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Capital Markets and Securities Trading

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## CERTIFICATE

This is to certify that Mr. Gaurav Saluja is a bona-fide student of Delhi School of Management, Delhi Technological University, New Delhi has successfully completed the project work as prescribed by the Dr. Saurabh Agrawal, Associate Professor, in the partial fulfilment of the requirement of Master Of Business Administration- Executive (Executive MBA) Program for the academic year 2022-23.

The Project Work titled as<br>"Capital Markets and Securities Trading"

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Dr. Saurabh Agrawal

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## DECLARATION

I, Gaurav Saluja, Student of EMBA 2021-2023 of Delhi School of Management, Delhi Technological University, Bawana Road, New Delhi hereby declare that the report on "Capital Markets and Securities Trading" submitted in partial fulfilment of the requirement for the award of the degree of Master of Business Administration under the guidance of Dr. Saurabh Agrawal, Associate Professor is my original work, and the material collected by myself.

The Information and the data given in the report are authentic to the best of my knowledge.

Place: New Delhi
Date: May 2023

Gaurav Saluja

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## Introduction to Stock Markets

An asset class is a category of investment with particular risk and return characteristics.
The following are some of the popular assets class.

1. Fixed income instruments
2.Equity
3.Real estate
4.Commodities (precious metals)

## Fixed Income Instruments

These are investable instruments with very limited risk to the principle and the return is paid as an interest to the investor based on the particular fixed income instrument. The interest paid, could be quarterly, semi-annual or annual intervals. At the end of the term of deposit, (also known as maturity period) the capital is returned to the investor.

Typical fixed income investment includes:

1. Fixed deposits offered by banks
2.Bonds issued by the Government of India
3.Bonds issued by Government related agencies.
4.Bonds issued by corporates

As of June 2014, the typical return from a fixed income instrument varies between $8 \%$ and $11 \%$.

## Equity

Investment in Equities involves buying shares of publicly listed companies. The shares are traded both on the Bombay Stock Exchange (BSE), and the National Stock Exchange (NSE).

When an investor invests in equity, unlike a fixed income instrument there is no capital guarantee. However, as a trade-off, the returns from equity investment can be extremely attractive. Indian Equities have generated returns close to $14 \%$ - 15\% CAGR (compound annual growth rate) over the past 15 years.

Investing in some of the best and well-run Indian companies has yielded over 20\% CAGR in the long term. Identifying such investments opportunities requires skill, hard work and patience. This is an added attraction to investing in equities.

## Real Estate

Real Estate investment involves transacting (buying and selling) commercial and noncommercial land. Typical examples would include transacting in sites, apartments and commercial buildings. There are two sources of income from real estate investments namely - Rental income, and Capital appreciation of the investment amount. The transaction
procedure can be quite complex involving legal verification of documents. The cash outlay in real estate investment is usually quite large. There is no official metric to measure the returns generated by real estate, hence it would be hard to comment on this.

## Commodity -

Bullion Investments in gold and silver are considered one of the most popular investment avenues. Gold and silver over a long-term period have appreciated in value. Investments in these metals have yielded a CAGR return of approximately $8 \%$ over the last 20 years. There are several ways to invest in gold and silver. One can choose to invest in the form of jewellery or Exchange Traded Funds (ETF).

## Things to know before Investing

1.Risk and Return go hand in hand. Higher the risk, higher the return. Lower the risk, lower is the return.
2.Investment in fixed income is a good option if you want to protect your principal amount. It is relatively less risky. However, you have the risk of losing money when you adjust the return for inflation. Example - A fixed deposit which gives you $9 \%$ when the inflation is $10 \%$ means you are net losing $1 \%$ per annum. Fixed income investment is best suited for ultra-risk averse investors
3.Investment in Equities is a great option. It is known to beat the inflation over long period of times. Historically equity investment has generated returns close to $14-15 \%$. However, equity investments can be risky
4.Real Estate investment requires a large outlay of cash and cannot be done with smaller amounts. Liquidity is another issue with real estate investment - you cannot buy or sell whenever you want. You always have to wait for the right time and the right buyer or seller to transact with you.
5.Gold and silver are known to be a relatively safer but the historical return on such investment has not been very encouraging.

## Stock Market

Investing in equities is an important investment that we make in order to generate inflation beating returns. it is extremely important to understand the ecosystem in which equities operate. we go to the stock market to shop (read as transact) for equity investments.

Stock market is where everyone who wants to transact in shares go to. Transact in simple terms means buying and selling. For all practical purposes, you can't buy/sell shares of a public company like Infosys without transacting through the stock markets. The main purpose of the stock market is to help you facilitate your transactions. So, if you are a buyer of a share, the stock market helps you meet the seller and vice versa. The stock market does not exist in a brick and mortar form. It exists in electronic form. You access the market
electronically from your computer and go about conducting your transactions (buying and selling of shares).

Also, it is important to note that you can access the stock market via a registered intermediary called the stock broker. There are two main stock exchanges in India that make up the stock markets. They are the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE).

## Stock Market Participants

1.Domestic Retail Participants - These are people like you and me transacting in markets.
2.NRI's and OCI - These are people of Indian origin but based outside India
3.Domestic Institutions - These are large corporate entities based in India. Classic example would be the LIC of India.
4.Domestic Asset Management Companies (AMC) - Typical participants in this category would be the mutual fund companies such as SBI Mutual Fund, DSP Black Rock, Fidelity Investments, HDFC AMC etc.
5.Foreign Institutional Investors - Non-Indian corporate entities. These could be foreign asset management companies, hedge funds and other investors.

