty futures is at 1300.
c. The futures price of Nifty futures can be worked out by taking the interest cost of 3 months into account.
d. If there is a difference then arbitrage opportunity exists.

Let us take the example of single stock to understand the concept better. If Wipro is quoted at Rs 1000 per share and the 3 months futures of Wipro is Rs 1070 then one can purchase Wipro at Rs 1000 in spot by borrowing @ 12% annum for 3 months and sell Wipro futures for 3 months at Rs 1070.

Sale = 1070

Cost= 1000+30 = 1030

Arbitrage profit = 40

These kinds of imperfections continue to exist in the markets but one has to be alert to the opportunities as they tend to get exhausted very fast.

3.3 Options strategies:-

A. Buy Long Call Options:-

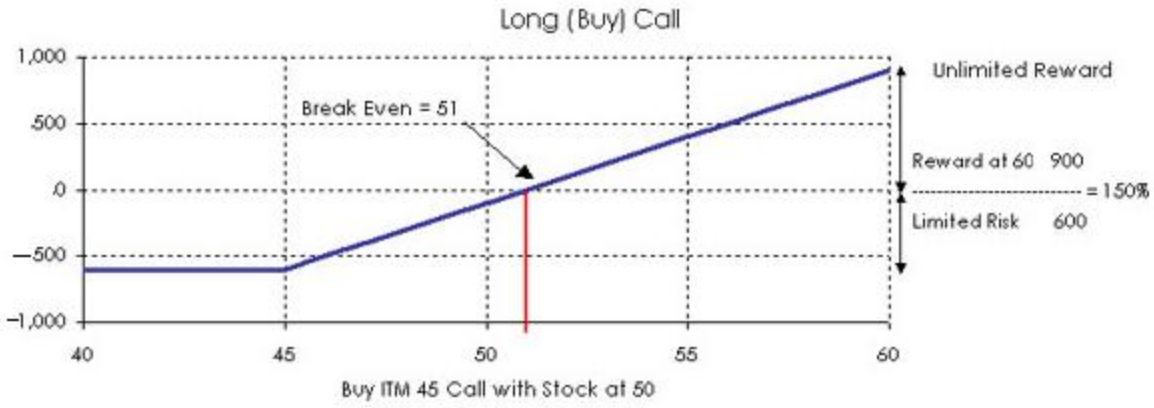
Buy Calls in a Bullish market with maximum days until expiration.

Entry Rules:-
Bullish expectations for the underlying asset.
Low Implied Volatility resulting in cheap options.

Exit Rules:-
- Close position if it falls to 60% of purchase price.
- Close position 30 days to expiration.
- Evaluate position at 100% profit.

If you are still Bullish, close 50% of position to take your money off the table.
Use these exit rules again, but adjust your 'purchase price' to the current price.
This assures that you don't give back all of your profit.
Otherwise, close your entire position.

Profit & Loss Calculations:-
Maximum Risk – Limited to the premium paid for the Call
Maximum Profit – Unlimited as the price of the stock rises above the break even
Breakeven =Call strike price + Call option premium



B. Buy Long Put Options:-

Buy Put in a Bearish market with at maximum days until expiration.

Entry Rules:-

Bearish expectations for the underlying asset.

Low Implied Volatility resulting in cheap options.

Exit Rules:-

- Close position if it falls to 60% of purchase price.
- Close position 30 days to expiration.
- Evaluate position at 100% profit.

If you are still Bearish, close 50% of position to take your money off the table.

Use these exit rules again, but adjust your 'purchase price' to the current price.

This assures that you don't give back all of your profit.

