OPTIONS TRADING GUIDE

Raakesh Thayyil

A compendium of the basic knowledge required to start trading Options Contracts on the Exchanges. Be aware that options trading is highly risky and you may lose your entire capital PROCEED WITH CAUTION

Thayyil Financial Advisory Series

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DO'S AND DONT'S IN DERIVATIVES

My advice – Preferably avoid them

1. Key to profit from options is to **form a correct view first**.

2. Construct a **strategy** around the view.

3. Opt for **liquid** stocks.

4. **Book profits** by **squaring off** your position instead of waiting for the expiry.

5. Option **value decays** towards the **expiration**. Hence market timing is important.

6. **In-The-Money** contracts are more **responsive** to underlying price changes than Out-of-The-Money contracts.

7. Better **liquidity** in **At-The-Money** contracts.

8. **Avoid deep** In-The-Money and deep Out-of-The Money strike prices. Such strike prices are generally **illiquid**.

9. Keep **sufficient allocated funds** for Derivatives to cover any losses if you have an open position in Futures or Sell position in Options – these are to covered by margin till their expiry. If you are not clear about this avoided them.

10. **Learn** to interpret Open Interest, Put Call Ratio and Cost to Carry

FORMING A VIEW

Before getting into a trade two questions have to be asked:

1. How do you decide whether "it's going up" or "it's going down"?

2. What other factors should you consider before putting on a position?

Economic factors

A basic understanding of economic fundamentals is required to interpret and act upon

Related markets

Look for clues from other markets -- the commodity, bond and forex markets

Political situations

Political developments are extremely important. Their impact should never be underestimated.

Technical analysis

As derivative products are influenced by the performance underlying stock, it is very important how is the stock going to perform in the short-term.

This where technical analysis come handy.

Whether you believe in them or not, everyone should know at least the basics, such as the current support and resistance levels and the likely effect of any breach of them.

How far can the markets go?

Has the opportunity been missed, or is joining in still a viable proposition?

How strong is the mood of the market, e.g. how many people already have the same position as you are considering?

In equity markets, for example, when all the retail punters finally get round to buying, a rule of thumb is that it is generally a good time to sell.

Are you sure you of your view?

If you are not particularly convinced about your view, then you should probably not put on any position at all.

The hardest thing in the world is to do nothing, but it can be the right thing to do on some occasions.

There is no point whatsoever in trading just for the sake of it.

Start Point:

Deciding whether the market is going to rise or fall is only the starting point. A trader will then have to address a whole variety of considerations:

- The **likely size of the move**, when it will take place and how it will occur;

- Should the position be **built up gradually**, put on **immediately**, or when a **certain level is reached**?

- Is the **expectation** that the market will **gap**, or **gradually move** in the predicted direction?

- Where should **stop losses / take profits levels** be set?

- What **disciplines** should be imposed as regards **time horizons**?

After that:

Will the market stabilise, or merely pause for breath?

Is there anything that could cause a rapid reverse and thus suggest that precise timing will be vital?

In other words, will it be possible to unwind the position gradually - still obtaining some benefit from further favourable movements - or will nimble action be required in order not to miss the window of opportunity?

Another consideration is the type of position that is to be run –

Short term technical

Long term fundamental

Or some form of combination of the two?

Does any of this need to be taken into account when determining stop loss / take profit levels?

And finally one has to consider

How can I best profit from my view?

The final step is then to determine the product(s) that should be used.

INTERPRETING VOLUME AND OPEN INTEREST

1. If **volume is relatively high** while the **market is going up**
   and remains relatively low during corrections,
   the inference is that the **market is in a strong uptrend**,
   which should **continue**.

2. If **volume is high** while the **market is going down**
   and relatively **light** during **upward retracements**,
   then the **market is weak**
   with a **continuing downward trend** likely.

3. If **both open interest** and **prices** are **increasing**,
   then **new buyers** are being brought into the market
   with a **strong technical picture** unfolding.
   Expect the **uptrend to continue**.

4. If on the other hand, **open interest is increasing** while **prices decline**,
   short sellers have the **upper hand** in a **technically weak market**.

As open interest is growing while prices decline, buyers are obviously the more aggressive party.

5. In the event of **open interest declining** while **prices are also slipping**,

liquidation by **long positions** is the implication,

therefore suggesting a **technically strong market** overall.

In other words, the market is strong as open interest declining suggests no new aggressive shorts, as this would entail an increase in open interest.

6. When **open interest is declining** and **prices are increasing**,

short covering is the most likely cause suggesting that

overall the market is weak - i.e. attracting new buyers would be required

for a technically strong market and consequently open interest would rise.

VOLATILITY & OPTIONS

1. If you believe that volatility would rise and the underlying then you may go in for a bull strategy.

2. Or if you are an aggressive player you could sell the option with a belief to buy them at a later date.

3. Most traders, however, use a **general rule of thumb**:

Buy options in low volatility

Sell options during periods of **high volatility**.

4. If you see **low implied volatilities**

Buy the **At the Money (ATM) CALL** option and **sell an Out of the Money (OTM)CALL** option.

Similar position using **PUTS**. **Buy ATM** and **sell In the Money (ITM) PUT** options.

5. If you see **high implied volatilities**

Buy an **In the Money (ITM) Call** and **Sell** an **ATM Call**. You will find that both the calls are expensive, but the ATM will be in most circumstances more expensive than the others. Thus, by selling the ATM call, you can realize a good price.

Similar position using **PUTS**. **Buy OTM** and **Sell ATM PUT** options.

THE DAY TRADER'S PREPARATION

Brett Steenbarger is an excellent traders coach. He writes a blog where he shares his trading ideas. This article consists of a selection of his trading suggestions relevant to day trading.

PREPARATION FOR THE TRADING DAY

The trader's daily **preparation** begins **before markets open**. By observing how markets **trade overnight**, evaluating the **behavior of correlated asset classes prior** to the open, and by **assimilating** economic data, news, and earnings releases (and market responses to these), the trader **gains a feel** for the market day before the opening bell rings.

Key to the trader's reasoning is an elaboration of **"what-if"scenarios** that review hypotheses regarding **likely market action**.

> What if we open with low volume, near the previous day's pivot level on a day with no scheduled economic releases?
>
> What if we open weak in the S&P 500 Index, but see firmness among the small cap stocks and a mixed open among the major stock sectors?
>
> What if the market breaks above a key price level, with bullish behavior in bonds, the dollar, commodities, and the more speculative stock sectors? What if the market breaks below support, but breadth remains mixed?

Each of these scenarios calls for a specific trader response. Each offers potential trading opportunity. By **mentally reviewing** the scenarios in **advance**, the trader becomes **more prepared to act** upon them. The trader also becomes **more sensitive to their unfolding**, so that trading opportunities can be properly anticipated and mapped out.

THREE QUESTIONS FOR THE START OF THE TRADING DAY

Here are three questions to ask at the start of the trading day:

1) Am I bringing **baggage** to the day's trade?
   Am I **carrying over frustrations** from losing money or missing opportunity?
   Am I feeling particular **pressure** to make winning trades?
   Am I **locked into a view** of markets because those views haven't been paying me?

2) Am I **prepared**?
   Have I **identified** significant **price levels** for the day?
   Have I **gained a feel** for how various markets have been trading overnight?
   Do I know if **economic reports** are **scheduled** for day and what the **expectations** are?

3) What am I **working on**?
Do I have **goals** for the **day**?
What have been the **mistakes** I've been making that need to be **corrected**?
What **improvements** have I made that I want to **cement**?
What kinds of **trades** have been **working best** for me, and am I prepared to **actively look** for those.

TRADING BY THEMES

One of the **most important calls** an active trader can make is the **dominant theme** of the day's trade. Sometimes a news or earnings report will set the theme of the day. Other times, we will see themes carry over from trade in Asia and/or Europe. I find that tracking the market before the open provides a feel for some of the themes that may move markets--or shift on us--during the trading session.

IMPORTANCE OF THE OPENING PRICE

A **trending market** will stay **above or below** the opening price for the **majority of the session**, as we **reject** that early estimate and probe value higher or lower.

A **range market** will tend to **accept** the **early estimate** of value, and we will **oscillate** around the open for much of the session.

Knowing how **we're trading relative** to the open--but also seeing how **individual stocks and sectors** are trading relative to their opening prices--is useful in **gauging evolving market** strength and weakness.

THREE QUESTIONS FOR THE END OF THE TRADING DAY

1) Did I **trade well today**?
Did I make **good use** of my **preparation**?
Did I **follow rules** about position sizing and execution?
Did I **adapt well** to shifts during the trading day?
Was I **patient** in finding **trades** with **good risk/reward characteristics**?

2) What did I **learn** about myself today?
What about **today's trading** can I bring to the **next day** to **make myself better**?
How can I **learn** from what I did **right and wrong** today?
What **goals** can I set for **tomorrow** to make sure that I **carry over that learning**?

3) **What did I learn** about markets today?
Did markets do what I **expected**?
Are my views on markets any **different** based on today's trade?
What levels did I **observe in today's** trade that can **inform decision making tomorrow**?
What **themes from** today will I be **tracking tomorrow**?

PRICING OF OPTIONS

There are four major factors affecting the Option premium:

- Price of Underlying
- Time to Expiry
- Exercise Price Time to Maturity
- Volatility of the Underlying

And two less important factors:

- Short-Term Interest Rates
- Dividends

THE INTRINSIC VALUE OF AN OPTION

The intrinsic value of an option is defined as the amount by which an option is in-the-money, or the immediate exercise value of the option when the underlying position is marked-to-market.

For a call option: Intrinsic Value = Spot Price - Strike Price

For a put option: Intrinsic Value = Strike Price - Spot Price

PRICE OF UNDERLYING

The premium is affected by the price movements in the underlying instrument.

For Call options – as the underlying price rises so does its premium.

For Put options – as the underlying price rises, the premium falls.

THE TIME VALUE OF AN OPTION

Generally, the longer the time remaining until an option's expiration, the higher its premium will be.

VOLATILITY

Volatility is the tendency of the underlying security's market price to fluctuate either up or down.

> It reflects a price change's magnitude; it does not imply a bias toward price movement in one direction or the other.

Thus, it is a major factor in determining an option's premium.

> **Higher volatility=Higher premium**
>
> **Lower volatility = Lower premium**

INTEREST RATES

In general interest rates have the least influence on options and equate approximately to the cost of carry of a futures contract.

> If the size of the options contract is very large, then this factor may take on some importance.

All other factors being equal as **interest rates rise**, **premium costs fall** and vice versa. The relationship can be thought of as an **opportunity cost**.

FUTURES STRATEGY – BULLISH MARKET VIEW

Bullish on the Markets? Buy Nifty Futures!

How you can use Index futures if you are bullish and expect the markets to rally. Ordinarily, you could take advantage of a bullish market in two ways - buy some of the index stocks which move or to an extent mirror the index and sell them at a later date, or buy the entire index portfolio.

> The first approach is widely used on liquid stocks based on using these as an index proxy. The shortcoming is that this runs the risk of making losses owing to company specific news not focused purely on the index or market news.
>
> The other approach of buying the entire index portfolio is cumbersome and expensive in terms of transaction cost.

The answer lies in using Index Futures. You can take a position on the index using index futures market where you can **BUY (LONG)** or **SELL (SHORT)** the entire index by trading on one single security.

How does one do this?

If you expect the markets (index) to go up buy Nifty futures. Currently, the minimum lot size is 50 units. So if the Nifty is at 4400, the investment to buy the Nifty futures is Rs 2,20,000.

However, when the trade takes place you are only required to pay the initial margin (say 15 per cent), which is Rs 33,000. What this essentially does is that by paying an initial margin of just Rs 33,000 an investor gets a claim on the index worth Rs 2,20,000.

An example of a Long Nifty futures trade

On 18 May 2009 you think the index will rise. So, buy 50 Nifties (one contract) with expiration date on 28 May, 2009 (last working Thursday of the month).

> Assuming the Nifty May contract is traded at 4450, you build a position worth Rs 2,22,500 (4450*50). On 25 May 2009, the underlying Nifty rises to 4435 and the May contract rises to 4480, you sell off the position at 4480 and pocket a profit of Rs 1,500 i.e. (4480*50 - 4450*50).
>
> So basically, you have invested just Rs 33,000 plus brokerage and made a profit of Rs 1,500 – **provided your view of the index moving up is correct.** Else you may stand to lose your entire invested capital.

FUTURES STRATEGY – BEARISH MARKET VIEW

Bearish on the Markets? Sell Nifty Futures!

How you can use Index futures if you are bearish and expect the markets to fall. Ordinarily, you could take advantage of a bearish market in two ways – short-sell some of the index stocks which move or to an extent mirror the index and buy them at a later date, or short-sell the entire index portfolio.

> The first approach is widely used on liquid stocks based on using these as an index proxy. The shortcoming is that this runs the risk of making losses owing to company specific news not focused purely on the index or market news.
>
> The other approach of buying the entire index portfolio is cumbersome and expensive in terms of transaction cost.

The answer lies in using Index Futures. You can take a position on the index using index futures market where you can **BUY (LONG)** or **SELL (SHORT)** the entire index by trading on one single security.

How does one do this?

If you expect the markets (index) to go down sell Nifty futures. Currently, the minimum lot size is 50 units. So if the Nifty is at 4400, the investment to buy the Nifty futures is Rs 2,20,000.

However, when the trade takes place you are only required to pay the initial margin (say 15 per cent), which is Rs 33,000. What this essentially does is that by paying an initial margin of just Rs 33,000 an investor gets a claim on the index worth Rs 2,20,000.

An example of a Long Nifty futures trade

On 18 May 2009 you think the index will fall. So, sell 50 Nifties (one contract) with expiration date on 28 May, 2009 (last working Thursday of the month).