## The Regulators

In India the stock market regulator is called The Securities and Exchange board of India often referred to as SEBI. The objective of SEBI is to promote the development of stock exchanges, protect the interest of retail investors, regulate the activities of market participants and financial intermediaries. In general SEBI ensures...
1.The stock exchanges (BSE and NSE) conducts its business fairly.
2.Stock brokers and sub brokers conduct their business fairly.
3.Participants don't get involved in unfair practices.
4.Corporate's don't use the markets to unduly benefit themselves (Example - Satyam Computers).
5.Small retail investors interest are protected
6. Large investors with huge cash pile should not manipulate the markets
7.Overall development of markets

## The IPO Markets

When a company decides to file for an IPO, invariably the main reason is to raise funds to fuel their Capex requirement. The promoter has 3 advantages by taking his company public.
1.Company is raising funds to meet Capex requirement
2.Company is avoiding the need to raise debt which means he does not have to pay finance charges which translates to better profitability
3.Whenever you buy a share of a company, you are in essence taking the same amount of risk as the promoter is taking. Needless to say, the proportion of the risk and its impact will depend on the quantity of shares you hold. Nonetheless, whether you like it or not, when you buy shares you also buy risk. So, when the company goes public, the promoter is actually spreading his risk amongst a large group of people.

There are other advantages as well in going for an IPO-
1.Provide an exit for early investors - Once the company goes public, the shares of the company start trading publicly. Any existing shareholder of the company - could be promoters, angel investors, venture capitalist, PE funds; can use this opportunity to sell their shares in the open market. By selling their shares, they get an exit on their initial investment in the company. They can also choose to sell their shares in smaller chunks if they wish.
2.Reward employees -Employees working for the company would have shares allotted to them as an incentive. This sort of arrangement between the employee and the company is called the "Employee Stock Option". The shares are allotted at a discount to the employees. Once the company goes public, the employees stand a chance to see capital appreciation in the shares. Few examples where the employee benefited from ESOP would be Google, Infosys, Twitter, Facebook etc.
3.Improve visibility - Going public definitely increases visibility as the company has a status of being publicly held and traded. There is a greater chance of people's interest in the company, consequently creating a positive impact on its growth.

During the bidding process (also called the date of issue) investors can bid for shares at a particular price within the specified price band. This whole system around the date of issue where one bids for shares is referred to as the Primary Market.

The moment the stock gets listed and debuts on the stock exchange, the stock starts to trade publicly. This is called the secondary markets. Once the stock transitions from primary markets to secondary markets, the stock gets traded daily on the stock exchange. People start buying and selling the stocks regularly.

There are two main market indices in India. The BSE Sensex representing the Bombay stock exchange and Nifty 50 representing the National Stock exchange

While the Sensex and Nifty represent the broader markets there are certain indices that represents specific sectors. These are called the sectoral indices. For example, the Bank Nifty on NSE represents the mood specific to the banking industry. The CNX IT on NSE represents the behaviour of all the IT stocks in the stock markets. Both BSE and NSE have sector specific indexes. The construction and maintenance of these indices is similar to the other major indices.

## Commonly Used Jargons

Bull Market (Bullish) - If you believe that the stock prices are likely to go up then you are said to be bullish on the stock price. From a broader perspective, if the stock market index is going up during a particular time period, then it is referred to as the bull market.

Bear Market (Bearish) - If you believe that the stock prices are likely to go down then you are said to be bearish on the stock price. From a broader perspective, if the stock market index is going down during a particular time period, then it is referred to as the bear market.

Trend - A term 'trend' usually refers to the general market direction, and its associated strength. For example, if the market is declining fast, the trend is said to be bearish. If the market is trading flat with no movement then the trend is said to be sideways.

Face value of a stock - Face value (FV) or par value of a stock indicates the fixed denomination of a share. The face value is important with regard to corporate action.

52 weeks high/low - 52 weeks high is the highest point at which a stock has traded during the last 52 weeks (which also marks a year) and likewise 52 -week low marks the lowest point at which the stock has traded during the last 52 weeks. The 52 -week high and low gives a sense of the range within which the stock has traded during the year. Many people believe that if a stock reaches 52 weeks high, then it indicates a bullish trend for the foreseeable future. Similarly, if a stock has hits 52 weeks low, some traders believe that it indicates a bearish trend for a foreseeable future.

All time high/low - This is similar to the 52-week high and low, with the only difference being the all-time high price is the highest price the stock has ever traded from the time it has been listed. Similarly, the all-time low price is the lowest price at which the stock has ever traded from the time it has been listed.

Long Position - Long position or going long is simply a reference to the direction of your trade. For example, if you have bought or intend to buy Biocon shares then you are said to be long on Biocon or planning to go long on Biocon respectively. If you have bought the Nifty Index with an expectation that the index will trade higher then essentially you have a long position on Nifty. If you are long on a stock or an index, you are said to be bullish.

Short Position - Going short or simply 'shorting' is a term used to describe a transaction carried out in a particular order. This is a slightly tricky concept. To help you understand the concept shorting, I'd like to narrate a recent incident that happened to me at work.

## Corporate Actions \& Its Impact on Stock Prices

Corporate actions are initiatives taken up by a corporate entity that bring in a change to its stock. There are many types of corporate actions that an entity can choose to initiate. A good understanding of these corporate actions gives a clear picture of the company's financial health and also to determine whether to buy or sell a particular stock.

A corporate action is initiated by the board of directors, and approved by the company's shareholders.