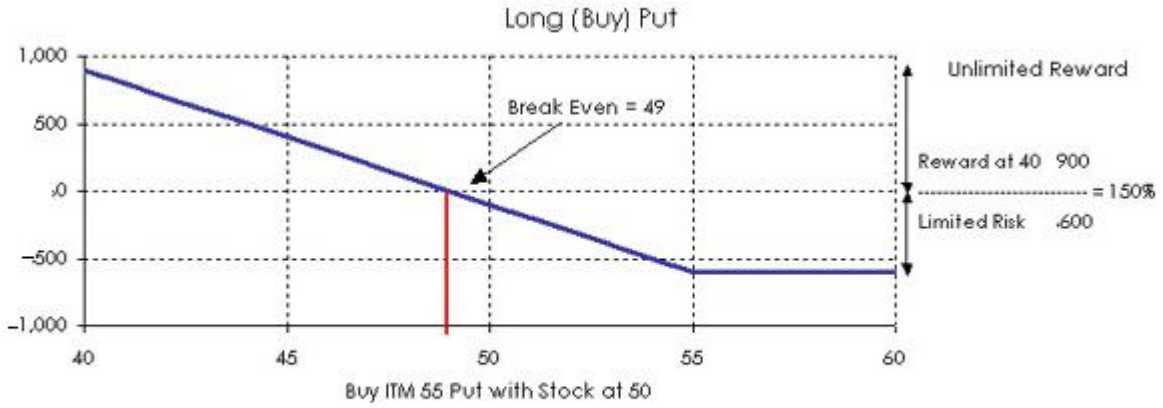
Otherwise, close your entire position.

Profit & Loss Calculations:-

Maximum Risk – Limited to the premium paid for the Put

Maximum Profit – Virtually unlimited as the price of the stock falls below the break even to zero

Breakeven = Put strike price – Put option premium

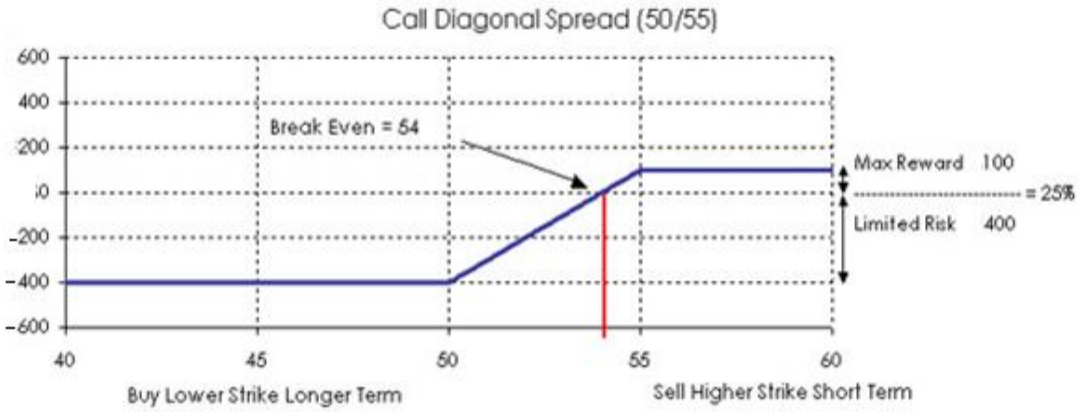


C. Diagonal Bull Call Spread:-

This trade is a combination of a Bull Call Spread and a Call Calendar Spread. Buy ATM (lower strike price) Call with 60 days or greater to expiration. Sell OTM (higher strike price) Call with at least 30 days until expiration and at least 30 days less until expiration than purchased Call. This is a good trade to do with LEAPS in combination with short-term options.

Entry Rules:-
Bullish expectations for the underlying asset, but you don't expect stock price to move too quickly.
Exit Rules:-
- Close position if it falls to 60% of purchase price.
- Hold position until expiration week of the sold option.
If the stock price is greater than the strike price of the sold Call option, you have two choices:
- Exercise your purchased Call option to cover your sold option being called, and take your profit; or
- Roll forward to the next month - buy back the Call option you sold and sell the next month's Call option at the same or higher strike price depending on the Call option prices and your outlook for the stock.
If the stock price is less than the strike price of the sold Call option, it will expire worthless. Sell the next month's OTM (higher strike price) option on the Monday following expiration.
If the option you purchased is entering its final month before expiration, close the position, or keep the Call or convert to a Bull Call Spread depending on your outlook for the stock.

Profit & Loss Calculations:-
Maximum Risk – Limited to the net debit paid for the spread
Maximum Profit – Limited to difference in strike prices – net debit paid
Breakeven= Lower Call strike price + net debit paid



D. Bear Put Spread:-

Buy ATM (higher strike price) Puts and sell OTM (lower strike price) Puts in moderately Bearish markets that are trending down or reaching new lows with 45 days to 90 days until expiration.

Entry Rules:-

Bearish expectations for the underlying asset.