> Assuming the Nifty May contract is traded at 4450, you sell a position worth Rs 2,22,500 (4450*50). On 25 May 2009, the underlying Nifty falls to 4435 and the May contract rises to 4420, you buy the position at 4420 and pocket a profit of Rs 1,500 i.e. (4450*50 - 4420*50).
>
> So basically, you have invested just Rs 33,000 plus brokerage and made a profit of Rs 1,500 – **provided your view of the index moving down is correct.** Else you may stand to lose your entire invested capital.

FUTURES STRATEGY – HEDGING A PORTFOLIO

How to hedge your position using Futures to reduce unnecessary risk

We often buy a stock expecting the company to post good results or expect positive developments to take place; but see the stock price decline just because the broader market (index) fell or other investors thought otherwise?

This happens in most cases because a buy position on a stock (especially index scrip's) is also simultaneously a buy on the index. For example: if Reliance gains more often, then the Nifty is also likely to be in positive territory and vice-versa. As such, a long (buy) Reliance position is not a focused play on that stock but also carries a long position on the Nifty. Here one is forced to have a view on the index even though we do not want to.

A way to overcome this is by Hedging. Every time you build a long position on a stock, you sell some amount of Index futures as well. This removes the index exposure and also provides a hedge. Hedging **does not ensure additional profits** but helps **reduce unnecessary risk** i.e. reduce the probability for a loss. A hedged position is better than a completely unhedged position.

How does one do this?

The first thing needed is the **beta** of the stock. That is the impact a ±1 per cent movement in the Nifty will have on the stock. These beta figures are available on the NSE website.

> Let's assume you expect Reliance Industries to go up and want to take a long position on Reliance Industries worth Rs 200,000 and the scrip has a beta of 1.23. To remove the hidden Nifty exposure in the above position the size of the sell position that will have to be taken in the Nifty futures is 1.23 * 200,000 = 246,000.
>
> So if the Nifty is at 4400 and each market lot is 50 (one contract), then the contract size would be Rs 220,000. As such, to sell Rs 246,000 worth of Nifty we need to sell one market lot (rounded off to the nearest market lot).
>
> This would give us the following position.
> **Long Reliance Rs 200,000** **Short Nifty Rs 220,000**

By building such a position one is essentially removing the hidden Nifty exposure. The position will reflect the price changes inherent only to Reliance. Assuming the Index falls and Reliance also fell, you will lose on Reliance but the losses and risk could be offset or reduced by the short Nifty position in futures. However, if the **forecast** about the **stock** itself is **wrong** then hedging is of no help. But if the assumption goes wrong because the Nifty falls then the hedge could reimburse these losses.

FUTURES STRATEGY – HEDGING A SHORT POSITION

There are many reasons which could make one bearish about a stock. It might be due to expectations of bad results or some other developments like the recent Reliance case or a general downtrend in the industry. How often have you sold some stock due to any of the above factors but see the stock price rise just because the broader market (index) rose or other investors thought otherwise?

This can happen because a sell position on a stock (especially index scrips) is also simultaneously a sell on the index. For example: if Infosys falls more often than not the Nifty will also fall and vice-versa. As such, a short position on Infosys is not a focused play on that stock but also carries a short position on the Nifty. So you are forced to have a view on the index even though you do not want to. One way to overcome this is by doing the following:

Every time you take a short position on a stock, you should buy some amount of Index futures as well. This removes some of the index exposure and also provides hedge. Hedging **does not ensure excess profits but helps reduce unnecessary risk**. A hedged position is better than a completely unhedged position.

How do you do this?

This first thing one needs to know is the beta of the stock. That is the impact a 1 per cent movement in the Nifty will have on the stock. These beta figures are available on the NSE website.

> Let's assume you expect Reliance Industries to fall and want to take a short position on the stock worth Rs 200,000. The scrip has a beta of 1.23. To remove the hidden Nifty exposure in the above position the size of the buy position that will have to be taken in the Nifty futures is 1.23 * 200,000 = 246,000. So if the Nifty is at 1225 and each market lot is 200 (one contract) then the contact size would be Rs 245,000. As such, to build a buy on the Nifty worth Rs 246,000 we need to buy one market lot (rounded off to the nearest market lot).
>
> This would give us the following position.
>
> **Short Reliance Rs 200,000 Long Nifty Rs 245,000**

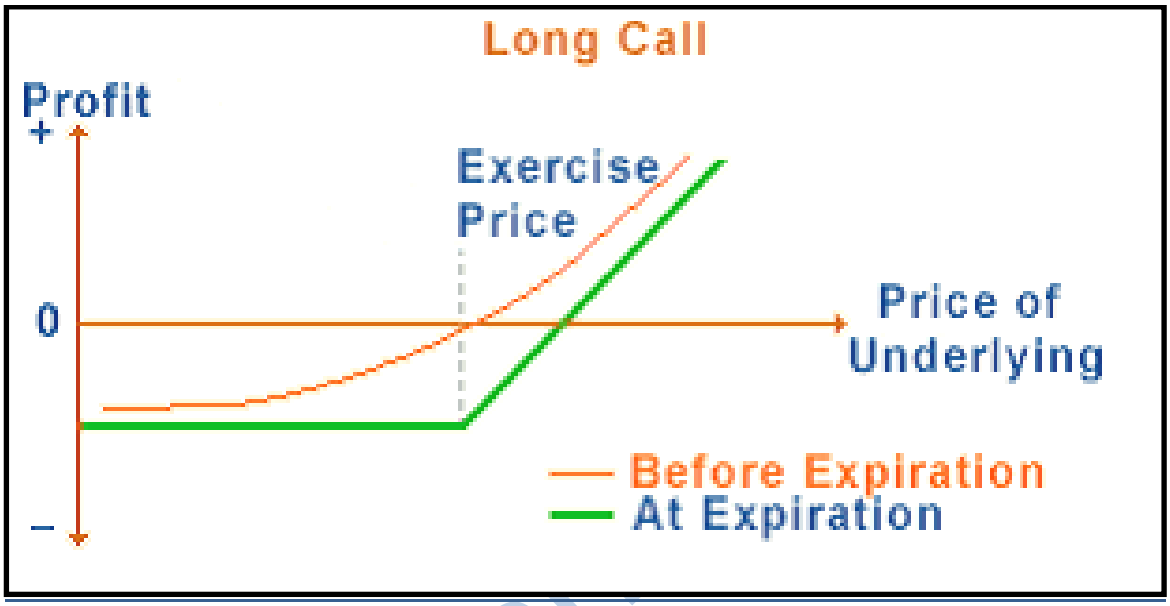
By building such a position what you are essentially doing is removing the hidden Nifty exposure and a position which will reflect the price changes inherent only to Reliance. Assuming the Index gains and Reliance also moved in line you will lose on Reliance but the losses and risk could be offset or reduced by the long Nifty.

> However, one thing has to be kept in mind; if the forecast about the stock itself is wrong then hedging is of no help. But if the assumption goes wrong because the Nifty gains then the hedge could reimburse these losses.

OPTIONS STRATEGY – BULLISH MARKET VIEW

CALLS IN A BULLISH STRATEGY

An investor with a bullish market outlook should **Buy Call options**. If you expect the market price of the underlying asset to rise, then you would rather have the right to purchase at a specified price and sell later at a higher price than have the obligation to deliver later at a higher price.



Buy Call Options

The investor's **profit potential** buying a call option is **unlimited**.

The investor's profit is the ***market price less the exercise price less the premium paid***.

The greater the increase in price of the underlying, the greater the investor's profit.

The investor's **potential loss is limited to the premium paid**.

Even if the market takes a drastic decline in price levels, the holder of a call is under no obligation to exercise the option. He may let the option expire worthless. The investor breaks even when the market price equals the exercise price plus the premium.

An **increase in volatility** will **increase the value** of your call and increase your return. Because of the increased likelihood that the option will become in- the-money, an increase in the underlying volatility (before expiration), will increase the value of a long options position. As an option holder, your return will also increase.

A simple example will illustrate the above: Suppose there is a call option with a strike price of Rs 2000 and the option premium is Rs 100.

The option will be exercised only if the value of the underlying is greater than Rs 2000 (the strike price). If the buyer exercises the call at Rs 2200 then his gain will be Rs 200. However, this would not be his actual gain for that he will have to deduct the Rs 200 (premium) he has paid. The profit can be derived as follows

Profit = Market price - Exercise price - Premium
Profit = Market price – Strike price – Premium.
2200 – 2000 – 100 = Rs 100

PUTS IN A BULLISH STRATEGY

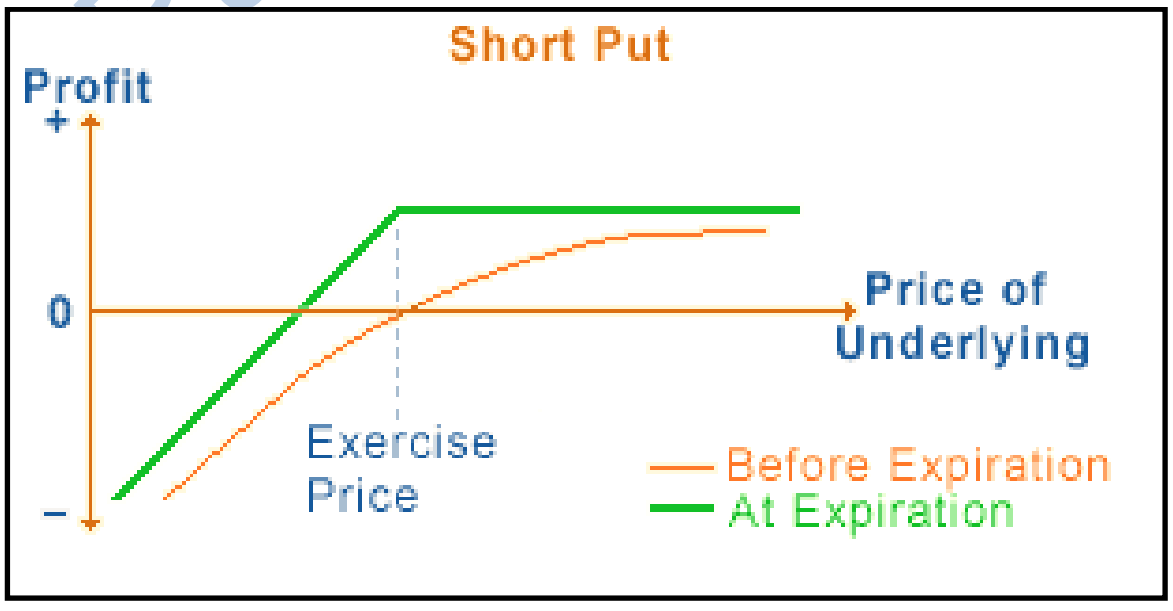
An investor with a bullish market outlook can also go **short on a Put** option. Basically, an investor anticipating a bull market could **write Put options**. If the market price increases and puts become out-of-the-money, investors with long put positions will let their options expire worthless.

By **writing Puts**, **profit potential is limited**. A Put writer profits when the price of the underlying asset increases and the option expires worthless. The maximum profit is limited to the premium received.

However, the ***potential loss is unlimited***. Because a short put position holder has an obligation to purchase if exercised. He will be exposed to potentially large losses if the market moves against his position and declines.

The break-even point occurs when the market price equals the exercise price: minus the premium. At any price less than the exercise price minus the premium, the investor loses money on the transaction. At higher prices, his option is profitable.

An increase in volatility will increase the value of your put and decrease your return. As an option writer, the higher price you will be forced to pay in order to buy back the option at a later date, lower is the return.

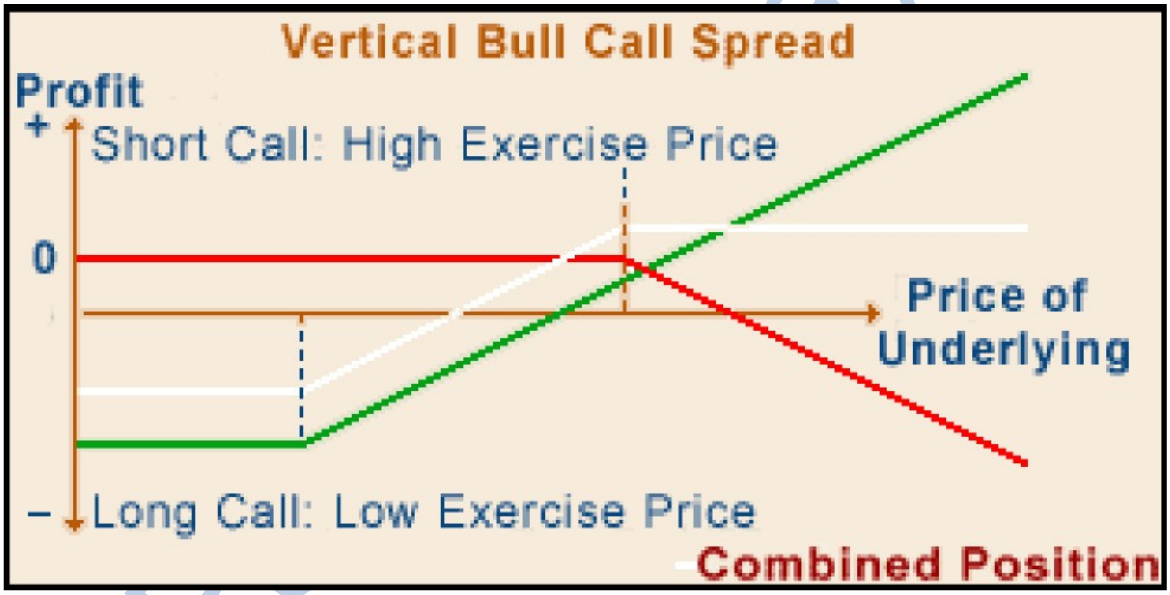


BULLISH CALL SPREAD STRATEGIES

A **vertical call spread** is the **simultaneous purchase and sale** of **identical call options** but with **different exercise prices**.