## Dividends

Dividends are paid by the company to its shareholders. Dividends are paid to distribute the profits made by the company during the year. Dividends are paid on a per share basis. For example, during one of the financial years, Infosys had declared a dividend of Rs. 42 per share. The dividend paid is also expressed as a percentage of the face value. In the above case, the face value of Infosys was Rs.5/- and the dividend paid was Rs.42/- hence the dividend pay-out is said to be $840 \%$ (42/5). It is not mandatory to pay out the dividends every year. If the company feels that instead of paying dividends to shareholders, they are better off utilizing the same cash to fund new project for a better future, then can do so. Besides, the dividends need not be paid from the profits alone. If the company has made a loss during the year but it does hold a healthy cash reserve, then the company can still pay dividends from its cash reserves. Sometimes distributing the dividends may be the best way forward for the company. When the growth opportunities for the company have exhausted and the company holds excess cash, it would make sense for the company to reward its shareholders thereby repaying the trust the shareholders hold in the company. The decision to pay dividend is taken in the Annual General Meeting (AGM) during which the directors of the company meet. The dividends are not paid right after the announcement. This is because the shares are traded throughout the year and it would be difficult to identify who gets the dividend and who doesn't. The following timeline would help you understand the dividend cycle.

Dividend Declaration Date: This is the date on which the AGM takes place and the company's board approves the dividend issue Record Date: This is the date on which the company decides to review the shareholders register to list down all the eligible shareholders for the dividend. Usually the time difference between the dividend declaration date and record date is at least 30 days.

Ex-Date/Ex-Dividend date: The ex-dividend date is normally set two business days before the record date. Only shareholders who own the shares before the ex-dividend date are entitled to the dividend. This is because in India the normal settlement is on T+2 basis. So, for all practical purposes if you want to be entitled for dividend you need to ensure you buy the shares before the ex-dividend date.

Dividend Pay-out Date: This is the day on which the dividends are paid out to shareholders listed in the register of the company.

## Bonus Issue

A bonus issue is a stock dividend, allotted by the company to reward the shareholders. The bonus shares are issued out of the reserves of the company. These are free shares that the shareholders receive against shares that they currently hold. These allotments typically come in a fixed ratio such as, $1: 1,2: 1,3: 1$ etc. If the ratio is $2: 1$ ratio, the existing shareholders get 2 additional shares for every 1 share they hold at no additional cost. So, if a shareholder owns 100 shares then he will be issued an additional 200 shares, so his total holding will become 300 shares. When the bonus shares are issued, the number of shares the shareholder holds will increase but the overall value of investment will remain the same.

Similar to the dividend issue there is a bonus announcement date, ex-bonus date, and record date. Companies issue bonus shares to encourage retail participation, especially when the price per share of a company is very high and it becomes tough for new investors to buy shares. By issuing bonus shares, the number of outstanding shares increases, but the value of each share reduces.

## Stock Split

The word stock split- for the first time sounds weird but this happens on a regular basis in the markets. What this means is quite obvious - the stocks that you hold actually are split!

When a stock split is declared by the company the number of shares held increases but the investment value/market capitalization remains the same similar to bonus issue. The stock is split with reference to the face value. Suppose the stock's face value is Rs.10, and there is a $1: 1$ stock split then the face value will change to Rs.5. If you owned 1 share before split you would now own 2 shares after the split.

## Right Issue

The idea behind a rights issue is to raise fresh capital. However instead of going public, the company approaches their existing shareholders Think about the rights issue as a second IPO but for a select group of people (existing shareholders). The rights issue could be an indication of a promising new development in the company. The shareholders can subscribe to the rights issue in the proportion of their shareholding. For example, 1:4 rights issue means for every 4 shares a shareholder owns, he can subscribe to 1 additional share. Needless to say,
the new shares under the rights issue will be issued at a lower price than what prevails in the markets.

However, a word of caution - The investor should not be swayed by the discount offered by the company but they should look beyond that. Rights issue is different from bonus issue as one is paying money to acquire shares. Hence the shareholder should subscribe only if he or she is completely convinced about the future of the company. Also, if the market price is below the subscription price/right issue price it is obviously cheaper to buy it from the open market.

## Buyback of Shares

A buyback can be seen as a method for company to invest in itself by buying shares from other investors in the market. Buybacks reduce the number of shares outstanding in the market; however, buyback of shares is an important method of corporate restructuring.

There could be many reasons why corporates choose to buy back shares.
1.Improve the profitability on a per share basis
2.To consolidate their stake in the company
3.To prevent other companies from taking over
4.To show the confidence of the promoters about their company
5.To support the share price from declining in the markets When a company announces a buy back, it signals the company's confidence about itself. Hence this is usually a positive for the share price.

## Key Events and Their Impact

## Monetary Policy

The monetary policy is a tool with which the Reserve Bank of India (RBI) controls the money supply by controlling the interest rates. They do this by tweaking the interest rates. RBI is India's central bank. World over every country's central bank is responsible for setting the interest rates. While setting the interest rates the RBI has to strike a balance between growth and inflation. In a nutshell - if the interest rates are high that means the borrowing rates are high (particularly for corporations). If corporate can't borrow easily they cannot grow. If corporations don't grow, the economy slows down. On the other hand, when the interest rates are low, borrowing becomes easier. This translates to more money in the hands of the corporations and consumers. With more money there is increased spending which means the sellers tend to increase prices leading to inflation. In order to strike a balance, the RBI has to consider all the factors and should carefully set a few key rates. Any imbalance in these rates can lead to an economic chaos.

The key RBI rates that you need to track are as follows:
Repo Rate - Whenever banks want to borrow money they can borrow from the RBI. The rate at which RBI lends money to other banks is called the repo rate. If repo rate is high that means the cost of borrowing is high, leading to a slow growth in the economy. Currently, the repo rate in India is $8 \%$. Markets don't like the RBI increasing the repo rates.

