TECHNICAL ANALYSIS

Technical Analysis is the practice of anticipating price changes of a financial instrument (such as shares) or market as a whole by analyzing historic price and volume and looking for patterns and their relationships. In simple words, technical analysis forecasts the direction of prices of securities through the study of past market data, primarily price and volume. It is the art of gauging the trends, momentum and the overall sentiment behind the price movement of a stock or any other security, thus, helping investors to make the investment decision. However, no single indicator has ever been found to be completely conclusive.

Charts are the key tool used in technical analysis.

BASIC PRINCIPLES OF TECHNICAL ANALYSIS

The basic principles on which technical analysis is based on may be summarized follows:

a) The most important principle and assumption of technical analysis is that the market discounts everything. It signifies that the price at which the security is quoted represents the hopes, fear, inside information and all other fundamental factors.

b) The market moves in trends and the trends when established, has a tendency to continue further for some time and then reverse at some other point of time.

c) History keeps repeating itself over and again.

d) The market value of a security is related to demand and supply factors operating in the market.

e) Trends in stock prices have been seen to change when there is a shift in the demand and supply factors.

f) There are both rational and irrational factors which surround the supply and demand factors of a security.

g) The shifts in demand and supply can be detected through charts prepared specially to show market action.

h) Patterns which are projected by charts record price movement and these recorded patterns are used by analysts to make forecasts about the movement of prices in future.

i) Action and reaction resulting from buying and selling pressures lead to corrections and rallies to the major up trends and downtrends respectively.

Fundamental Analysis focuses on:

- Fundamental analysis is a method of forecasting the future price based on strength of business and economic factors.
- Demand & Supply
- Seasonal cycles
- Financial health
- Government policies
- Long term goals of investors

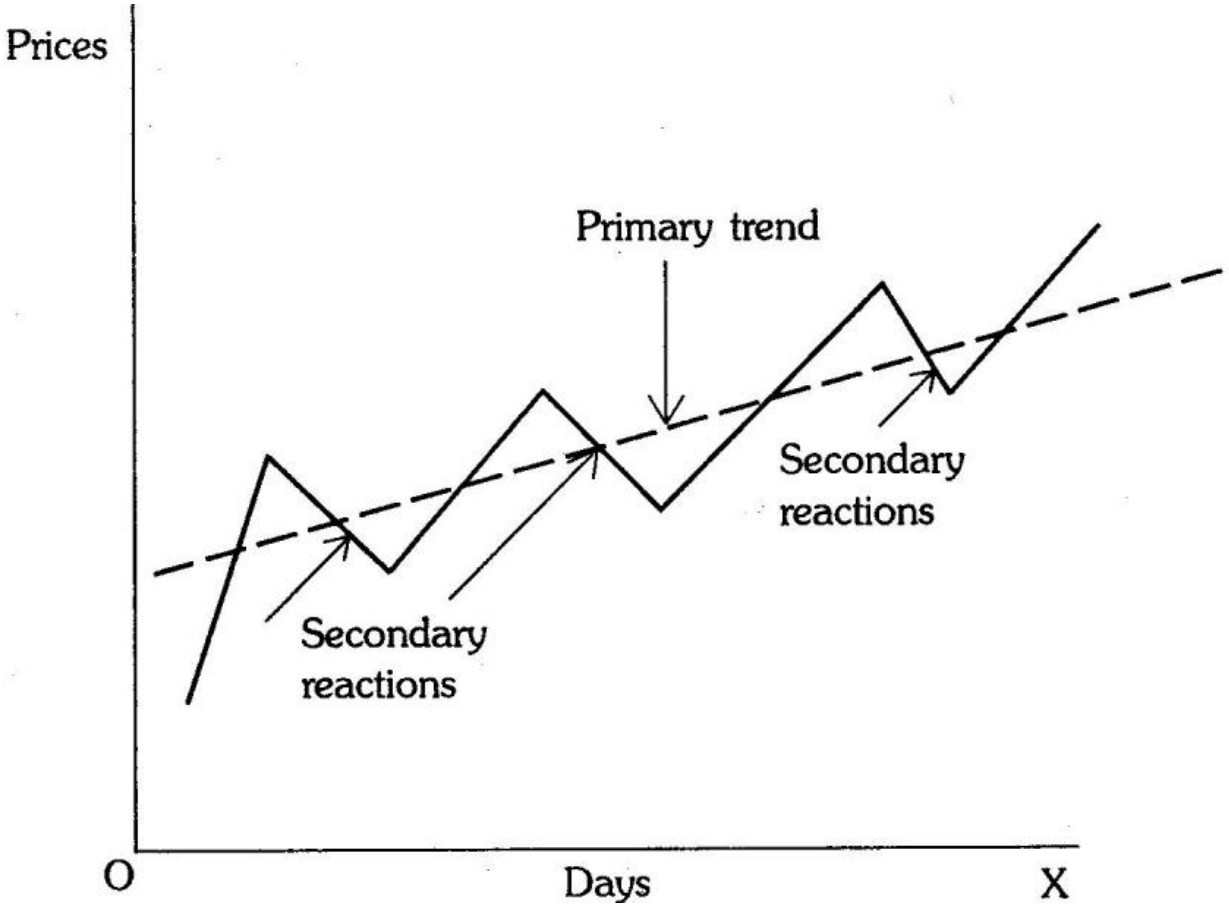
Technical Analysis focuses on:

- Technical analysis is a method of predicting price movements by studying charts of past market action.
- Price
- Volume
- Open interest (futures only)
- Short to long term goals of investors

DOW THEORY

Charles Dow who was the editor in of a Wall Street Journal formulated this theory. This theory was presented in a series of editorials in the Wall Street Journal during 1900-1902.According to him stock market does not move on a random basis but is influenced by three distinct cyclical trends which are simultaneous in nature. These movements are primary movements, secondary movements and minor movements.

The primary movement has a long cycle which carries the entire market up or down. Secondary reactions are opposite reactions to the primary movement and it is quoted as the restraining force on the primary movement. This is expected to be present in the market only for a short while. Minor movements are nothing but the day today fluctuations in the market. These three movements have been compared to the tides, the waves and the ripples in the ocean.



TECHNICAL INDICATORS

Technical indicators are series of data points plotted as a chart pattern derived using mathematical calculations based on historic price and volume of a security to forecast the market trend. They can be categorized based on their common characteristics namely price, volume and

oscillators indicators, where price indicators help gauge the overall price movement trends while volume indicators help gauge the overall sentiment of the market.

It is important to note that reading the indicators is more of an art than science because the same indicator may exhibit different behavioural patterns on different securities. Through in-depth study and experience the expertise to read various indicators correctly develops over time.

PRICE CHART

A price chart is a sequence of prices plotted over a specific time frame. In statistical terms, charts are referred to as time series plots. On the chart, the y-axis (vertical axis) represents the price scale and the x-axis (horizontal axis) represents the time scale.