> To "***buy a call spread***" is to ***purchase*** a ***call*** with a ***lower exercise price*** and to ***write*** a ***call*** with a ***higher exercise price***. The trader *pays a net premium* for the position.
>
> To "***sell a call spread***" is the opposite, here the trader ***buys*** a ***call*** with a ***higher exercise price*** and ***writes a call*** with a ***lower exercise price***, *receiving a net premium* for the position.
>
> An investor with a ***bullish market outlook should buy a call spread***.

The "Bull Call Spread" allows the investor to **participate to a limited extent in a bull market**, while at the same time **limiting risk exposure**.



Buy Bull Call Spread

An example of a Bullish call spread:
Let's assume that the cash price of a scrip is Rs 100 and you buy a November call option with a strike price of Rs 90 and pay a premium of Rs 14. At the same time you sell another November call option on a scrip with a strike price of Rs 110 and receive a premium of Rs 4. Here you are buying a lower strike price option and selling a higher strike price option. This would result in a net outflow of Rs 10 at the time of establishing the spread.

Now let us look at the fundamental reason for this position. Since this is a bullish strategy, the first position established in the spread is the long lower strike price call option with unlimited profit potential. At the same time to reduce the cost of purchase of the long position a short position at a higher call strike price is established. While this not only reduces the outflow in terms of premium

but his profit potential as well as risk is limited. Based on the above figures the maximum profit, maximum loss and breakeven point of this spread would be as follows:

Maximum profit = Higher strike price - Lower strike price - Net premium paid
= 110 - 90 - 10 = 10

Maximum Loss = Lower strike premium - Higher strike premium
= 14 - 4 = 10

Breakeven Price = Lower strike price + Net premium paid
= 90 + 10 = 100

BULLISH PUT SPREAD STRATEGIES

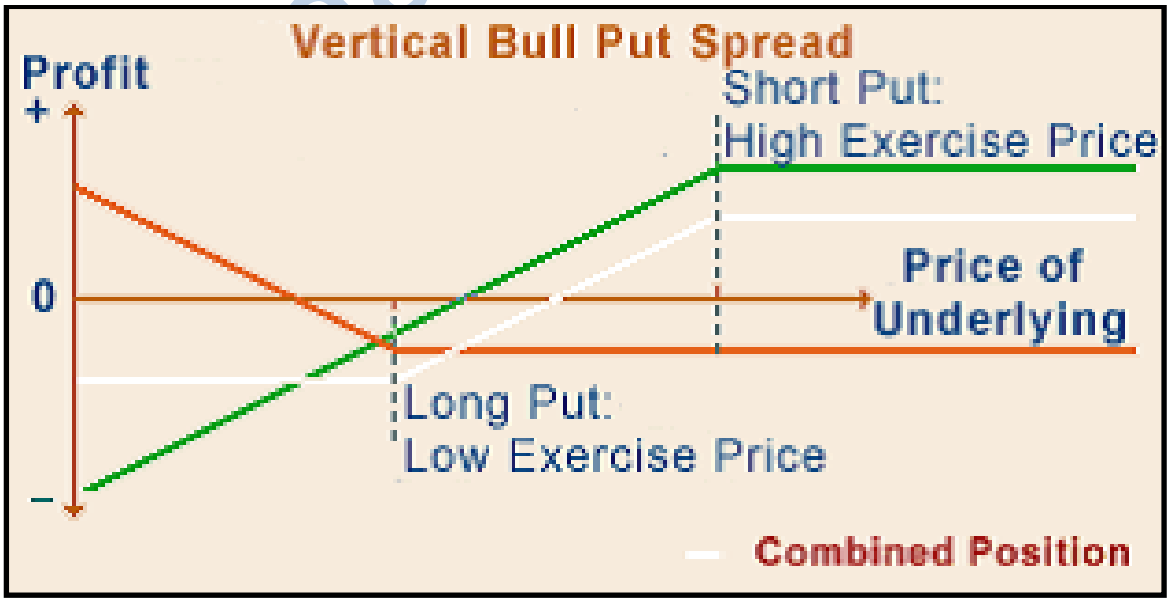
A **vertical Put spread** is the **simultaneous purchase and sale** of **identical Put options** but with **different exercise prices**.

To "***buy a put spread***" is to ***purchase a Put*** with a ***higher exercise price*** and to ***write a Put*** with a ***lower exercise price***. The trader pays a net premium for the position.

To "**sell a put spread**" is the opposite: the trader ***buys a Put*** with a ***lower exercise price*** and ***writes*** a ***put*** with a ***higher exercise price***, receiving a net premium for the position.

An investor with a bullish market outlook should ***sell a Put spread***.

The "Vertical Bull Put Spread" allows the investor to participate to a limited extent in a bull market, while at the same time limiting risk exposure.



Buy Bull Put Spread

To **put on a bull spread**, the trader needs to ***buy the lower strike call*** and ***sell the higher strike call***.

The combination of these two options will result in a bought spread. The cost of Putting on this position will be the *difference* between the *premium paid* for the *low strike call* and the *premium received* for the *high strike call*.

The investor's **profit potential is limited**. When *both calls* are *in-the-money*, both will be exercised and the *maximum profit will be realised*. The investor delivers on his short call and receives a higher price than he is paid for receiving delivery on his long call.

The investors' **potential loss is limited**. At the most, the investor can lose is the net premium. He pays a higher premium for the lower exercise price call than he receives for writing the higher exercise price call.

The investor breaks even when the market price equals the lower exercise price plus the net premium. At the most, an investor can lose is the net premium paid. To recover the premium, the market price must be as great as the lower exercise price plus the net premium.

An example of a bullish put spread:
Lets us assume that the cash price of the scrip is Rs 100. You now buy a November put option on a scrip with a strike price of Rs 90 at a premium of Rs 5 and sell a put option with a strike price of Rs 110 at a premium of Rs 15.

The first position is a short put at a higher strike price. This has resulted in some inflow in terms of premium. But here the trader is worried about risk and so caps his risk by buying another put option at the lower strike price. As such, a part of the premium received goes off and the ultimate position has limited risk and limited profit potential.

Based on the above figures the maximum profit, maximum loss and breakeven point of this spread would be as follows:

Maximum profit = Net option premium income or net credit
= 15 - 5 = 10

Maximum loss = Higher strike price - Lower strike price - Net premium received
= 110 - 90 - 10 = 10

Breakeven Price = Higher Strike price - Net premium income
= 110 - 10 = 100

LOW RISK

BULL CALL SPREAD (VERTICAL BULL CALL SPREAD)

The bull call option trading strategy is employed when one is of opinion that the price of the underlying asset will go up moderately in the near-term.

The Bull Call spread offers a limited profit potential if the underlying rises and a limited loss if the underlying falls.

It is formed with a combination of buy ATM Call and sell OTM Call.

The premium received from the selling of OTM call option reduces the cost incurred while paying premium for buying ATM Call option. The other advantage of this strategy is that it has a pre-defined risk-reward ratio.

Profit and loss (at expiry)

Profit: Limited to the difference between the two strikes minus net premium cost. Maximum profit occurs when the underlying rises to the level of the higher strike or above.

Loss: Limited to the net premium paid in establishing the position. Maximum loss occurs when the underlying falls to the level of the lower strike or below.

Profitability level: Strategy reaches the profitable level when the underlying is above the lower strike level by more than the amount equal to the net premium paid.

Example : On June 15, 2009, Nifty spot was at 4480. So one can establish this spread position by buying Nifty June 4500 Call Option at 105 and selling Nifty June 4600 Call Option at 80.

Max Profit = [(difference between two strikes) - (premium difference)] x lot size
= [(4600-4500) – (105-80)] * 50 = Rs.3750
Maximum profits occur, if Nifty expires at or above 4600 level.

Strategy is profitable above [lower Call Strike + (difference between the two premiums)]
i.e. [4500 + (105 – 80)] = 4525 level

Maximum loss= Difference between two Premiums * Lot size
= (105-80) * 50 = Rs.1250
Maximum losses occur, if Nifty expires at or below 4500 level.

Scenario Analysis at various Levels

					Spot closing at expiry					
Instrument	Action	Strike	Price	No. of lots	4000	4500	4525	4550	4600	4700
C	B	4500	105	1	-105	-105	-80	-55	-5	95
C	S	4600	80	1	80	80	80	80	80	-20
				Profit/Loss per share	-25	-25	0	25	75	75
				Total Profit/Loss	-1250	-1250	0	1250	3750	3750

MEDIUM RISK

COVERED CALL

The Covered Call trading strategy is also employed when one is of the opinion that the price of the underlying will go up moderately in the near-term.

The Covered Call spread has the advantage of reducing the cost of holding of a long futures position by selling an OTM Call option. The Covered Call offers a limited profit potential if the underlying rises and the limited downside protection if the underlying falls.

Profit and loss (at expiry):

Profit: Limited to the difference between the option strike and futures price plus premium received in selling a call. Maximum profit occurs when the underlying rises to the level of the higher strike or above.

Loss: Losses in the long futures position are protected till the premium received if the underlying falls.

Downside protection till: Strategy is protected on downsides till the level which is equivalent to the premium received while selling the call option.

Time decay: Time decay is the rate of decrease in option premium with the movement towards expiry. Strategy gains with time decay as the call option premium decreases as it approaches towards expiry.

Example: On June 15, 2009, Nifty June Futures was at 4490. So one can establish this strategy by buying Nifty June Futures at 4490 and selling Nifty June 4600 Call Option at 80.

Total inflow = Lot size * Premium received on selling the call
= 50 * 80 = Rs.4000

Maximum Profits = Lot Size * {(Difference between the call strike & Futures price) + (Premium received on selling the call)}
= 50 * {(4600-4490) + (80)} = Rs.9500

Strategy will have maximum profits at or above 4600 levels.

Downside is protected till (Futures Price – Premium received on selling call option)
i.e. 4490 – 80 = 4410 levels

Maximum Losses: Losses are unlimited in the strategy below Nifty level of 4410.

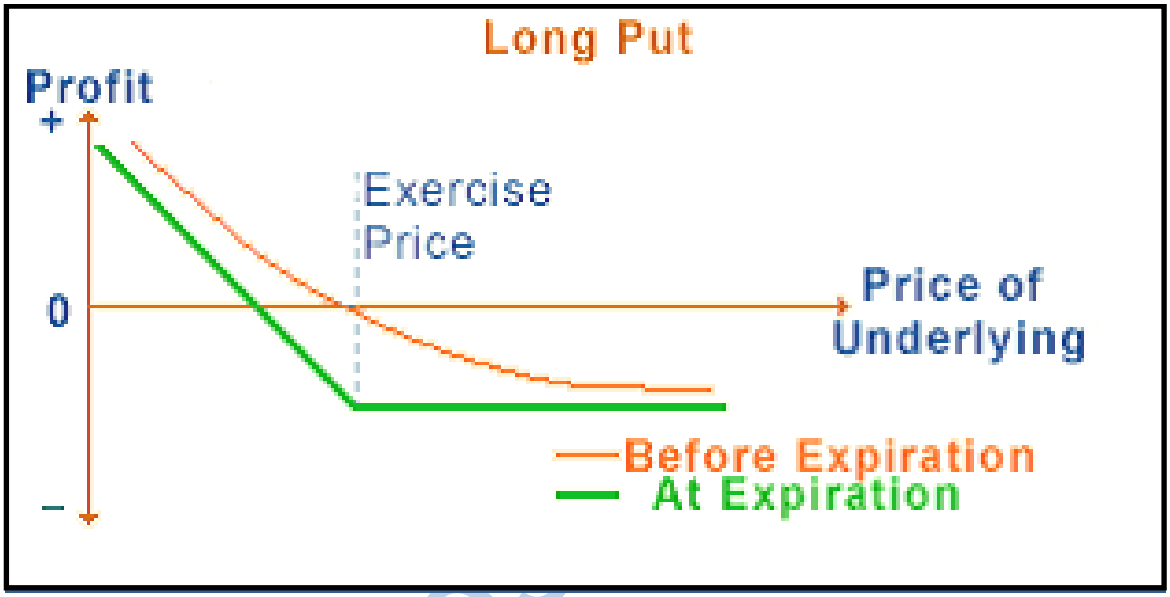
Scenario Analysis at various Levels

					Spot closing at expiry					
Instrument	Action	Strike	Price	No. of lots	4350	4410	4450	4500	4600	5000
F	B		4490	1	-140	-80	-40	10	110	510
C	S	4600	80	1	80	80	80	80	80	-320
Profit/Loss per share					-60	0	40	90	190	190
Total Profit/Loss					-3000	0	2000	4500	9500	9500

OPTIONS STRATEGY – BEARISH MARKET VIEW

PUTS IN A BEARISH STRATEGY

When you purchase a put you are long and want the market to fall. A put option is a bearish position. It will increase in value if the market falls. An investor with a bearish market outlook shall buy put options. By purchasing put options, the trader has the right to choose whether to sell the underlying asset at the exercise price. In a falling market, this choice is preferable to being obligated to buy the underlying at a price higher.



An investor's profit potential is practically unlimited. The higher the fall in price of the underlying asset, higher the profits.

The investor's potential loss is limited. If the price of the underlying asset rises instead of falling as the investor has anticipated, he may let the option expire worthless. At the most, he may lose the premium for the option.