Reverse repo rate - Reverse Repo rate is the rate at which RBI borrows money from banks. When banks lend money to RBI, they are certain that RBI will not default, and hence they are happier to lend their money to RBI as opposed to a corporate. However, when banks choose to lend money to the RBI instead of the corporate entity, the supply of money in the banking system reduces. An increase in reverse repo rate is not great for the economy as it tightens the supply of money. The reverse repo rate is currently at $7 \%$.

Cash reserve ratio (CRR) - Every bank is mandatorily required to maintain funds with RBI. The amount that they maintain is dependent on the CRR. If CRR increases then more money is removed from the system, which is again not good for the economy.

## Budget

The Budget is an event during which the Ministry of Finance discusses the country's finance in detail. The Finance Minister on behalf of the ministry makes a budget presentation to the entire country. During the budget, major policy announcements and economic reforms are announced which has an impact on various industries across the markets. Therefore, the budget plays a very important role in the economy.

## Technical Analysis

Technical Analysis is a research technique to identify trading opportunities in market based on the actions of market participants. The actions of markets participants can be visualized by means of a stock chart. Over time, patterns are formed within these charts and each pattern conveys a certain message. The job of a technical analyst is to identify these patterns and develop a point of view.

## Assumption in Technical Analysis

Unlike fundamental analysts, technical analysts don't care whether a stock is undervalued or overvalued. In fact, the only thing that matters is the stocks past trading data (price and volume) and what information this data can provide about the future movement in the security.

## Candlesticks Patterns

The candlesticks are used to identify trading patterns. Patterns in turn help the technical analyst to set up a trade. The patterns are formed by grouping two or more candles in a certain sequence. However, sometimes powerful trading signals can be identified by just single candlestick pattern.

Hence, candlesticks can be broken down into single candlestick pattern and multiple candlestick patterns.

Under the single candlestick pattern, we will be learning the following...

1. Marubozu

Bullish Marubozu
Bearish Marubozu
2. Doji
3. Shooting star

Multiple candlestick patterns are a combination of multiple candles. Under the multiple candlestick patterns, we will learn the following:

1. Engulfing pattern

Bullish Engulfing
Bearish Engulfing
2. Morning Star
3. Evening Star

Candlestick patterns help the trader develop a complete point of view. Each pattern comes with an in-built risk mechanism. Candlesticks gives an insight into both entry and stop loss price.

## The Marubozu

There are two types of marubozu - the bullish marubozu and the bearish marubozu.

A Marubuzo can appear anywhere in the chart irrespective of the prior trend, the trading implication remains the same.


The red candle represents the bearish marubuzo and the blue represents the bullish marubuzo.

## The Doji's

Doji's provide crucial information about the market sentiments and is an important candlestick pattern.

The classic definition of a doji suggests that the open price should be equal to the close price. The upper and lower wicks can be of any length.

Obviously the color of the candle does not matter. What matters is the fact that the open and close prices were very close to each other.

Have a look at the chart below, where the dojis appear in a downtrend indicating indecision in the market before the next big move.


Here is another chart where the doji appears after a healthy up trend after which the market reverses its direction and corrects.


So the next time you see a Doji individually or in a cluster, remember there is indecision is the market. The market could swing either ways and you need to build a stance that adapts to the expected movement in the market.

## The shooting star

The shooting star is the last single candlestick pattern that we will learn about before we move to multiple candlestick patterns. The price action on the shooting star is quite powerful, thus making the shooting star a very popular candlestick pattern to trade.


The longer the upper wick, the more bearish is the pattern, the shooting star should not have a lower shadow, however a small lower shadow, as seen in the chart above is considered alright. The shooting star is a bearish pattern; hence the prior trend should be bullish.

## Multiple Candlestick Patterns

## - The Engulfing Pattern

The engulfing pattern needs 2 trading sessions to evolve. In a typical engulfing pattern, you will find a small candle on day 1 and a relatively long candle on day 2 which appears as if it engulfs the candle on day 1 . If the engulfing pattern appears at the bottom of the trend, it is called the "Bullish Engulfing" pattern. If the engulfing pattern appears at the top end of the trend, it is called the "Bearish Engulfing" pattern.


Bullish Engulfing Pattern


Bearish Engulfing Pattern

## THE Morning Star

The morning star is a bullish candlestick pattern which evolves over a threeday period. It is a downtrend reversal pattern. The pattern is formed by combining 3 consecutive candlesticks. The morning star appears at the bottom end of a down trend. In the chart below the morning star is encircled.


The morning star pattern involves 3 candlesticks sequenced in a particular order.

## The Evening Star

The evening star is the last candlestick pattern.
The evening star is a bearish equivalent of the morning star. The evening star appears at the top end of an uptrend. Like the morning star, the evening star is a three-candle formation and evolves over three trading sessions.


Various Indicators that determine Technical Analysis

## Relative Strength Index

RSI is a leading momentum indicator which helps in identifying a trend reversal. RSI indicator oscillates between 0 and 100, and based on the latest indicator reading, the expectations on the markets are set.

The formula to calculate the RSI is as follows:

$$
\mathrm{RSI}=100-100 / 1+\mathrm{RS}
$$

RS = Average Gain/Average loss


To begin with, the red line below the price chart indicates the 14 period RSI. However, it has overbought and oversold Region. When the RSI reading is between 30 and 0 , the security is supposed to be oversold and ready for an upward correction. When the security reading is between 70 and 100, the security is supposed to be heavily bought and is ready for a downward correction.