Exit Rules:-

- Close position if it falls to 60% of purchase price.
- Close position 30 days to expiration.
- Evaluate position at 90-100% profit.

If you are still Bearish, close 50% of position to take your money off the table.

Close out the remainder of position at 75% – 80% of maximum spread.

Profit & Loss Calculations:-

Maximum Risk – Limited to the net debit paid for the spread

Maximum Profit – Limited to difference in strike prices – net debit paid

Breakeven = Higher Put strike price - net debit paid

E. Diagonal Bear Put Spread:-

This trade is a combination of a Bear Put Spread and a Put Calendar Spread. Buy ATM (higher strike price) Put with 60 days or greater to expiration. Sell OTM (lower strike price) Put with at least 30 days until expiration and at least 30 days less until expiration than purchased Put. This is a good trade to do with LEAPS in combination with short-term options.

Entry Rules:-

Bearish expectations for the underlying asset, but you don't expect stock price to move too quickly.

Implied Volatility Skews of sold Put at least 10% greater than purchased Put.

Exit Rules:-

- Close position if it falls to 60% of purchase price.
- Hold position until expiration week of the sold option.

If the stock price is less than the strike price of the sold Put option, you have two choices:

- Exercise your purchased Put option to cover the stock you must purchase when the Put option you sold is exercised, and take your profit; or
- Roll forward to the next month - buy back the Put option you sold and sell the next month's Put option at the same or lower strike price depending on the Put option prices and your outlook for the stock.

If the stock price is greater than the strike price of the sold Put option, it will expire worthless.

Sell the next month's OTM (lower strike price) option on the Monday following expiration.

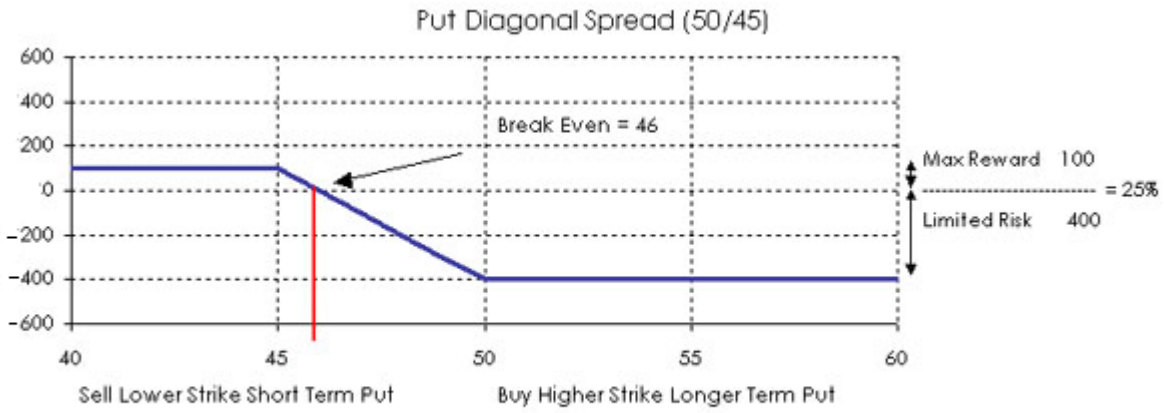
If the option you purchased is entering its final month before expiration, close the position, or keep the Put or convert to a Bear Put Spread depending on your outlook for the stock.

Profit & Loss Calculations:-

Maximum Risk – Limited to the net debit paid for the spread

Maximum Profit – Limited to difference in strike prices – net debit paid

Breakeven = Higher Put strike price + net debit paid



F. Bull Call Spread:-

Buy ATM (lower strike price) Call and sell OTM (higher strike price) Call with 45 days or greater until same expiration date in moderately Bullish markets that are trending up.

Entry Rules:-

Bullish expectations for the underlying asset.

Exit Rules:-

- Close position if it falls to 60% of purchase price.
- Close position 30 days to expiration.
- Evaluate position at 90-100% profit.

If you are still Bullish, close 50% of position to take your money off the table.