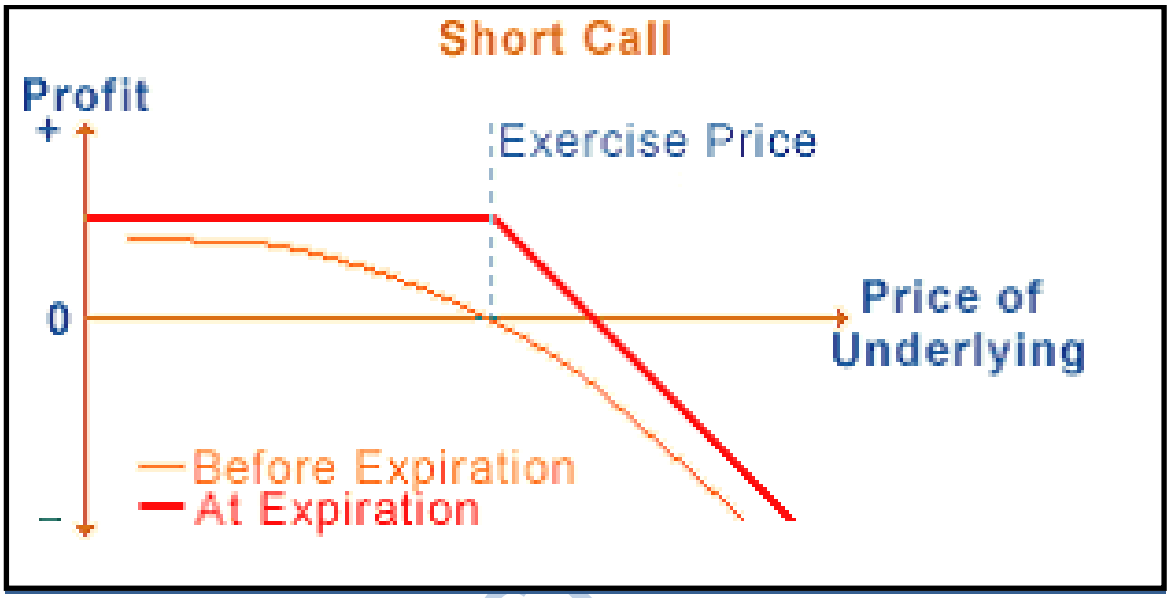
The trader's breakeven point is the exercise price minus the premium. To profit, the market price must be below the exercise price. Since the trader has paid a premium he must recover the premium he paid for the option.

An increase in volatility will increase the value of your put and increase your return. An increase in volatility will make it more likely that the price of the underlying instrument will move. This increases the value of the option.

CALLS IN A BEARISH STRATEGY

Another option for a bearish investor is to go short on a call with the intent to purchase it back in the future. By selling a call, you have a net short position and needs to be bought back before expiration and cancel out your position.

For this an investor needs to write a call option. If the market price falls, long call holders will let their out-of-the-money options expire worthless, because they could purchase the underlying asset at the lower market price.



The investor's profit potential is limited because the trader's maximum profit is limited to the premium received for writing the option.

Here the loss potential is unlimited because a short call position holder has an obligation to sell if exercised; he will be exposed to potentially large losses if the market rises against his position.

The investor breaks even when the market price equals the exercise price: plus the premium. At any price greater than the exercise price plus the premium, the trader is losing money. When the market price equals the exercise price plus the premium, the trader breaks even.

An increase in volatility will increase the value of your call and decrease your return. When the option writer has to buy back the option in order to cancel out his position, he will be forced to pay a higher price due to the increased value of the calls.

BEARISH PUT SPREAD STRATEGIES

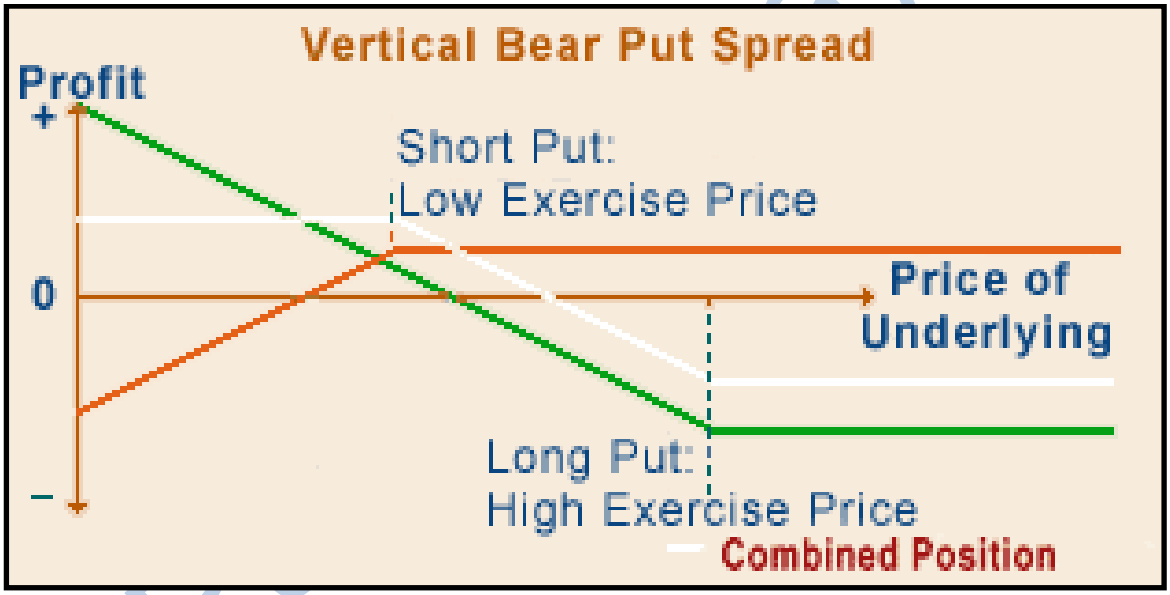
A vertical put spread is the simultaneous purchase and sale of identical put options but with different exercise prices.

To "**buy a put spread**" is to purchase a put with a higher exercise price and to write a put with a lower exercise price. The trader pays a net premium for the position.

To "**sell a put spread**" is the opposite. The trader buys a put with a lower exercise price and writes a put with a higher exercise price, receiving a net premium for the position.

To put on a bear put spread you buy the higher strike put and sell the lower strike put. You sell the lower strike and buy the higher strike of either calls or puts to set up a bear spread.

An investor with a bearish market outlook should: buy a put spread. The "**Bear Put Spread**" allows the investor to participate to a limited extent in a bear market, while at the same time limiting risk exposure.



An example of a bearish put spread.

Lets assume that the cash price of the scrip is Rs 100. You buy a November put option on a scrip with a strike price of Rs 110 at a premium of Rs 15 and sell a put option with a strike price of Rs 90 at a premium of Rs 5.

In this bearish position the put is taken as long on a higher strike price put with the outgo of some premium. This position has huge profit potential on downside. If the trader may recover a part of the premium paid by him by writing a lower strike price put option. The resulting position is a mildly bearish position with limited risk and limited profit profile. Though the trader has reduced the cost of taking a bearish position, he has also capped the profit portential as well. The maximum profit, maximum loss and breakeven point of this spread would be as follows:

Maximum profit = Higher strike price option - Lower strike price option - Net premium paid
= 110 - 90 - 10 = 10

Maximum loss = Net premium paid
= 15 - 5 = 10

Breakeven Price = Higher strike price - Net premium paid
= 110 - 10 = 100

BEARISH CALL SPREAD STRATEGIES

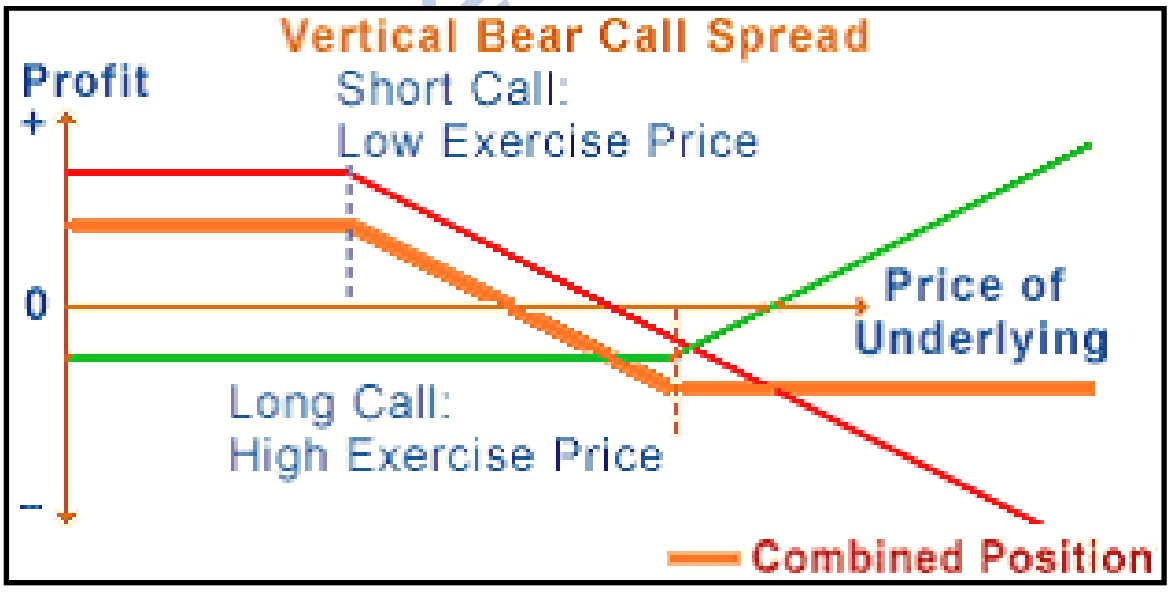
A vertical call spread is the simultaneous purchase and sale of identical call options but with different exercise prices.

To "**buy a call spread**" is to purchase a call with a lower exercise price and to write a call with a higher exercise price. The trader pays a net premium for the position.

To "**sell a call spread**" is the opposite: the trader buys a call with a higher exercise price and writes a call with a lower exercise price, receiving a net premium for the position.

To put on a bear call spread you sell the lower strike call and buy the higher strike call. An investor sells the lower strike and buys the higher strike of either calls or puts to put on a bear spread.

An investor with a bearish market outlook should: sell a call spread. The "**Bear Call Spread**" allows the investor to participate to a limited extent in a bear market, while at the same time limiting risk exposure.



The investor's **profit potential** is limited. When the market price falls to or below the lower exercise price, both options will be in-the-money and the trader will realize his maximum profit when he recovers the net premium paid for the options.

The investor's **potential loss** is limited. The trader has offsetting positions at different exercise prices. If the market rises rather than falls, the options will be out-of-the-money and expire worthless. Since the trader has paid a net premium.

The investor **breaks even** when the market price equals the higher exercise price less the net premium. For the strategy to be profitable, the market price must fall. When the market price falls to the high exercise price less the net premium, the trader breaks even. When the market falls beyond this point, the trader profits.

An example of a bearish call spread.
Let us assume that the cash price of the scrip is Rs 100. You now buy a November call option on a scrip with a strike price of Rs 110 at a premium of Rs 5 and sell a call option with a strike price of Rs 90 at a premium of Rs 15.

In this spread you have to buy a higher strike price call option and sell a lower strike price option. As the low strike price option is more expensive than the higher strike price option, it is a net credit startegy. The final position is left with limited risk and limited profit. The maximum profit, maximum loss and breakeven point of this spread would be as follows:

Maximum profit = Net premium received
= 15 - 5 = 10

Maximum loss = Higher strike price option - Lower strike price option - Net premium received
= 110 - 90 - 10 = 10

Breakeven Price = Lower strike price + Net premium paid
= 90 + 10 = 100

LOW RISK

BEAR PUT SPREAD

The Bear Put option trading strategy is employed when one is of the view that the price of the underlying asset will go down moderately in the near-term.

The Bear Put spread offers a limited profit potential if the underlying falls and a limited loss if underlying rises. It is formed with a combination of buy ATM Put and sell OTM Put. The premium received from the selling of OTM Put option reduces the cost incurred while paying premium for buying ATM Put option. Other advantage of this strategy is that it has a pre-defined risk-reward ratio.

Profit and loss (at expiry):

Profit: Limited to the difference between the two strikes minus net premium cost. Maximum profit occurs when the underlying falls to the level of the lower strike or below.

Loss: Limited to the net premium paid in establishing the position. Maximum loss occurs when the underlying rises to the level of the higher strike or above.

Profitability level: Strategy reaches the profitable level when the underlying is below the upper strike level by more than the amount equal to the net premium paid.

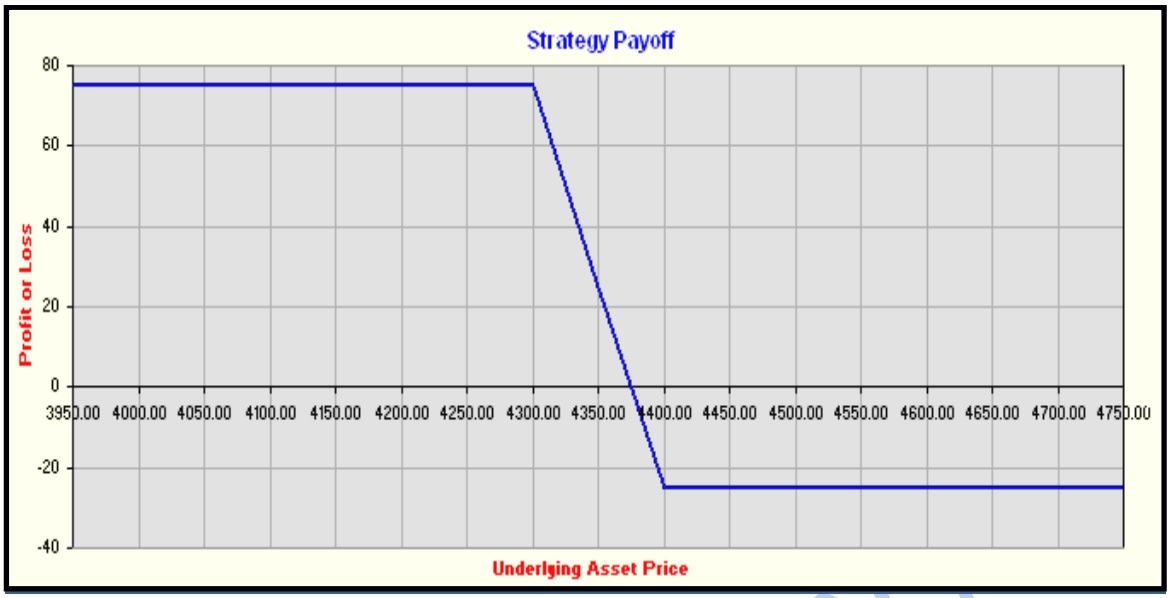
Example: On June 15, 2009, Nifty Spot was at 4480. So one can establish this spread position by buying Nifty June 4400 Put option at Rs.70 and Selling Nifty June 4300 Put option at Rs.45 .