## Moving Average Convergence and Divergence

MACD is all about the convergence and divergence of the two moving averages. Convergence occurs when the two moving averages move towards each other and a divergence occurs when the moving averages move away from each other.

When the MACD is negative, it means the 12-day EMA is lower than the 26day EMA. Therefore, the momentum is negative. Higher the magnitude of the MACD, the more strength in the downward trend.

The difference between the two moving averages is called the MACD spread. The spread decreases when the momentum mellows down and increases when the momentum increases.


## The Double Bottom and Top Formation

A double bottom formation is considered bullish, and hence one should look at buying opportunities.


Likewise in a double top formation, the stock attempts to hit the same high price twice but eventually sells off. Double Top formation is considered bearish.

## The Flag Formation

The flag formation usually takes place when the stock posts a sustained rally with almost a vertical or a steep increase in stock prices. Flag patterns are marked by a big move which is followed by a short correction. In the correction phase, the price would generally move within two parallel lines. Flag pattern takes the shape of a parallelogram or a rectangle and they have the appearance of a flag on the pole.


With these two events (i.e price rally, and price decline) occurring consecutively a flag formation is formed. When a flag forms, the stock invariably spurts back all of a sudden and continues to rally upwards.

For a trader who has missed the opportunity to buy the stock, the flag formation offers a second chance to buy. However, the trader has to be quick
in taking the position as the stock tends to move up all of a sudden. In the chart above the sudden upward moved is quite evident.

The logic behind the flag formation is fairly simple. The steep rally in the stock offers an opportunity for market participants to book profits.
Invariably, the retail participants who are happy with the recent gains in the stock start booking profits by selling the stock. This leads to a decline in the stock price. As only the retail participants are selling, the volumes are on the lower side. The smart money is still invested in the stock, and hence the sentiment is positive for the stock. Many traders see this as an opportunity to buy the stock and hence the price rallies all of a sudden.

## OPTION STRATEGIES

## Bull Call Spread

To implement the bull call spread -

1. Buy 1 ATM call option (leg 1)
2. Sell 1 OTM call option (leg 2)

When you do this ensure -1 . All strikes belong to the same underlying
2. Belong to the same expiry.
3. Each leg involves the same number of options.

Outlook - Moderately bullish (expect the market to go higher but the expiry around the corner could limit the upside). Example:

Nifty Spot - 7846
ATM - 7800 CE, premium - Rs. 79.
OTM - 7900 CE, premium - Rs. 25.
Bull Call Spread, trade set up-1. Buy 7800 CE by paying 79 towards the premium. Since money is going out of my account this is a debit transaction

Sell 7900 CE and receive 25 as premium. Since I receive money, this is a credit transaction

The net cash flow is the difference between the debit and credit i.e. $79-25$ $=54$.

Generally speaking, in a bull call spread there is always a 'net debit', hence the bull call spread is also called referred to as a 'debit bull spread'. After we initiate the trade, the market can move in any direction and expiry at any level.

## Bull Put Spread

Similar to the Bull Call Spread, the Bull Put Spread is a two-leg option strategy invoked when the view on the market is 'moderately bullish'. The Bull Put Spread is similar to the Bull Call Spread in terms of the payoff structure; however, there are a few differences in terms of strategy execution and strike selection. The bull put spread involves creating a spread by employing 'Put options' rather than 'Call options' (as is the case in bull call spread).

The bull put spread is executed for a credit
To implement the bull put spread -

1. Buy 1 OTM Put option (leg 1)
2. Sell 1 ITM Put option (leg 2)

Outlook - Moderately bullish (expect the market to go higher). Example:
Nifty Spot - 7805 Bull Put Spread

1. Buy 7700 PE by paying Rs.72/- as premium, do note this is an OTM option. Since money is going out of my account this is a debit transaction
2. Sell 7900 PE and receive Rs.163/- as premium, do note this is an ITM option. Since I receive money, this is a credit transaction
3. The net cash flow is the difference between the debit and credit i.e. $163-$ $72=+91$, since this is a positive cashflow, there is a net credit to my account.

## LONG STRADDLE

Long straddle is perhaps the simplest market neutral strategy to implement. Once implemented, the P\&L is not affected by the direction in which the market moves. The market can move in any direction, but it has to move. As long as the market moves (irrespective of its direction), a positive P\&L is generated.

To implement a long straddle all one has to do is -

1. Buy a Call option
2. Buy a Put option

Both the options belong to the same underlying. Both the options belong to the same expiry. Belong to the same strike.

Example which explains the execution of a long straddle and the eventual strategy payoff. As I write this, the market is trading at 7579, which would make the strike 7600 'At the money'. Long straddle would require us to simultaneously purchase the ATM call and put options.

As 7600 CE is trading at 77 and 7600 PE is trading at 88 . The simultaneous purchase of both these options would result in a net debit of Rs.165. The idea here is - the trader is long on both the call and put options belonging to the ATM strike. Hence the trader is not really worried about which direction the market would move. If the market goes up, the trader would expect to see gains in Call options far higher than the loss made (read premium paid) on the put option. Similarly, if the market goes down, the gains in the Put option far exceeds the loss on the call option. Hence irrespective of the direction, the gain in one option is good enough to offset the loss in the other and still yield a positive P\&L.

Scenario 1 - Market expires at 7200 , put option makes money This is a scenario where the gain in the put option not only offsets the loss made in the call option but also yields a positive P\&L over and above. At 7200, the 7600 CE will expire worthless, hence we lose the premium paid i.e. Rs. 77.