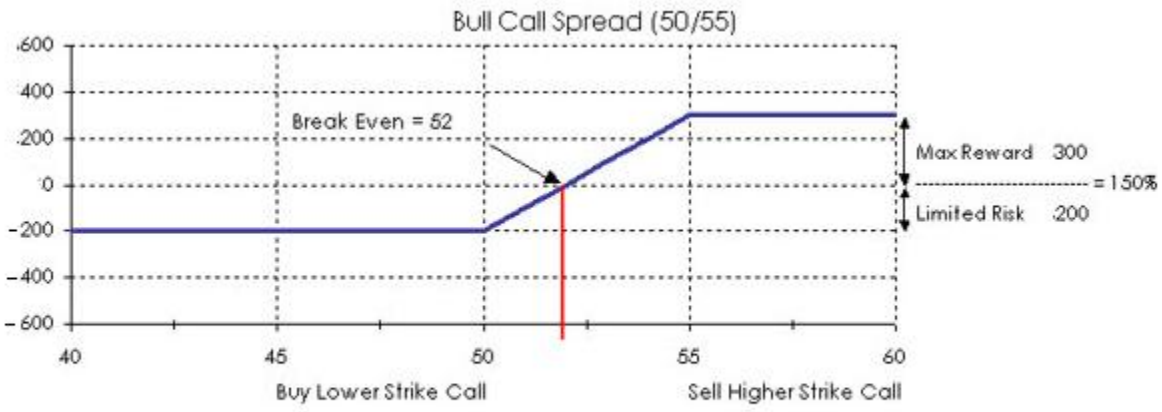
Close out the remainder of position at 75% – 80% of maximum spread.

Profit & Loss Calculations:-

Maximum Risk – Limited to the net debit paid for the spread

Maximum Profit – Limited to difference in strike prices – net debit paid

Breakeven = Lower Call strike price + net debit paid



G. Bull Put Spread:-

A credit spread buying OTM (lower strike price) Put and selling ATM (higher strike price) Put with 30 to 90 days until same expiration date in moderately bullish markets that are trending up. The benefit to this credit spread is that you keep the credit if the options expire worthless.

Entry Rules:-

Bullish expectations for the underlying asset.

Exit Rules:-

- Buy back position if it rises to 135% of purchase price.
- Evaluate position at 90-100% profit.

If you are still Bullish, buy back 50% of position to take your money off the table.

Buy back the remaining position if it moves back to your original purchase price.

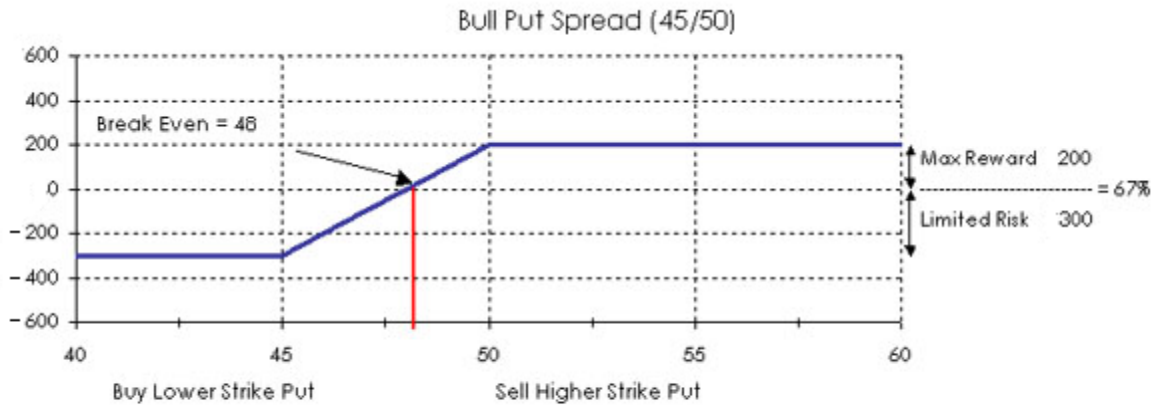
Otherwise, let the options expire to keep all or part of the remaining credit you collected.

Profit & Loss Calculations:-

Maximum Risk – Limited to difference in strike prices – net credit received

Maximum Profit – Limited to net credit received

Breakeven = Higher Put strike price – net credit received



H. Calendar Option Spreads:-

Buy one long term Call with 90 days or greater until expiration and sell one short-term Call with 45 days or less until expiration at same strike price in stable markets. The objective of this trade is to capture time decay since the sold Call will lose value faster than the purchased Call. Repeat sale of another short-term option if time permits on long term option to capture additional time premium. Hold long option if market looks ready to break out in an upward direction.