Maximum Profit = [(difference between two strikes) - (premium difference)] x lot size
= [(4400-4300) – (70-45)] * 50 = Rs.3750
Maximum profits occur, if Nifty expires at or below 4300 level.
Strategy is profitable below [higher Put Strike - (Difference between the two premiums)]
i.e. 4400 - (70-45) = 4375 levels.

Total Cost = Lot Size * (difference between the two premiums)
= 50 * (70 – 45) = Rs.1250

Maximum loss = Difference between the two premiums * Lot size
= (70-45) * 50 = Rs.1250
Maximum losses occur, if Nifty expires at or above 4400 levels.

Strategy Pay-off



Scenario Analysis

Scenario Analysis at various Levels

					Spot closing at expiry					
Instrument	Action	Strike	Price	No. of lots	4000	4200	4300	4350	4375	5000
P	B	4400	70	1	330	130	30	-20	-45	-70
P	S	4300	45	1	-255	-55	45	45	45	45
				Profit/Loss per share	75	75	75	25	0	-25
				Total Profit/Loss	3750	3750	3750	1250	0	-1250

MEDIUM RISK

COVERED PUT

The Covered Put trading strategy is employed when one is of opinion that the price of the underlying asset will go down moderately in the near-term.

The Covered Put spread has the advantage of reducing the cost of holding of a short futures position by selling a Put option. The Covered Put offers a limited profit potential if the underlying falls and the limited upside protection if the underlying rises.

Profit and loss (at expiry):
Profit: Limited to the difference between the option strike and futures price plus premium received in selling a put. Maximum profit occurs when the underlying falls to the level of the lower strike or below.

Loss: Losses in the short futures position are protected till the premium received if the underlying rises.

Upside protection till: Strategy is protected on upsides till the level which is equivalent to the premium received while selling the put option.

Time decay: Time decay is the rate of decrease in option premium with the movement towards expiry. Strategy gains with time decay as the put option premium decreases as it approaches towards expiry.

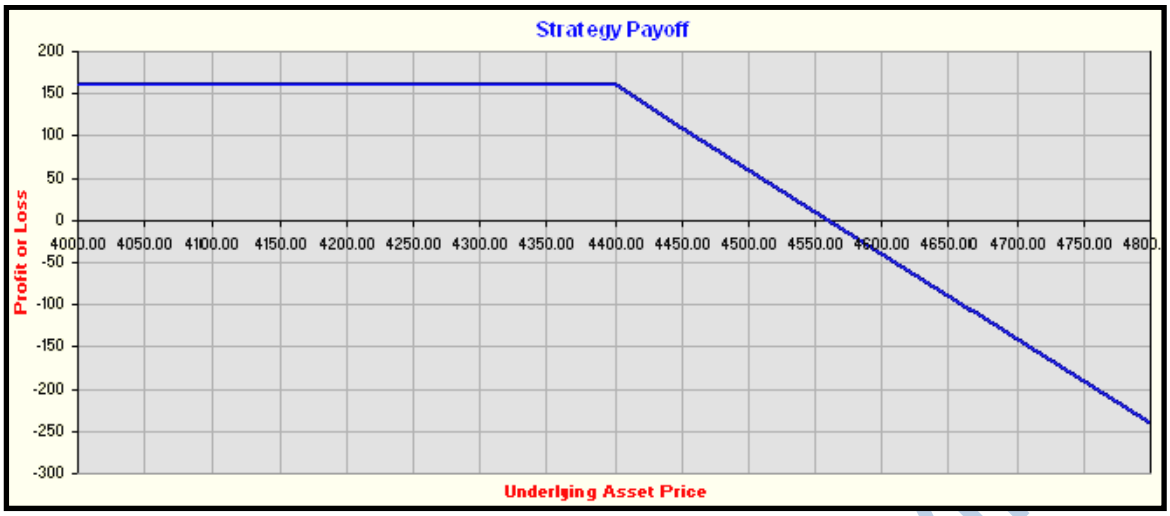
Example : On June 15, 2009, Nifty June Futures was at 4490. So one can establish this position by Selling Nifty June Futures at 4490 and selling Nifty June 4400 Put Option at 70.

Total Inflow = Lot size * Premium received on selling the put option
= 50 * 70 = Rs.3500

Maximum Profit = Lot Size * { (Difference between the put strike & futures price) + (Premium received on selling the put)}
= 50 * {(4490-4400)+(70)} = Rs.8000
Strategy will have maximum profits at or below 4400 levels.

Upside protection till (Futures Price + Premium received on selling put option)
i.e. 4490 + 70 = 4560 levels.

Maximum losses : Losses are unlimited in the strategy above Nifty level of 4560.



Scenario Analysis at various Levels

					Spot closing at expiry					
Instrument	Action	Strike	Price	No. of lots	4000	4300	4400	4500	4560	4600
F	S		4490	1	490	190	90	-10	-70	-110
P	S	4400	70	1	-330	-30	70	70	70	70
Profit/Loss per share					160	160	160	60	0	-40
Total Profit/Loss					8000	8000	8000	3000	0	-2000

OPTIONS STRATEGY – VOLATILE MARKET VIEW

STRADDLES IN A VOLATILE MARKET OUTLOOK

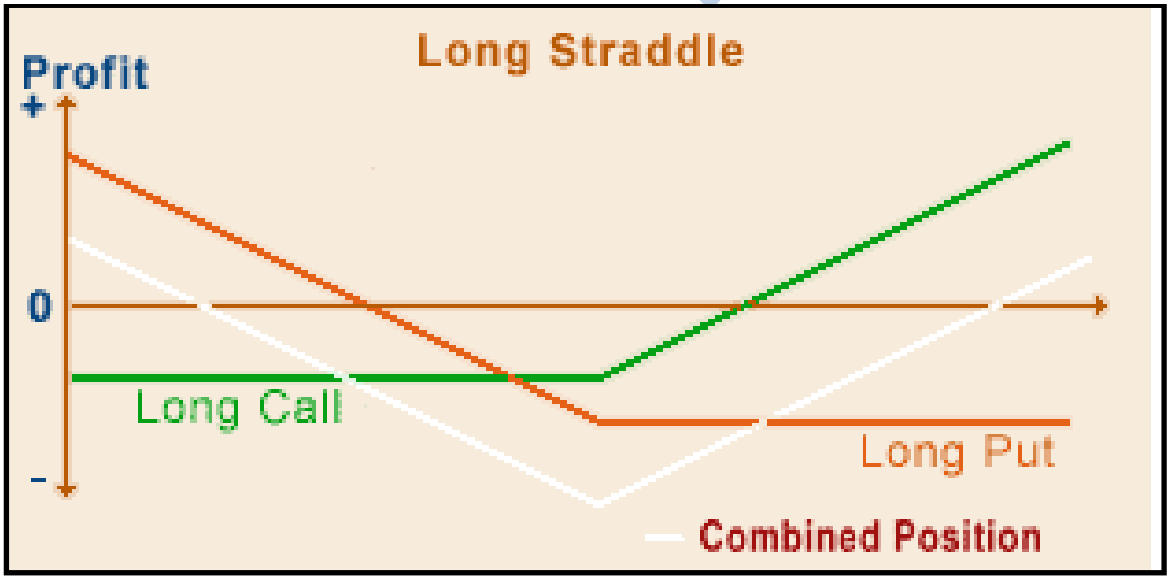
Volatile market trading strategies are appropriate when the trader believes the market will move but does not have an opinion on the direction of movement of the market. As long as there is significant movement upwards or downwards, these strategies offer profit opportunities. A trader need not be bullish or bearish. He must simply be of the opinion that the market is volatile.

A **straddle** is the **simultaneous purchase (or sale)** of two identical options, one a call and the other a put.

To "**buy a straddle**" is to purchase a call and a put with the same exercise price and expiration date.

To "**sell a straddle**" is the opposite: the trader sells a call and a put with the same exercise price and expiration date.

A trader, viewing a market as volatile, should **buy option straddles**. A "**straddle purchase**" allows the trader to profit from either a bull market or from a bear market.



Here the investor's profit potential is unlimited. If the market is volatile, the trader can profit from an up- or downward movement by exercising the appropriate option while letting the other option expire worthless. (Bull market, exercise the call; bear market, the put.)

While the investor's potential loss is limited. If the price of the underlying asset remains stable instead of either rising or falling as the trader anticipated, the most he will lose is the premium he paid for the options.

In this case the trader has long two positions and thus, two breakeven points. One is for the call, which is exercise price plus the premiums paid, and the other for the put, which is exercise price minus the premiums paid.

STRANGLES IN A VOLATILE MARKET OUTLOOK

A strangle is similar to a straddle, except that the call and the put have different exercise prices. Usually, both the call and the put are out-of-the-money.

> To "**buy a strangle**" is to purchase a call and a put with the same expiration date, but different exercise prices.
>
> To "**sell a strangle**" is to write a call and a put with the same expiration date, but different exercise prices.

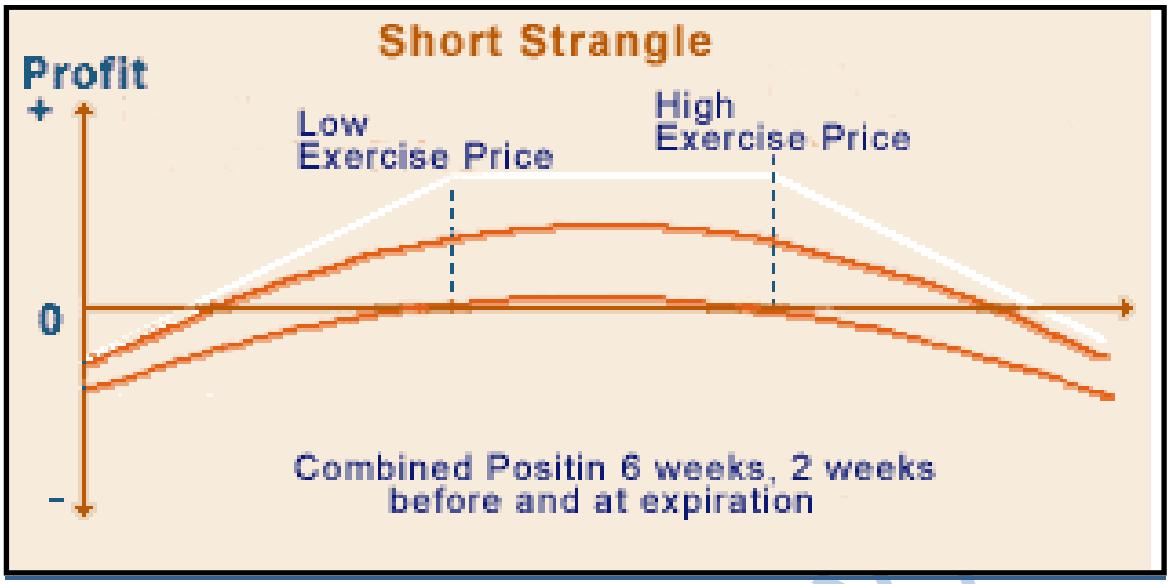
A trader, viewing a market as volatile, should **buy strangles**. A "strangle purchase" allows the trader to profit from either a bull or bear market. Because the options are typically out-of-the-money, the market must move to a greater degree than a straddle purchase to be profitable.

The trader's profit potential is unlimited. If the market is volatile, the trader can profit from an up- or downward movement by exercising the appropriate option, and letting the other expire worthless. (In a bull market, exercise the call; in a bear market, the put).

The investor's potential loss is limited. Should the price of the underlying remain stable, the most the trader would lose is the premium he paid for the options. Here the loss potential is also very minimal because, the more the options are out-of-the-money, the lesser the premiums.

Here the trader has two long positions and thus, two breakeven points. One for the call, which breakevens when the market price equal the high exercise price plus the premium paid, and for the put, when the market price equals the low exercise price minus the premium paid.

LONG STRANGLE diagram????