7600 PE will have an intrinsic value of 400 . After adjusting for the premium paid i.e. Rs. 88 , we get to retain $400-88=312$.The net payoff would be 312 $-77=+235$ As you can see, the gain in put option after adjusting for the premium paid for put option and after adjusting for the premium paid for the call option still yields a positive P\&L.

Scenario 2 - Market expires at 7435 (lower breakeven). This is a situation where the strategy neither makes money nor loses any money. 7600 CE would expire worthless; hence the premium paid has to be written off. Loss would be Rs.77. 7600 PE would have an intrinsic value of 165 , hence this is the gain in the put option. However, the net premium paid for the call and put option is Rs.165, which gets adjusted with the gain in the put option If you think about it, with respect to the ATM strike, market has indeed expired at a lesser value. So therefore, the put option makes money. However, the gains made in the put option adjusts itself against the premium paid for both the call and put option, eventually leaving no money on the table.

Scenario 3 - Market expires at 8000, call option makes money Clearly the market in this scenario is way above the 7600 ATM mark. The call option premiums would swell, so much so that the gains in call option will more than offset the premiums paid. 7600 PE will expire worthless, hence the premium
paid i.e. Rs. 88 is to be written off. At 8000 , the 7600 CE will have an intrinsic value of 400 . The net payoff here is $400-88-77=+235$.

1. The maximum loss (165) occurs at 7600 , which is the ATM strike.
2. The profits are unlimited in either direction of the market.

## The Short Straddle

Setting up a short straddle is quite straight forward - as opposed to buying the ATM Call and Put options (like in long straddle) you just have to sell the ATM Call and Put option. Obviously, the short strategy is set up for a net credit, as when you sell the ATM options, you receive the premium in your account.

Consider Nifty is at 7589 , so this would make the 7600 strike ATM.
7600 CE is trading at 77.7600 PE is trading at 88 , So the short straddle will require us to sell both these options and collect the net premium of $77+88=$ 165.

Scenario 1 - Market expires at 7200 (we lose money on put option) This is a scenario where the loss in the put option is so large that it eats away the premium collected by both the CE and PE , resulting in an overall loss. At 7200,7600 CE will expire worthless, hence we get the retain the premium received i.e. 77. 7600 PE will have an intrinsic value of 400 . After adjusting for the premium received i.e. Rs. 88 , we lose $400-88=-312$. The net loss would be $312-77=-235$.

Scenario 2 - Market expires at 7435 (lower breakdown) This is a situation where the strategy neither makes money nor loses any money. 7600 CE would expire worthless; hence the premium received is retained. Profit here is Rs. 77. 7600 PE would have an intrinsic value of 165 , out of which we have received Rs. 88 as premium, hence our loss would be $165-88=-77$. The gain in the call option is completely offset by the loss in the put option. Hence, we neither make money nor lose money at 7435 .

Scenario 3 - Market expires at 7600 (at the ATM strike, maximum profit) This is the most favourable outcome for a short straddle. At 7600, the situation is quite straight forward as both the call and put option would expire worthless and hence the premium received from both the call and put option will be retained. The gain here would be equivalent to the net premium received i.e. Rs.165. So, this means, in a short straddle you make maximum money when the markets don't move!

Scenario 4 - Market expires at 7765 (upper breakdown) This is similar to the 2nd scenario we discussed. This is a point at which the strategy breaks even at a point higher than the ATM strike. 7600 CE would have an intrinsic value of 165 , hence after adjusting for the premium received of Rs. 77, we stand to
lose Rs. 88 (165-77). 7600 PE would expire worthless, hence the premium received i.e. Rs. 88 is retained. The gain made in the 7600 PE is offset against the loss on the 7600 CE , hence we neither make money nor lose money. Clearly this is the upper breakdown point.

Scenario 5 - Market expires at 8000 (we lose money on call option) Clearly the market in this scenario is way above the 7600 ATM mark. The call option premium would swell, so would the loss. 7600 PE will expire worthless, hence the premium received i.e. Rs. 88 is retained. At 8000, the 7600 CE will have an intrinsic value of 400 , hence after adjusting for the premium received of Rs. 77, we stand to lose Rs. 323(400-77). We have received Rs. 88 as premium for the Put option, therefore the loss would be $88-323=-235$.

## The Long and Short Strangle

If you have understood the straddle, then understanding the 'Strangle' is quite straightforward. For all practical purposes, the thought process behind the straddle and strangle is quite similar. Strangle is an improvisation over the straddle, mainly to reduce the cost of implementation. Let me explain this further.

The strangle is an improvisation over the straddle. The improvisation mainly helps in terms of reduction of the strategy cost, however as a trade-off the points required to breakeven increases.

In a straddle you are required to buy call and put options of the ATM strike. However, the strangle requires you to buy OTM call and put options. Remember when compared to the ATM strike, the OTM will always trade cheap, therefore this implies setting up a strangle is cheaper than setting up a straddle.

Let's take an example to explain this better -
Nifty is trading at 7921, to set up a strangle we need to buy OTM Call and Put options. Do note, both the options should belong to the same expiry and same underlying.

Same ratio here means - one should buy the same number of call option as that of put option. For instance, it can be $1: 1$ ratio meaning 1 lot of call, 1 lot of put option. Or it can be $5: 5$, meaning buy 5 lots of call and 5 lots of put option. Something like $2: 3$ is not considered strangle (or straddle).

Going back to the example, considering Nifty is at 7921, we need to buy OTM Call and Put options. I'd prefer to buy strikes which are 200 points either way (note, there is no particular reason for choosing strikes 200 points away). So, this would mean I would buy 7700 Put option and 8100 Call option. These options are trading at 28 and 32 respectively.