Entry Rules:-
Stocks expected to stay in a trading range.
Implied volatility skews of sold Call at least 15% greater than purchased Call.
Buy as much time as you can while keeping the net debit of the spread under $2 per contract.

Exit Rules:-
-Hold position until expiration week of the sold option.
-If the options are ITM: roll forward to the next month - buy back the Call option you sold and sell the next month's Call option at the same strike price.
-If the options are OTM: let the current month options expire worthless. Sell the next month's option on the Monday following expiration.
If the options are ATM you have several options:
- Sell the option you purchased to close out the spread.
- Roll forward to continue the position,
- Convert the position to a Bull Call spread or Bear Call spread.
(See these strategies to determine if one of these options makes sense)
If the option you purchased is entering its final month before expiration, close the position, or keep the Call or convert to a Bull Call spread if you are now Bullish on the underlying asset.

Profit & Loss Calculations: -
Maximum Risk – Limited to the net debit paid for the spread
Maximum Profit – Unlimited at short-term Call expiration
Breakeven = Strike price + net debit paid after short-term Call expiration

I. Straddle Option Trading:-

A delta neutral strategy best placed in a market with high volatility at a time when volatility is low and where you anticipate a volatility increase. Purchase an equal numbers of ATM Puts and Calls with 45 days or more until the same expiration date.

Entry Rules:-

Price Consolidation usually visible as a Triangle Formation and tightening Bollinger Bands on a stock chart.

Cheap options - Low Implied Volatility compared to Historical Volatility

Additional Criteria that improve probability of success:

Scheduled earnings announcement or upcoming event.

History of price movement with news or earnings announcements.

Buy 3-4 weeks before announcement when option prices are low, because option prices go up as the announcement date gets closer due to increased volatility, even without the stock price changing.

Exit Rules:-

Exit 30 days prior to expiration if there has been no movement in the underlying asset.

Exit just before or after the earning announcement, depending on the history of the stock's movement on prior earnings announcement dates. If a stock has made a good move in anticipation of the news, consider getting out of the profitable option the day before. Many times the stock will move in the opposite direction, no matter what the news is because people are 'buying on the rumor, and selling on the fact'.

Exit at a profit target of 50% of the entire trade (debit – the cost of the Call + Put).

Exit if there is a big move in the underlying asset soon after you enter the position, even if the date for the 'news' has not happened yet.

Profit & Loss Calculations:-

Maximum Risk – Limited to the net debit paid

Maximum Profit – Unlimited to the upside and downside beyond the breakeven prices

Upside breakeven – ATM Call strike price + net debit paid

Downside breakeven – ATM Put strike price - net debit paid

3.4 Analysis of Data:-

For achieving the objectives of the project research work following are the steps which can be followed for analyzing the data of the research work.

- Nifty movement analysis
- Different types of strategies analysis
- Suggested strategies analysis on the basis of market view, BEP
- Stock price movement analysis of the companies
- Risk on investment analysis

Nifty movement analysis:-

Here, nifty movement analysis is important for determining the market conditions i.e.-

Bullish Market

Bearish Market

Volatile Market

Neutral Market

On that basis the strategies should be suggested for derivative trading.

Market view analysis

On the basis of nifty index movement the market view is to be analyzed, and strategies are to be implemented.

Nifty movement for the month of June-2008

Date	Open	High	Low	Close
2-Jun-08	4869.25	4908.80	4713.00	4739.60
3-Jun-08	4739.30	4739.30	4634.00	4715.90
4-Jun-08	4469.65	4541.05	4468.05	4523.60
5-Jun-08	4586.95	4690.60	4536.25	4676.95
6-Jun-08	4680.55	4676.30	4614.25	4627.80
9-Jun-08	4626.45	4626.45	4411.60	4500.95
10-Jun-08	4522.00	4522.55	4369.80	4449.80
11-Jun-08	4472.50	4547.50	4472.50	4523.60
12-Jun-08	4524.40	4550.00	4392.00	4539.35
13-Jun-08	4539.50	4536.35	4491.35	4517.10
16-Jun-08	4536.30	4617.70	4536.30	4572.50
17-Jun-08	4572.50	4664.05	4561.75	4663.00
18-Jun-08	4652.80	4679.75	4569.90	4582.40
19-Jun-08	4582.55	4585.70	4488.95	4504.25
20-Jun-08	4504.20	4532.00	4333.60	4347.55
23-Jun-08	4351.15	4351.15	4225.50	4266.40
24-Jun-08	4271.05	4305.90	4156.10	4191.00
25-Jun-08	4189.60	4264.55	4093.20	4252.65
26-Jun-08	4252.60	4324.75	4230.00	4315.65
27-Jun-08	4315.30	4315.30	4119.20	4136.65
30-Jun-08	4136.25	4163.00	4021.50	4040.55