THE SHORT BUTTERFLY CALL SPREAD

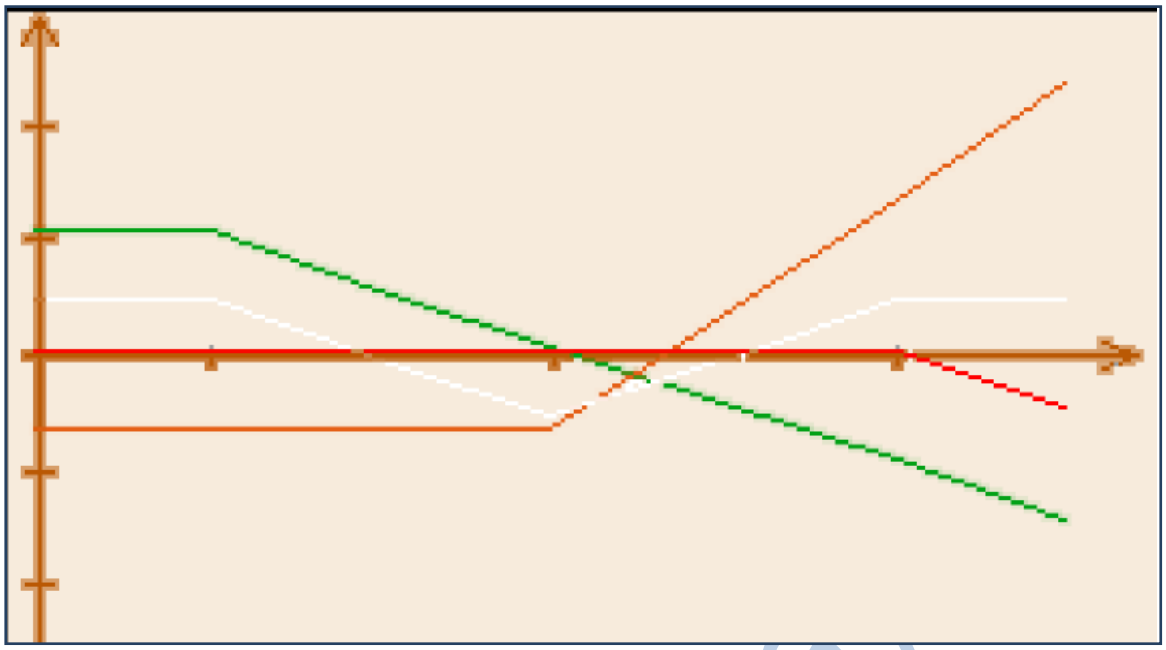
Like the volatility positions we have looked at so far, the Short Butterfly position will realize a profit if the market makes a substantial move. It also uses a combination of puts and calls to achieve its profit/loss profile – but combines them in such a manner that the maximum profit is limited.

You are short the September 40-45-50 butterfly with the underlying at 45. You are neutral but want the market to move in either direction.

The position is a neutral one - consisting of two short options balanced out with two long ones. Which of these positions is a short butterfly spread? The graph on the left.

The profit loss profile of a short butterfly spread looks like two short options coming together at the center Calls.

SHORT BUTTERFLY CALL SPREAD diagram?????



The spread shown above was constructed by using 1 short call at a low exercise price, two long calls at a medium exercise price and 1 short call at a high exercise price.

Your potential gains or losses are: limited on both the upside and the downside.

Say you had built a short 40-45-50 butterfly. The position would yield a profit only if the market moves below 40 or above 50. The maximum loss is also limited.

THE CALL RATIO BACKSPREAD

The call ratio backspread is similar in construction to the short butterfly call spread you looked at in the previous section. The only difference is that you omit one of the components (or legs) used to build the short butterfly when constructing a call ratio backspread.

When putting on a call ratio backspread, you are neutral but want the market to move in either direction. The call ratio backspread will lose money if the market sits. The market outlook one would have in putting on this position would be for a volatile market, with greater probability that the market will rally.

To put on a call ratio backspread, you sell one of the lower strike and buy two or more of the higher strike. By selling an expensive lower strike option and buying two less expensive high strike options, you receive an initial credit for this position. The maximum loss is then equal to the high strike price minus the low strike price minus the initial net premium received.

Your potential gains are limited on the downside and unlimited on the upside. The profit on the downside is limited to the initial net premium received when setting up the spread. The upside profit is unlimited.

An increase in implied volatility will make your spread more profitable. Increased volatility increases a long option position's value. The greater number of long options will cause this spread to become more profitable when volatility increases.

CALL RATIO BACKSPREAD diagram???

THE PUT RATIO BACKSPREAD

In combination positions (e.g. bull spreads, butterflys, ratio spreads), one can use calls or puts to achieve similar, if not identical, profit profiles. Like its call counterpart, the put ratio backspread combines options to create a spread which has limited loss potential and a mixed profit potential.

It is created by combining long and short puts in a ratio of 2:1 or 3:1. In a 3:1 spread, you would buy three puts at a low exercise price and write one put at a high exercise price. While you may, of course, extend this position out to six long and two short or nine long and three short, it is important that you respect the (in this case) 3:1 ratio in order to maintain the put ratio backspread profit/loss profile.

When you put on a put ratio backspread: are neutral but want the market to move in either direction. Your market expectations here would be for a volatile market with a greater probability that the market will fall than rally.

How would the profit/loss profile of a put ratio backspread differ from a call ratio backspread?
Unlimited profit would be realized on the downside. The two long puts offset the short put and result in practically unlimited profit on the bearish side of the market. The cost of the long puts is offset by the premium received for the (more expensive) short put, resulting in a net premium received.

To put on a put ratio backspread, you: buy two or more of the lower strike and sell one of the higher strike. You sell the more expensive put and buy two or more of the cheaper put. One usually receives an initial net premium for putting on this spread.

The Maximum loss is equal to: High strike price - Low strike price - Initial net premium received.

For eg if the ratio backspread is 45 days before expiration. Considering only the bearish side of the market, an increase in volatility increases profit/loss and the passage of time decreases profit/loss.

The low breakeven point indicated on the graph is equal to the lower of the two exercise prices... minus the call premiums paid, minus the net premiums received. The higher of this position's two breakeven points is simply the high exercise price minus the net premium.

PUT RATIO BACKSPREAD diagram????

LOW RISK

LONG STRADDLE

The Long Straddle is employed when one is of opinion that there will be a sharp directional move and the market will be highly volatile and may move beyond a limited range in the near-term.

The Long straddle offers an unlimited profit potential if there is major market movement beyond a limited range. However, the long straddle will have a limited loss if the market stagnates and doesn't have a major move. It is formed with a combination of long ATM Call and long ATM Put strikes.

Profit & Loss (at expiry)

Profit: The profit potential is unlimited although a substantial directional movement is necessary to yield a profit in either direction of the underlying.

Loss: Loss occurs if the market remains in the range; limited to the premium paid in establishing the position.

Profitability: It is reached if the market rises above the higher strike price or falls below the lower strike price by more than the premium paid while establishing the strategy.

Decrease in Volatility: The option premium decreases due to decrease in volatility. Hence the strategy may result in losses if the volatility decreases.

Time decay: Time decay is the rate of decrease in option premium with the movement towards expiry. Strategy loses with time decay as the option premium decreases as it approaches towards expiry.

Example : On June 15, 2009, Nifty spot was at 4480. So one can establish this position by Buying Nifty June 4500 Call option at Rs. 105 and buying Nifty June 4500 Put option at Rs.110.

Profitable above = Higher strike + total premium received
= 4500 + 215 = 4715 level

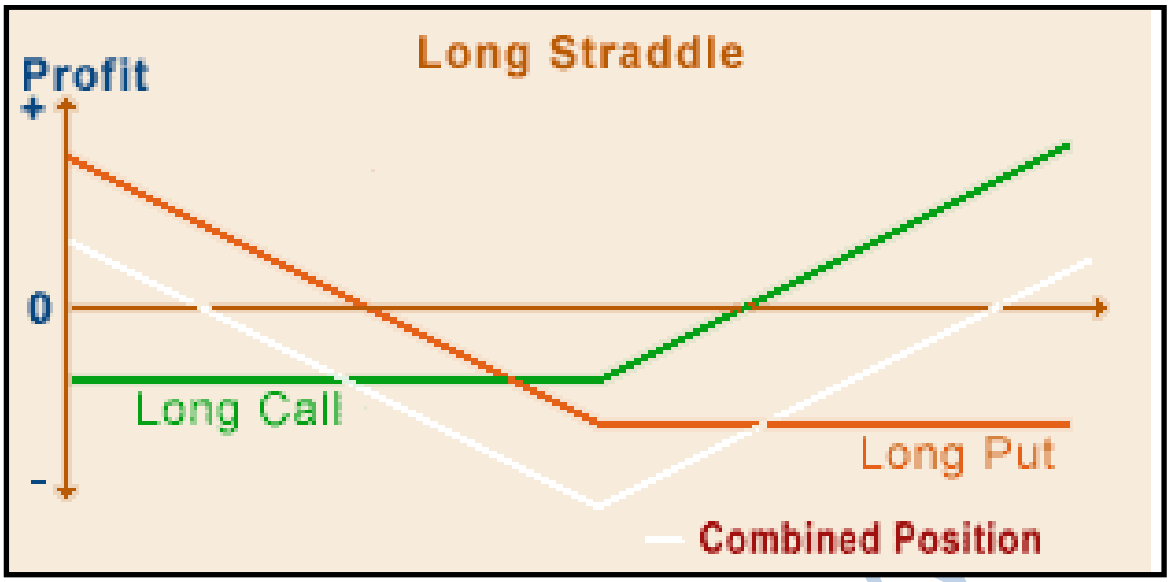
Profitable below = Lower strike – total premium received
= 4400 – 215 = 4185 level

Hence, strategy is profitable below 4185 and above 4715 Nifty levels.

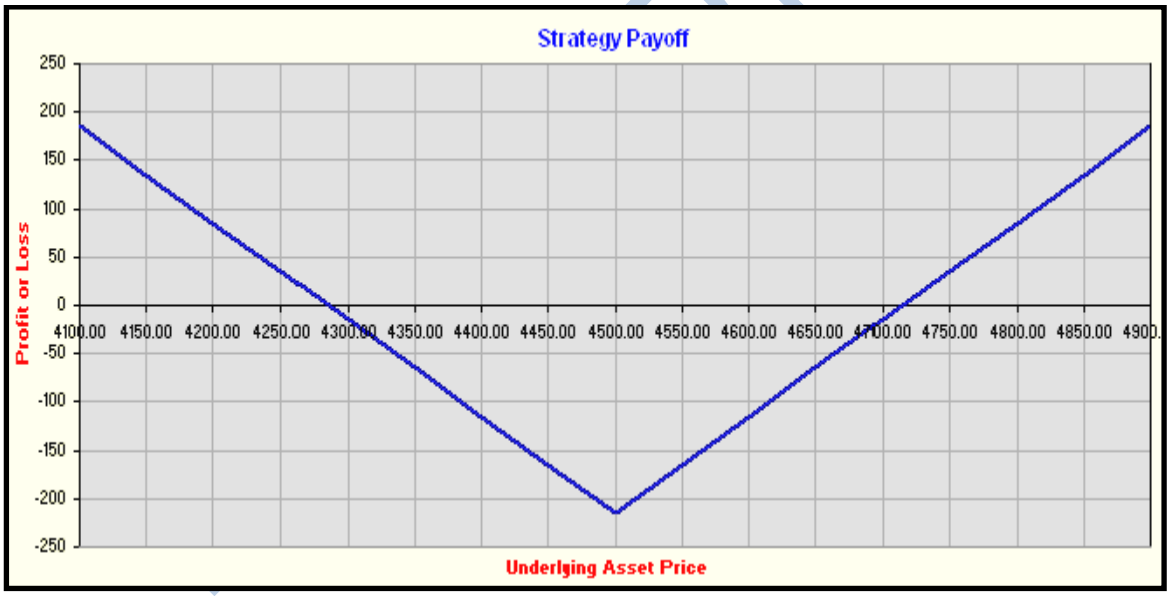
Total out flow = Lot Size * total premium received
= 50 * 215 =Rs.10750

Max Loss = Total outflow as computed above.

Max Profit = Unlimited



Strategy Pay-off



Scenario Analysis at various Levels

					Spot closing at expiry					
Instrument	Action	Strike	Price	No. of lots	4000	4285	4400	4500	4715	5000
C	B	4500	105	1	-105	-105	-105	-105	110	395
P	B	4500	110	1	390	105	-10	-110	-110	-110
				Profit/Loss per share	285	0	-115	-215	0	285
				Total Profit/Loss	14250	0	-5750	-10750	0	14250

MEDIUM RISK

LONG STRANGLE

The Long Strangle is employed when one is of opinion that there will be a sharp directional move and market will be highly volatile and may move beyond a broad range in the near-term.

The Long strangle offers a unlimited profit potential if the market moves beyond a broad range. However, the long strangle will have a limited loss if the market stagnates and doesn't have a major move. It is formed with a combination of long OTM Call and long OTM Put strikes.

Profit & loss (at expiry):

Profit: The profit potential is unlimited although a substantial directional movement is necessary to yield a profit in either direction of the underlying.

Loss: Loss occurs if the market remains in the range; limited to the premium paid in establishing the position.

Profitability: It is reached if the market rises above the higher strike price or falls below the lower strike price by more than the premium paid while establishing the strategy.

Decrease in Volatility: The option premium decreases due to decrease in volatility. Hence the strategy may result in losses if the volatility decreases.

Time decay: Time decay is the rate of decrease in option premium with the movement towards expiry. Strategy loses with time decay as the option premium decreases as it approaches towards expiry.

Example : On June 15, 2009, Nifty spot was at 4480. So one can establish this position by Buying Nifty June 4500 Call option at Rs. 105 and Buying Nifty June 4400 Put option at Rs.70.