The combined premium paid to execute the 'strangle' is 60. Let's figure out how the strategies behave under various scenarios. I'll keep this discussion brief as I do believe you are now comfortable accessing the P\&L across various market scenarios.

## Scenario 1 - Market expires at 7500.

At 7500, the premium paid for the call option i.e. 32 will go worthless. However, the put option will have an intrinsic value of 200 points. The premium paid for the Put option is 28 , hence the total profit from the put option will be $200-28=+\mathbf{1 7 2}$

We can further deduct for the premium paid for call option i.e. 32 from the profits of Put option and arrive at the overall profitability i.e. $172-32=+\mathbf{1 4 0}$

## Scenario 2 - Market expires at 7640.

At 7640, the 7700 put option will have an intrinsic value of 60 . The put option's intrinsic value offsets the combined premium paid towards both the call and put option i.e. $32+28$ $=60$. Hence at 7640, the strangle neither makes money nor losses money.

## Scenario 3 - Market expires at 7700.

At 7700, both the call and put options would expire worthless, hence we would lose the entire premium paid i.e. $32+28=60$. Do note, this also happens to be the maximum loss the strategy would suffer.

## Scenario 4 - Market expires at 7900, 8100.

Both the options expire worthless at 7900 and 8100 . Hence we would lose the entire premium paid i.e. 60 .

## Scenarios 5 - Market expires at 8160 (upper breakeven)

At 8160 , the 8100 Call option has an intrinsic value of 60 , the gains in the call option would offset the loss incurred against the premium paid towards the call and put options.

## Scenarios 6 - Market expires at 8300 (much higher than the CE strike)

Clearly at 8300 , the 8100 -call option would have an intrinsic value of 200 points; therefore, the option would make 200 points. After adjusting for the combined premium paid of 60 points, we would be left with 140 points profit. Notice the symmetry of payoff above the upper and below the lower breakeven points.

Here is a table which contains various other market expiry scenarios and the eventual payoff at these expiry levels -

| Market Expiry | CE_IV | Pp | CE Payoff | PE_IV | pp | PE_Payoff | Strategy Payoff |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7000 | 0 | -32 | -32 | 700 | -28 | 672 | 640 |
| 7100 | 0 | -32 | -32 | 600 | -28 | 572 | 540 |
| 7200 | 0 | . 32 | -32 | 500 | -28 | 472 | 440 |
| 7300 | 0 | -32 | -32 | 400 | -28 | 372 | 340 |
| 7400 | 0 | -32 | -32 | 300 | -28 | 272 | 240 |
| 7500 | 0 | -32 | -32 | 200 | -28 | 172 | 140 |
| 7600 | 0 | -32 | -32 | 100 | -28 | 72 | 40 |
| 7700 | 0 | -32 | -32 | 0 | -28 | $-28$ | -60 |
| 7800 | 0 | -32 | -32 | 0 | -28 | -28 | -60 |
| 7900 | 0 | -32 | -32 | 0 | -28 | $-28$ | -60 |
| 8000 | 0 | -32 | -32 | 0 | . 28 | -28 | -60 |
| 8100 | 0 | -32 | -32 | 0 | -28 | -28 | -60 |
| 8200 | 100 | -32 | 68 | 0 | -28 | -28 | 40 |
| 8300 | 200 | -32 | 168 | 0 | -28 | $-28$ | 140 |
| 8400 | 300 | -32 | 268 | 0 | -28 | -28 | 240 |
| 8500 | 400 | -32. | 368 | 0 | -28 | -28 | 340 |
| 8600 | 500 | -32 | 468 | 0 | -28 | -28 | 440 |
| 8700 | 600 | -32 | 568 | 0 | -28 | -28 | 540 |
| 8800 | 700 | -32 | 668 | 0 | -28 | -28 | 640 |

We can plot the strategy payoff to visualize the payoff diagram of the strangle -


## The Short Strangle

The execution of a short strangle is the exact opposite of the long strangle. One needs to sell OTM Call and Put options which are equidistant from the ATM strike. In fact you would short the 'strangle' for the exact opposite reasons as to why you go long strangle.

I've used the same strikes (the one used in long strangle example) for the short strangle example. Instead of buying these options, you would sell these OTM options to set up a short strangle. Here is the payoff table of the short strangle -

| Market Expiry | CE_IV | pp | CE Payoff | PE_IV | pp | PE_Payoff | Strategy Payoff |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7000 | 0 | 32 | 32 | 700 | 28 | -672 | -640 |
| 7100 | 0 | 32 | 32 | 600 | 28 | -572 | -540 |
| 7200 | 0 | 32 | 32 | 500 | 28 | -472 | -440 |
| 7300 | 0 | 32 | 32 | 400 | 28 | . 372 | -340 |
| 7400 | 0 | 32 | 32 | 300 | 28 | -272 | -240 |
| 7500 | 0 | 32 | 32 | 200 | 28 | $-172$ | -140 |
| 7600 | 0 | 32 | 32 | 100 | 28 | -72 | -40 |
| 7700 | 0 | 32 | 32 | 0 | 28 | 28 | 60 |
| 7800 | 0 | 32 | 32 | 0 | 28 | 28 | 60 |
| 7900 | 0 | 32 | 32 | 0 | 28 | 28 | 60 |
| 8000 | 0 | 32 | 32 | 0 | 28 | 28 | 60 |
| 8100 | 0 | 32 | 32 | 0 | 28 | 28 | 60 |
| 8200 | 100 | 32 | -68 | 0 | 28 | 28 | -40 |
| 8300 | 200 | 32 | -168 | 0 | 28 | 28 | -140 |
| 8400 | 300 | 32 | -268 | 0 | 28 | 28 | $-240$ |
| 8500 | 400 | 32 | -368 | 0 | 28 | 28 | -340 |
| 8600 | 500 | 32 | -458 | 0 | 28 | 28 | -440 |
| 8700 | 600 | 32 | -568 | 0 | 28 | 28 | -540 |
| 8800 | 700 | 32 | -668 | 0 | 28 | 28 | -640 |