Market view:-

No. of trading days	Bullish	bearish	volatile	Neutral
21	5	6	8	2

Nifty movement for the month of July-2008

Date	Open	High	Low	Close
1-Jul-08	4039.75	4075.40	3878.20	3896.75
2-Jul-08	3895.30	4107.15	3848.25	4093.25
3-Jul-08	4094.60	4097.35	3874.85	3925.75
4-Jul-08	3926.65	4033.50	3896.40	4016.00
7-Jul-08	4002.00	4114.50	4002.00	4030.00
8-Jul-08	4028.70	4028.70	3896.05	3988.55
9-Jul-08	3990.00	4169.40	3990.00	4157.10
10-Jul-08	4155.65	4187.95	4110.40	4162.20
11-Jul-08	4166.00	4215.50	4014.45	4049.00
14-Jul-08	4047.45	4118.10	4004.25	4039.70
15-Jul-08	4039.30	4040.70	3835.50	3861.10
16-Jul-08	3861.55	3920.05	3790.20	3816.70
17-Jul-08	3823.15	3968.75	3823.15	3947.20
18-Jul-08	3962.95	4110.55	3926.30	4092.25
21-Jul-08	4092.20	4168.15	4072.75	4159.50
22-Jul-08	4158.45	4262.45	4137.95	4240.10
23-Jul-08	4246.70	4491.55	4246.70	4476.80
24-Jul-08	4476.20	4539.45	4385.85	4433.55
25-Jul-08	4440.85	4440.85	4297.15	4311.85
28-Jul-08	4282.25	4352.65	4282.25	4332.10
29-Jul-08	4332.20	4332.20	4159.15	4189.85
30-Jul-08	4191.20	4327.00	4191.20	4313.55
31-Jul-08	4314.35	4342.00	4285.55	4332.95

Market view

No. of Trading days	Bullish	Bearish	Volatile	Neutral
22	9	2	5	6

3.5 Interpretation of Derivatives Strategies:-

1. Ratio Put Spread:-

Market View: - Range bound with negative bias

Nifty, Lot size: 50

CMP = 4517.10

Buy a Put with strike price of 4400

Premium paid = 82.0

Break Even Point (BEP) = 4400-82 = 4318

Sell Put (lot size=100) with strike price of 4200

Premium got = 42.0

Total BEP of the strategy = 4318-4200 = 118+ (2*42) = 202

= 4200-202 = 3998.0

Maximum Risk = Unlimited

Maximum Profit = 202*50 = 10,100

If Nifty closes at 4200 on expiry.

On expiry i.e. on 27th June Nifty closed at = 4136.65

Profit/ (Loss) calculation:-

Put bought = 4318-4136.65 = 181.35*50 = 9067.5

Put Sold = 4200-4136.65= 63.35-42=21.35*2*50=2135

Total Profit = 9067.5-2135 = 6932.5 Rs.

Margin always required.

2. Short strangle:-

Market View: - Range bound with high volatility

Nifty, Lot size: 50

CMP = 4136.50

Sell a Put with strike price of 4000

Premium got = 155.0

Sell a call with strike price of 4300

Premium got = 95.0

Lower BEP = 4000 - (155+95) = 3750.0

Higher BEP = 4300+ (155+95) = 4550.0

Maximum Risk = Unlimited

Maximum Profit = 250*50 = 12,500

If Nifty closes on or between 4000 and 4300 on expiry.

On expiry i.e. on 27th June Nifty closed at = 4136.65

Profit/ (Loss) calculation:-

Put sold = 4136.65-4000 = 136.65

Call sold = 4300-4136.65 = 163.35

Profit = (136.65+163.35 - BEP)*lot size
= (300 -250)*50
= 2500 Rs.