Profitable above = Higher strike + total premium received
= 4500 + 175 = 4675 level

Profitable below = Lower strike – total premium received
= 4400 – 175 = 4225 level

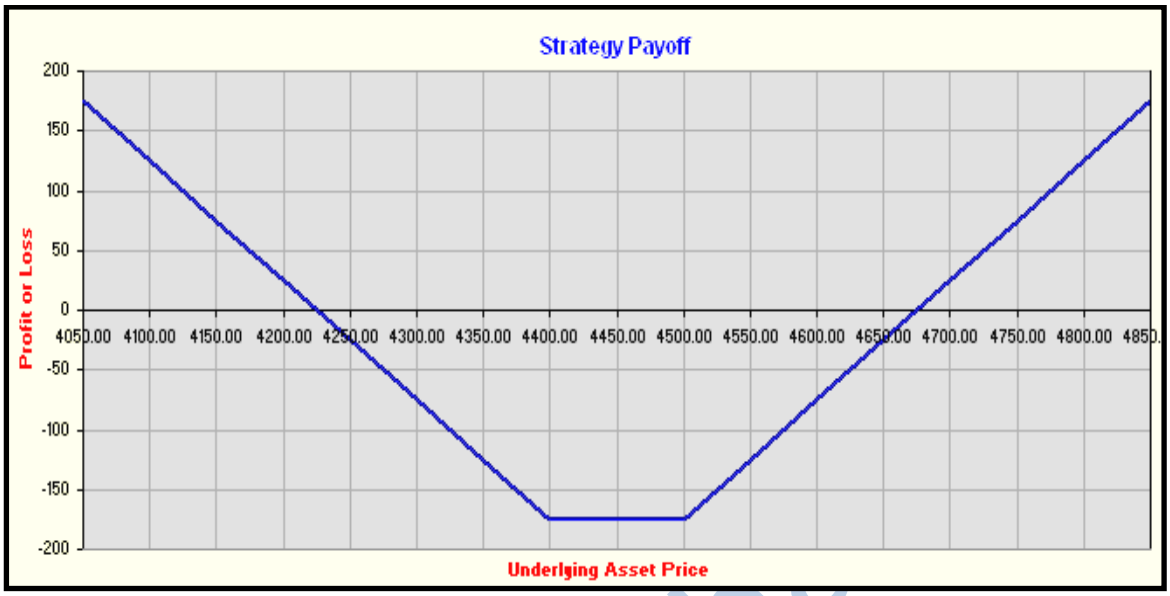
Hence, strategy is profitable below 4225 and above 4675 Nifty levels.

Total Outflow = Lot Size * total premium received
= 50 * 175 = Rs.8750

Max Loss = Total outflow as computed above.

Max Profit = Unlimited

LONG STRANGLE diagram????



Scenario Analysis at various Levels

					Spot closing at expiry					
Instrument	Action	Strike	Price	No. of lots	4000	4225	4400	4500	4675	4900
C	B	4500	105	1	-105	-105	-105	-105	70	295
P	B	4400	70	1	330	105	-70	-70	-70	-70
				Profit/Loss per share	225	0	-175	-175	0	225
				Total Profit/Loss	11250	0	-8750	-8750	0	11250

OPTIONS STRATEGY – STABLE MARKET VIEW

STRADDLES IN A STABLE MARKET OUTLOOK

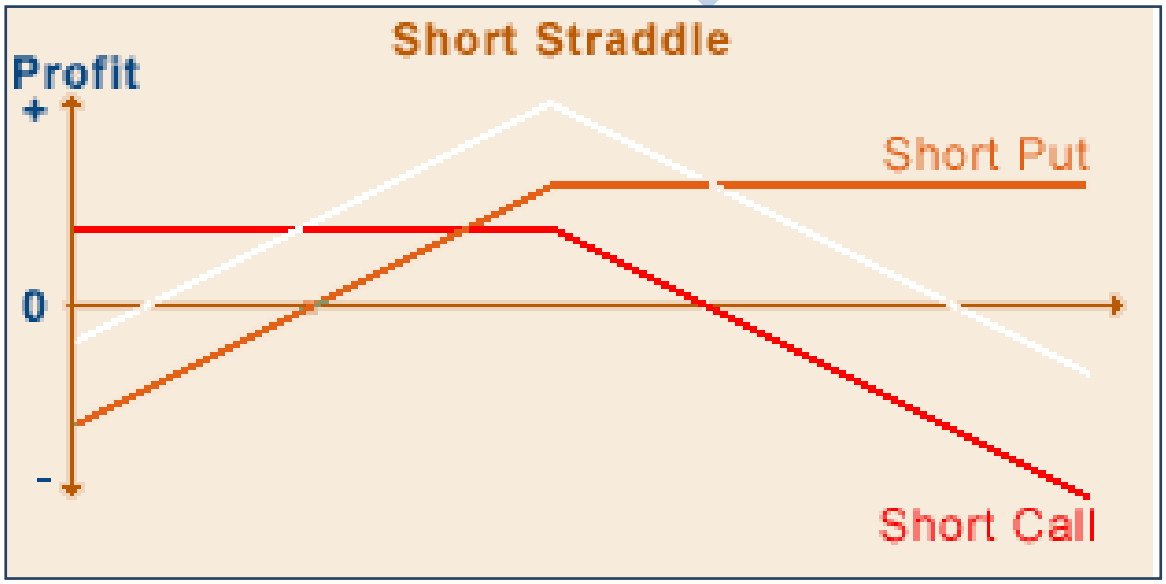
Volatile market trading strategies are appropriate when the trader believes the market will move but does not have an opinion on the direction of movement of the market. As long as there is significant movement upwards or downwards, these strategies offer profit opportunities. A trader need not be bullish or bearish. He must simply be of the opinion that the market is volatile. This market outlook is also referred to as "neutral volatility."

A straddle is the simultaneous purchase (or sale) of two identical options, one a call and the other a put.

To "**buy a straddle**" is to purchase a call and a put with the same exercise price and expiration date.

To "**sell a straddle**" is the opposite: the trader sells a call and a put with the same exercise price and expiration date.

A trader, viewing a market as stable, should: **write option straddles**. A "**straddle sale**" allows the trader to profit from writing calls and puts in a stable market environment.



The investor's profit potential is limited. If the market remains stable, traders long out-of-the-money calls or puts will let their options expire worthless. Writers of these options will not have be called to deliver and will profit from the sum of the premiums received.

The investor's potential loss is unlimited. Should the price of the underlying rise or fall, the writer of a call or put would have to deliver, exposing himself to unlimited loss if he has to deliver on the call and practically unlimited loss if on the put. The breakeven points occur when the market price at expiration equals the exercise price plus the premium and minus the premium. The trader is

short two positions and thus, two breakeven points; One for the call (common exercise price plus the premiums paid), and one for the put (common exercise price minus the premiums paid).

STRANGLES IN A STABLE MARKET OUTLOOK

A strangle is similar to a straddle, except that the call and the put have different exercise prices. Usually, both the call and the put are out-of-the-money.

To "**buy a strangle**" is to purchase a call and a put with the same expiration date, but different exercise prices. Usually the call strike price is higher than the put strike price.

To "**sell a strangle**" is to write a call and a put with the same expiration date, but different exercise prices.

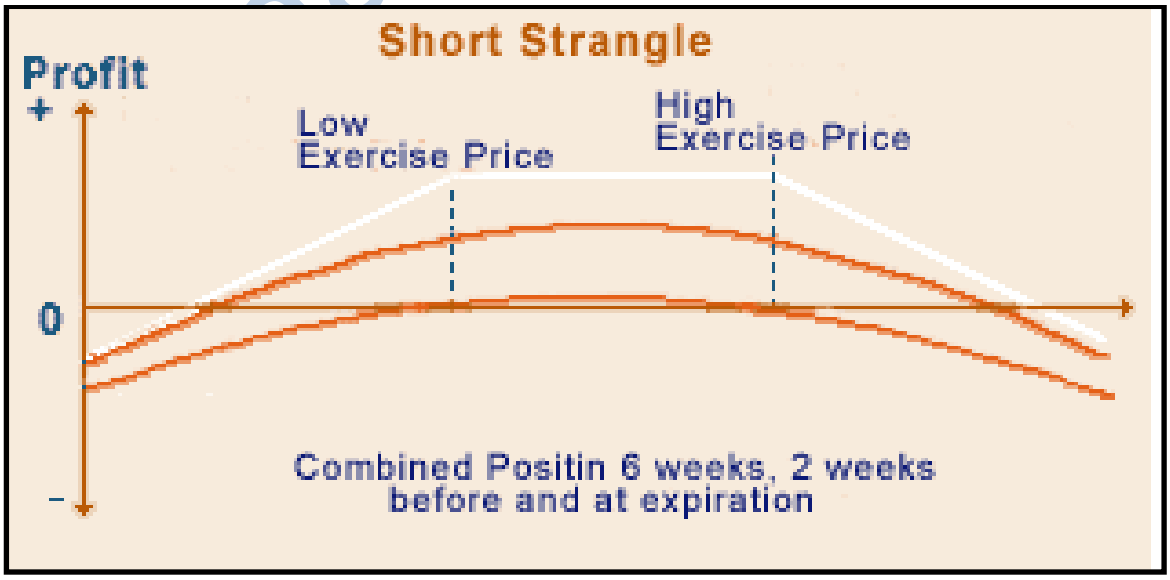
A trader, viewing a market as stable, should: **write strangles**. A "**strangle sale**" allows the trader to profit from a stable market.

The investor's **profit potential** is: **unlimited**. If the market remains stable, investors having out-of-the-money long put or long call positions will let their options expire worthless.

The investor's **potential loss** is: **unlimited**. If the price of the underlying interest rises or falls instead of remaining stable as the trader anticipated, he will have to deliver on the call or the put.

The breakeven points occur when market price at expiration equals the high exercise price plus the premium and the low exercise price minus the premium.

The trader is short two positions and thus, two breakeven points. One for the call (high exercise price plus the premiums paid), and one for the put (low exercise price minus the premiums paid).



Why would a trader choose to sell a strangle rather than a straddle?
The risk is lower with a strangle. Although the seller gives up a substantial amount of potential profit by selling a strangle rather than a straddle, he also holds less risk.

Notice that the strangle requires more of a price move in both directions before it begins to lose money.

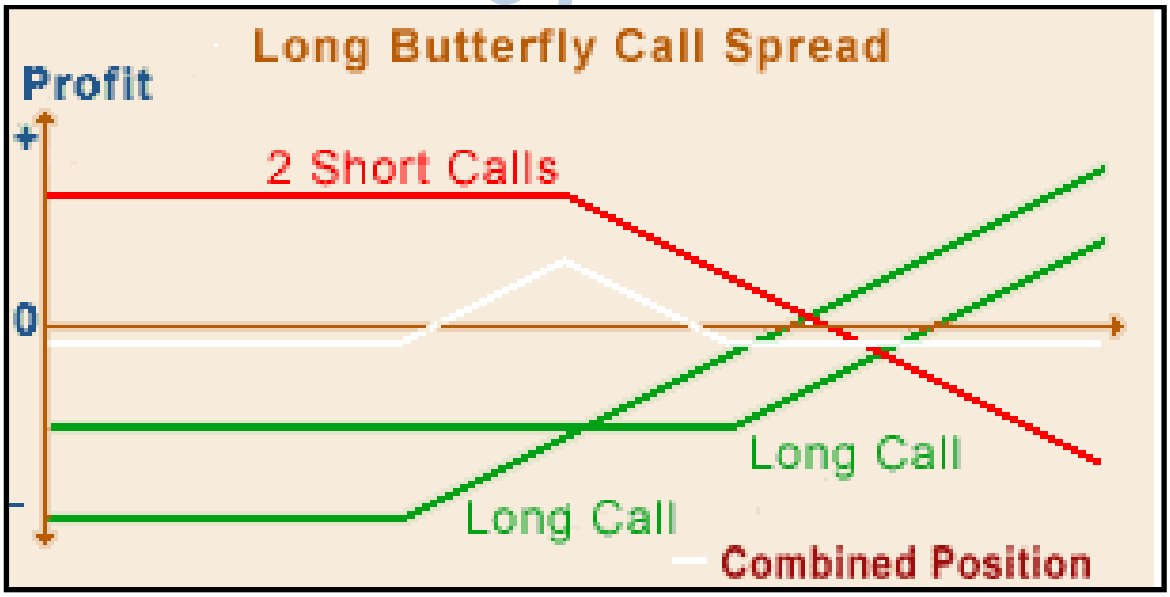
LONG BUTTERFLY CALL SPREAD STRATEGY

The long butterfly call spread is a combination of a bull spread and a bear spread, utilizing calls and three different exercise prices.

A long butterfly call spread involves:
Buying a call with a low exercise price, Writing two calls with a mid-range exercise price, Buying a call with a high exercise price.

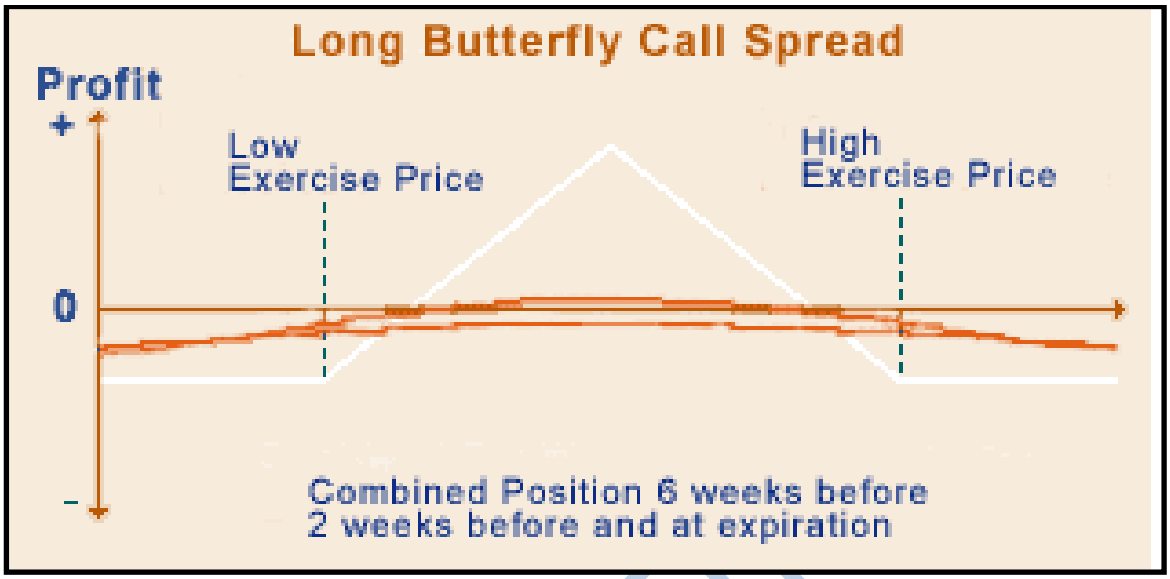
To put on the September 40-45-50 long butterfly, you: buy the 40 and 50 strike and sell two 45 strikes. This spread is put on by purchasing one each of the outside strikes and selling two of the inside strike. To put on a short butterfly, you do just the opposite.