As you can notice, the strategy results in a loss as and when the market moves in any particular direction. However, the strategy remains profitable between the lower and upper breakeven points. Recall -

- Upper breakeven point is at 8160
- Lower breakeven point is at 7640
- Max profit is net premium received, which is 60 points

In other words, you get to take home 60 points as long as the market stays within 7640 and 8160. In my opinion this is a fantastic proposition. More often than not market stays within certain trading ranges and therefore the market presents such beautiful trading opportunities.

So, here is something for you to think about - identify stocks which are in a trading range, typically stocks in a trading range form double/triple tops and bottom. Setup the 'strangle' by writing strikes which are outside the upper and lower range. When you write strangles in this backdrop make sure you watch closely for breakouts or breakdowns.

Anyway, here is the payoff graph of the short strangle -


As you can notice -

1. The payoff of the short strangle looks exactly opposite of the long strangle
2. The profits are restricted to the extent of the net premium received
3. The profits are maximum as long as the stock stays within the two strike prices
4. The losses are potentially unlimited.

## Taxation

You can classify yourself as an Investor if you hold equity investments for more than 1 year and show income as long term capital gain (LTCG).

You can also consider yourself an investor and gains as short-term capital gains (STCG) if your holding period is more than 1 day and less than 1 year. We also discussed how it is best to show your capital gains as a business income if the frequency of trades is higher or if investing/trading is your primary source of income.

In this chapter we will discuss all aspects of taxation when trading is declared as a business income, which can be categorized either as:

1. Speculative business income - Income from intraday equity trading is considered as speculative. It is considered as speculative as you would be trading without the intention of taking delivery of the contract.
2. Non-speculative business income - Income from trading F\&O (both intraday and overnight) on all the exchanges are considered as non-speculative business income as it has been specifically defined this way. $\mathrm{F} \& \mathrm{O}$ is also considered as non-speculative as these instruments are used for hedging and also for taking/giving delivery of the underlying contracts. Even though currently almost all equity, currency, \& commodity contracts in India are cash-settled, but by definition, they give rise to giving/taking delivery (there are a few commodity futures contracts like gold and almost all Agri-commodity contracts with the delivery option to it).Income from shorter-term equity delivery based trades (held for between 1 day to 1 year) are also best to be considered as non-speculative business income if the frequency of such trades executed by you is high or if investing/trading in the markets is your main source of income.

## Tax Loss Harvesting

Towards the end of a financial year, you might have realized profits and unrealized losses. If you let it be, you will pay taxes on realized profits and carry forward your unrealized losses
to next year. This would mean a higher tax outgo immediately, and hence any interest that you could have earned on that capital goes away as taxes.

You can very easily postpone this tax outgo by booking the unrealized loss, and immediately getting back on the same trade. By booking the loss, the tax liability for the financial year would reduce.

While there is no explicit regulation in India that disallows tax loss harvesting. In the US, if stocks are sold and bought back within 30 days just to reduce taxes on realized gains, they are called wash sales, and taxes are disallowed to be offset. Given this, it is advisable for clients trading in India to consult a CA while filing income tax returns, as they could potentially be questioned by the income tax authorities during tax scrutiny if the same stock is sold and bought back just to save on the taxes.

## BTST OR ATST - Is It Speculative or Non-Speculative

BTST (Buy today Sell tomorrow) or ATST (Acquire today sell tomorrow) is quite popular among equity traders. It is called BTST when you buy today and sell tomorrow without taking delivery of the stock.

Since you are not taking delivery, should it be considered as speculative similar to intraday equity trading?

There are both schools of thought, one which considers it to be speculative because no delivery was taken. However, I come from the second school, which is to consider it as nonspeculative/STCG as the exchange itself charges the security transaction tax (STT) for BTST trades similar to regular delivery-based trades. A factor to consider is if such BTST trades are done just a few times in the year show it as STCG, but if done frequently it is best to show it as speculative business income.

## Advance Tax

Paying advance tax is important when you have a business income. Like we discussed in the previous chapter, the advance tax has to be paid every year $-15 \%$ by $15^{\text {th }}$ Jun, $45 \%$ by $15^{\text {th }}$ Sep, $75 \%$ by $15^{\text {th }} \mathrm{Dec}$, and $100 \%$ by $15^{\text {th }}$ March. I guess the question that will arise is $\%$ of what?

The \% of the annual tax that you are likely to pay, yes! When you have a business income you have to pay most of your taxes before the year ends on March $31^{\text {st }}$. The issue with trading as a business is that you might have a great year until September, but you can't extrapolate this to say that you will continue to earn at the same rate until the end of the financial year. It could be more or less.

But everything said and done, you are required to pay that advance tax, otherwise, the penalty is $12 \%$ annualized for the time period it was not paid for. The best way to pay advance tax is by paying tax for that particular time period, so Sept $15^{\text {th }}$ pay for what was earned until then, and by March $15^{\text {th }}$ close to the year-end, you can make all balance payments as you would have a fair idea on how you will close the year. You can claim a tax refund if you end up paying more tax than what was required to pay for the financial year. Tax refunds are processed in a quick time by the IT departments.