Margin always required.

3. Covered call writing:-

Company: - Idea, Lot size = 2700

View: - Mildly Bullish

Buy Idea Future at 82.0 Rs.

Sell Call of Idea with strike price of 90.0

Premium got = 3.0

Lower BEP = 82.0 – 3.0 = 79.0

Maximum Risk = Unlimited.

Maximum Profit = Unlimited.

Idea closed on 94.5 on the day of expiry i.e. on 31st July 2008

Profit/ (Loss) calculation:-

Profit = [(94.5 – 82) – (4.50-3.0)]* lot size
= (12.5 – 1.5) * 2700
=29,700 Rs.

Margin always required.

4. Long Put:-

Market View: - Mildly Bearish

Nifty, Lot size: 50

CMP = 4252.05

Buy a Put with strike price of 4250

Premium paid = 44.25

BEP = 4252.05 – 44.25 = 4207.8

Maximum Risk = Limited

Maximum Profit = Unlimited

If Nifty closes below 4207.8 on expiry.

On expiry i.e. on 27th June Nifty closed at = 4136.65

Profit/ (Loss) calculation:-

Put bought = (4207.8 – 4136.65)* lot size
= 71.15 * 50
= 3557.5 Rs.

Profit = 3557.5 Rs.

Margin not required.

5. Buy Straddle:-

Market View: - Range bound with high volatility

Nifty, Lot size: 50

CMP = 4040.55

Buy a Call with strike price of 4000

Premium paid = 221.6

Lower BEP = 4000 – 221.6 = 3778.4

Buy a Put with strike price of 4000

Premium paid = 128.84

Higher BEP = 4000 + 128.84 = 4128.4

Overall BEP of strategy = (3778.4+4128.4)/2 = 3953.4

Maximum Risk = Limited

Maximum Profit = If there is significant movement in either direction, significant profit will result.
= Unlimited

On expiry (31st July) Nifty closed at 4332.95

Profit/ (Loss) calculation:-

Call bought = (4332.95 – 4221.6) * Lot size
= 111.35*50
= 5567.5 Rs.

Put bought = 0.0 (as Nifty closed above 4128.4)
= 128.4*50
= (6420) Rs.

Overall Profit/ (Loss) = 6420 - 5567.5
= (852.5) Rs.

But if exercised on 23rd July, Nifty closed at 4476.8

Profit/ (Loss) calculation:-

Call bought = (4476.8 – 4221.6) * Lot size
= 255.2*50
=12,760

Put bought = 0.0 (Nifty is above HBEP of 4128.4)
= 128.54 * 50
= 6420

Overall Profit/ (Loss) = 12,760 – (128.4*50)
= 12760 – 6420
= 6340 Rs.

Margin not required.

The trader has the opportunity or the freedom of excising the options at any time during the contract period. As there was significant movement of the Nifty in either direction, he would have made large profits than what estimated if he would have exercised on 23rd and on 31st July.

6. Buy Strangle:-

Nifty, Lot size: 50

CMP = 3816.70

Buy a Call with strike price of 4000

Premium paid = 83.88

Buy a Put with strike price of 3800

Premium paid = 94.78

Higher BEP = 4000 + 83.88 = 4083.88

Lower BEP = 3800 – 94.78 = 3705.22

Maximum Risk = Limited

Maximum Profit = Unlimited

On expiry i.e. on 31st July Nifty closed at 4332.95

Profit/ (Loss) calculation:-

Call bought = (4332.95 – 4083.88) * Lot size
= 249.07*50
= 12,453.5 Rs.

Put bought = 0.0 (as Nifty is above 3800)
= 94.78 * 50
= 4739.0

Overall Profit/ (Loss) = 12,453.5 – (94.78*50)
= 12,453.5 – 4739.0
= 7714.5 Rs.