The investor's **profit potential** is **limited**.
Maximum profit is attained when the market price of the underlying interest equals the mid-range exercise price (if the exercise prices are symmetrical).



The investor's **potential loss** is: **limited**.
The maximum loss is limited to the net premium paid and is realized when the market price of the underlying asset is higher than the high exercise price or lower than the low exercise price.

The breakeven points occur when the market price at expiration equals the high exercise price minus the premium and the low exercise price plus the premium. The strategy is profitable when the market price is between the low exercise price plus the net premium and the high exercise price minus the net premium.



LOW RISK

SHORT STRANGLE

The Short Strangle is employed when one is of opinion that there will be no sharp directional move and market will trade in the broad range in the near-term. The advantage of Short strangle over short straddle is that short strangle can be profitable in a broad range however, short straddle is profitable in a limited range.

The Short strangle offers a limited profit potential if the underlying remains in the broad range but can have unlimited losses, if the market moves out out of the range. It is a combination of short OTM Call and short OTM Put strikes.

Profit and loss (at expiry):

Profit: Limited to the premium received. Profits will be highest if the underlying closes exactly between the profitable range.

Loss: Unlimited for a sharp move in the underlying in either direction beyond the profitable range.

Profitability : Strategy remains profitable in the range of (Lower strike- total premium received) and (Upper strike + Total premium received).

Increase in Volatility: The option premium increases due to increase in volatility. Hence the strategy may result in losses if the volatility increases.

Time decay: Time decay is the rate of decrease in option premium with the movement towards expiry. Strategy gains with time decay as the option premium decreases as it approaches towards expiry.

Example : On June 15, 2009, Nifty spot was at 4480. So one can establish this strategy by Selling Nifty June 4500 Call option at Rs. 105 and Selling Nifty June 4400 Put option at Rs.70.

Strategy is profitable below = Higher strike + total premium received
= 4500 + 175 = 4675 levels

Strategy is profitable above = Lower strike – total premium received
= 4400 – 175 = 4225 levels

Hence, strategy is profitable in the range of 4225-4675 Nifty levels.

Total Inflow = Lot Size * total premium received
= 50 * 175 = Rs.8750

Max Profit = Total Inflow as computed above.

Strategy Pay-off

Scenario Analysis at various Levels

					Spot closing at expiry					
Instrument	Action	Strike	Price	No. of lots	4200	4225	4400	4500	4675	4700
C	S	4500	105	1	105	105	105	105	-70	-95
P	S	4400	70	1	-130	-105	70	70	70	70
				Profit/Loss per share	-25	0	175	175	0	-25
				Total Profit/Loss	-1250	0	8750	8750	0	-1250

MEDIUM RISK

SHORT STRADDLE

The Short Straddle is employed when one is of opinion that there will be no sharp directional move and the market will trade in the limited range in the near-term.

The Short straddle offers a limited profit potential if the underlying remains in the limited range but can have unlimited losses, if the market moves out of the range. It is formed with a combination of short ATM Call and short ATM Put strikes.

Profit and loss (at expiry):

Profit: Limited to the premium received. Profits will be highest if the underlying remains exactly between the profitable range.

Loss: Unlimited for a sharp move in the underlying in either direction beyond the profitable range.

Profitability: Strategy remains profitable in the range of (Lower strike- total premium received) and (Upper strike + Total premium received).

Increase in Volatility: The option premium increases due to increase in volatility. Hence the strategy may result in losses if the volatility increases.

Time decay: Time decay is the rate of decrease in option premium with the movement towards expiry. Strategy gains with time decay as the option premium decreases as it approaches towards expiry.

Example : On June 15, 2009, Nifty spot was at 4480. So one can establish this position by Selling Nifty June 4500 Call option at Rs. 105 and Selling Nifty June 4500 Put option at Rs.110.

Strategy is profitable below = Higher strike + total premium received
= 4500 + 215 = 4715 levels

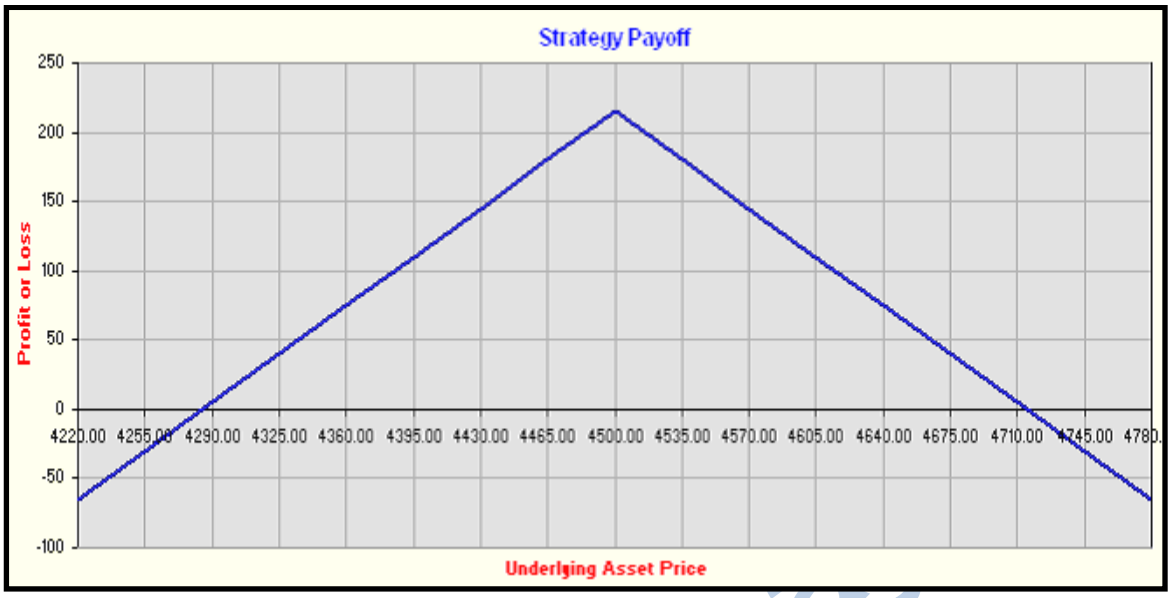
Strategy is profitable above = Lower strike – total premium received
= 4500 – 215 = 4285 levels

Hence, strategy is profitable in the range of 4285-4715 Nifty levels.

Total Inflow = Lot Size * total premium received
= 50 * 215 = Rs.10750

Max Profit = Total inflow as computed above.

Strategy Pay-off



Scenario Analysis at various Levels

					Spot closing at expiry					
Instrument	Action	Strike	Price	No. of lots	4250	4285	4400	4500	4715	4750
C	S	4500	105	1	105	105	105	105	-110	-145
P	S	4500	110	1	-140	-105	10	110	110	110
				Profit/Loss per share	-35	0	115	215	0	-35
				Total Profit/Loss	-1750	0	5750	10750	0	-1750

DELTA-NEUTRAL OPTIONS STRATEGY

Trading in derivative products is largely viewed as speculative, and why not? When most position are built around just the 'view' of the trader. However, if the trader's market outlook were faulty, the position would result in huge losses. A Delta-neutral strategy is a strategy by which you one make money without having to forecast the direction of the market.

The delta of an option is the rate of change in an option's price relative to a one-unit change in the price of the underlying asset. So, for example, if a call option has a delta of 0.35 and the price increases by one Re, the option's price should increase by 35 paise.

In the example above, the option has a delta of 0.35. Traders and brokers refer to that as "35 deltas." Simply multiply the delta by 100 to make it a percentage. However, make sure you understand that "35 deltas" really means 0.35.

For the purpose of our discussion, whenever we mention the delta of an option, we are referring to the actual decimal value because that is what's actually used in all mathematical models.

What exactly is Delta Neutral?

The term "Delta Neutral" refers to any strategy where the sum of your deltas is equal to zero. So, for instance, if you buy 10 call options, each having a delta of 0.60 and you also buy 20 put options, each having a delta of -0.30 you have the following:

(10 x 0.60) + (20 x -0.30) = 6.00 + -6.00 = 0

Your position delta (total delta) is zero, which means you are delta neutral.

The technique you are about to learn, is just one application of delta neutral. It is a general trading approach that is used by some of the largest and most successful trading firms. It allows you to make money without having to forecast the direction of the market. You can use it on any market (stocks, futures, whatever), just as long as options are available and the market is moving. It doesn't matter whether or not the market is trending, but it won't work if the market is really flat. The principle behind delta neutral is based upon the way an option's delta changes as the option moves further into or out of the money.

Consider the following example:

Statistical Volatility	25%
Option Strike Price	100
Days remaining	30

Price of underlying	Call Option	Put Option	Delta of underlying
80	0.0013	-0.9987	1.0000
85	0.0148	-0.9852	1.0000
90	0.0843	-0.9157	1.0000
95	0.2668	-0.7332	1.0000
100	0.5371	-0.4629	1.0000
105	0.7805	-0.2195	1.0000
110	0.9226	-0.0774	1.0000
115	0.9795	-0.0205	1.0000
120	0.9958	-0.0042	1.0000

You will notice the following characteristics of an option's delta:

The absolute value of the delta increases as the option goes further in-the-money and decreases as the option goes out-of-the-money.

At-the-money call and put options have a delta that is right around 0.50 and -0.50 respectively.

Put options have a negative delta, which means if the price of an asset goes up, the price of a put option on that asset goes down.

Deep in-the-money call options have a delta that approaches +1.00. Conversely, deep in-the-money put options have a delta that approaches -1.00.

Deep out-of-the-money calls and puts have deltas that approach zero.

The delta of the underlying asset itself always remains constant at 1.00.

All of the deltas mentioned above assume that you are buying the options or the underlying asset, that is, you have a long position. If instead, you sold the options or the asset, establishing a short position, all of the deltas would be reversed. So, in the example above, if you sold a call option with a strike price of 100, and the price of the underlying asset was 110, the delta would be 0.9226 x -1 = -0.9226.

If you short the underlying, the delta would be -1.0 instead of +1.0.

Keeping all of this in mind, we can construct the following delta neutral trade:

Stock futures price	110
Statistical Volatility	8%
Option Strike Price	110
Days remaining	30

Price of underlying	Option Theoretical price	Option delta
108	2.14	-0.73
109	1.43	-0.58
110	0.91	-0.42
111	0.53	-0.28
112	0.28	-0.16

Buy 2 stock futures at 110

Buy 5 put options (110 strike price) at 0.91 each

Delta of futures	2 x 1.00	= -2.00
Delta of put options	5 x -0.42	= -2.10
Total position delta	2.00 + -2.10	= -0.10

How it works:
If the futures increase from 110 up to 112:

Profit = 2 x 2.00 = 4.00

The put options will decrease from 0.91 down to 0.28 (each)

Loss on put options = 5 x (0.91 - 0.28) = 5 x 0.63 = 3.15

Net profit = 4.00 - 3.15 = 0.85

If the futures price decreases from 110 down to 108:

Loss = 2 x 2.00 = 4.00

The put options will increase from 0.91 up to 2.14 (each)

Profit on put options = 5 x (2.14 - 0.91) = 5 x 1.23 = 6.15

Net profit = 6.15 - 4.00 = 2.15

We can summarize this delta neutral approach as follows:

If you buy the underlying and buy put options so your position is delta neutral:

When the market goes up, you have a profit on the underlying and you have a smaller loss on the options (because their delta decreased), so you wind up with a net profit.

When the market goes down, you have a loss on the underlying but you have a bigger profit on the options (because their delta increased), so again you have a net profit.

If you sell (short) the underlying and buy call options so your position is delta neutral:

When the market goes up, you have a loss on the underlying but again you have a bigger profit on the options (their delta increased), so you have a net profit.

When the market goes down, you have a profit on the underlying but once again, you have a smaller loss on the options (their delta decreased), so you still have a net profit.

When you do this kind of delta neutral trading, you need to follow a few rules:

Always initiate the position with a total position delta of zero or as close to zero as possible. So, your starting position is "delta neutral."

When the market moves enough so your total position delta has increased or decreased by at least +1.00 or -1.00 delta (or more), you make an "adjustment" by buying or selling more of the underlying asset to get your position back to delta neutral. You can also sell off some of your options to get back to delta neutral. But the point is, you make profits consistently by making these adjustments.

If the price of the underlying asset doesn't move around much, close out the entire position.

You need some price action for this approach to work. If the market just sits there, time decay will eat away at this position. Keep an eye on the implied volatility of the options you're using. If it moves toward the high end of its 2-year range, stay away from this position for a while. Otherwise, you might have excessive time decay in your options when the implied volatility starts to drop.

The options you buy should have at least 30-60 days remaining before expiration.

Remember that time decay accelerates as the option's expiration date approaches, so if you allow more time, you minimize the time decay.

As you have seen, these trade positions benefit by price movement in the underlying asset. It puts you in the enviable position of being able to take full advantage of big price moves, in any direction.