Observations & findings:-

- Lack of Investor Awareness about the Derivatives Market & its Trading.
- Strategies are basically more applicable for HNI Clients whose margin Amount is more.
- Derivatives Market basically trades depending upon the Underlying Securities. So small fluctuations in the security results in changes in strategies for that particular Derivative.
- Small Investors usually prefer Cash Market over Derivatives Market because of Risk & ignorance about market conditions.
- Basically Derivatives include wide range of Strategies, but Strategies actually followed in practice are Bull call spread, call hedge, put hedge.
- In India Index Futures & Options have more liquidity than that of stock Futures & Options. Only 10% of the stocks are liquid.
- In many of the Brokerage houses Application of Strategies on day-to-day basis is very rare. The tendency is to have long position when market is bullish, & go for short position when market is bearish. But at Angel Broking, I m glad to mention that they follow Strategies as updated by their Research Team.

- Hedging/ Transfer of Risk
- Better Price Discovery
- Betting on the Future

Derivatives Markets bring a vast pool of participants together to speculate or hedge. In doing so, they discover the future price of certain financial instruments or commodities. In the process of generating precise price information, hedgers, who wish to transfer risk, are able to transfer it to speculators, who are willing to assume it.

For hedgers

· If long in cash underlying - Short future

· If short in cash underlying - Long future

· Need not be a "Perfect Hedge" as long as there is a substantial offset of risk

For speculators

· Bullish - Buy Futures

· Bearish - Sell Futures

· Cash & Carry - Deal simultaneously in cash and Futures Market

For arbitrageurs

· Take positions in the cash and derivatives market simultaneously.

· Take short position in the market, which is overvalued.

· Take long position in the market, which is undervalue

Conclusion:-

Cost Efficiency:-

Options have great leveraging power. An investor can obtain an option position that will mimic a stock position almost identically, but at a huge cost savings. For example, in order to purchase 200 shares of an $80 stock, an investor must pay out $16,000. However, if the investor were to purchase two $20 calls (with each contract representing 100 shares), the total outlay would be only $4,000 (2 contracts X 100 shares/contract X $20 market price). The investor would then have an additional $12,000 to use at his or her discretion. Obviously, it is not quite as simple as that. However, this strategy, known as stock replacement, is not only viable but also practical and cost efficient.

Less Risky - Depending on How You Use Them

There are situations in which buying options is riskier than owning equities, but there are also times when options can be used to reduce risk. It really depends on how you use them. Options can be less risky for investors because they require less financial commitment than equities, and they can also be less risky due to their relative imperviousness to the potentially catastrophic effects of gap openings.

Options are the most dependable form of hedge, and this also makes them safer than stocks. When an investor purchases stock, a stop-loss order is frequently placed to protect the position. The stop order is designed to "stop" losses below a predetermined price identified by the investor. The problem with these orders lies in the nature of the order itself. A stop order is executed when the stock trades at or below the limit as indicated in the order.

If you had purchased the $45 strike call instead of the stock, your loss would be limited to what you spent on the option. If you paid $6 for the option, you would have lost only that $6, not the $31 you lost if you owned the stock. The effectiveness of stop orders pales in comparison to the natural, full-time stop offered by options.

Higher Potential Returns:-

You don't need a calculator to figure out that if you spend much less money and make almost the same profit, then you have a higher percentage return. When they pay off, that's what options typically offer to investors.

More Strategic Alternatives:-

The final major advantage of options is that they offer more investment alternatives. Options are a very flexible tool. There are many ways to use options to recreate other positions. We call these positions synthetics. Synthetic positions present investors with multiple ways to attain the same investment goals, and this can be very, very useful. While synthetic positions are considered an advanced option topic, there are many other examples of how options offer strategic alternatives. For example, many investors use brokers that charge a margin when an investor wants to short a stock. The cost of this margin requirement can be quite prohibitive. Other investors use brokers that simply do not allow for the shorting of stocks, period. The inability to play the downside when needed virtually handcuffs investors and forces them into a black and white world while the market trades in color.

Recommendations:-

- Avoiding wrong perception of the investors
- Investors think that, Derivative trading is more risky than equity trading; it is a betting etc. their views are not cleared about derivative market. These wrong perceptions of the investors should be avoided by giving proper suggestions to the clients.
- Suggest the Derivatives trading to the investors on the basis of – Income, Risk
- Suggest the derivative trading to their clients who has currently invested in equity market. On the basis of their income capacity, risk bearing capacity of the investor.
- Introducing strategies to the Investors
- Introducing derivative strategies to the existing clients who are already invested in derivative segment.
- Diversify the portfolio of investors
- Diversify the investment portfolio of the clients who do not want to take a more risk in derivative market trading.

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