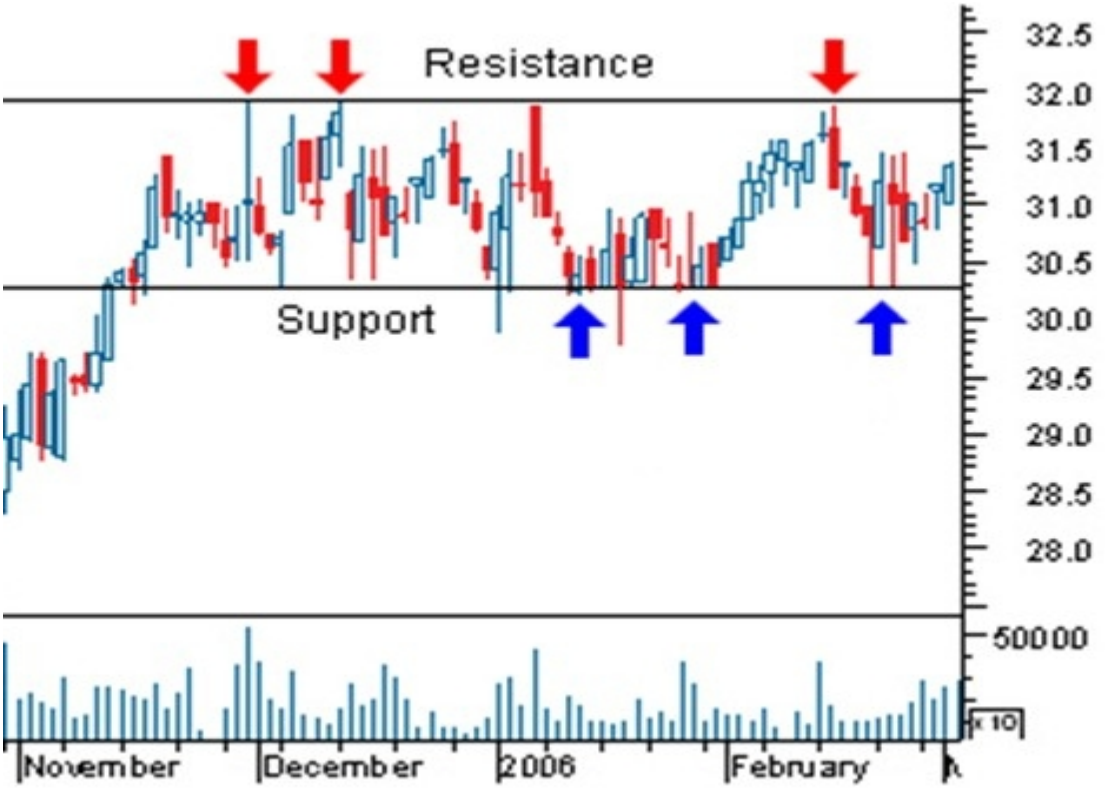
VOLUME

Volume is simply the number of shares or contracts that trade over a given period of time, usually a day. To determine the movement of the volume (up or down), volume bars can usually be found at the bottom of any chart. Volume bars illustrate how many shares have traded per period and show trends in the same way that prices do. Volume is an important aspect of technical analysis because it is used to confirm trends and chart patterns. Any price movement up or down with relatively high volume is seen as stronger. Volume is closely monitored by technicians and chartists to form ideas on upcoming trend reversals. If volume is starting to decrease in an uptrend, it is usually a sign that the upward run is about to end.

SUPPORT AND RESISTANCE LEVELS

Support and resistance are two very commonly used terms and most highly discussed attributes of technical analysis. Just like the general rule, in technical analysis also increased supply results in a bearish market and increased demand results in a bullish market.

Support is the price at which demand is thought to be strong enough to prevent the price from declining further. This happens when the prices have reached a point when the security gets cheaper and buyers' interest is created to enter the security and sellers are less inclined to sell the same. Whereas resistance is the price level at which sellers are expected to enter the market in sufficient numbers to take control from buyers which prevents the prices of security from rising further.



CHARTS

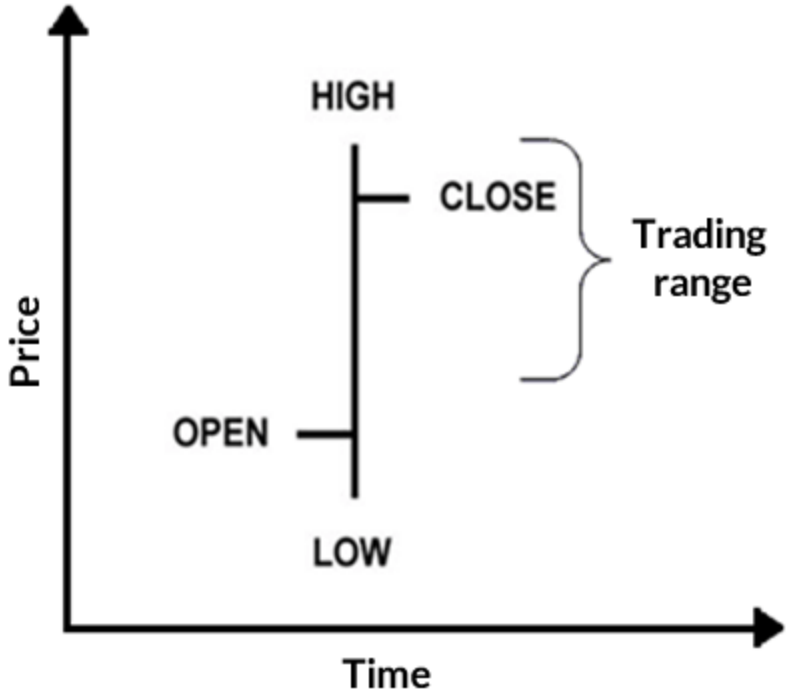
Charts are graphical displays of price information of securities over time and are the most fundamental aspects of technical analysis. While technical analysis uses a wide variety of charts that show price over time, there are four key chart types that are used by investors and traders - the line chart, the bar chart, the candlestick chart and the point and figure chart. Which chart type the technical analyst would use depends on what kind of information they are seeking and their individual skill levels.

BAR CHARTS

Bar charts are used to illustrate movements in the price of a financial instrument for a time period.

In a bar chart the open, close, high, and low prices of stocks or other financial instruments are embedded in bars which are plotted as a series of prices over a specific time period. It is made up of series of vertical lines that represent each data point. As seen on the chart, the top of the vertical line indicates the day's high price of the security, and the bottom represents the lowest price. The closing price is displayed on the right side of the bar, and the opening price is shown on the left side of the bar.

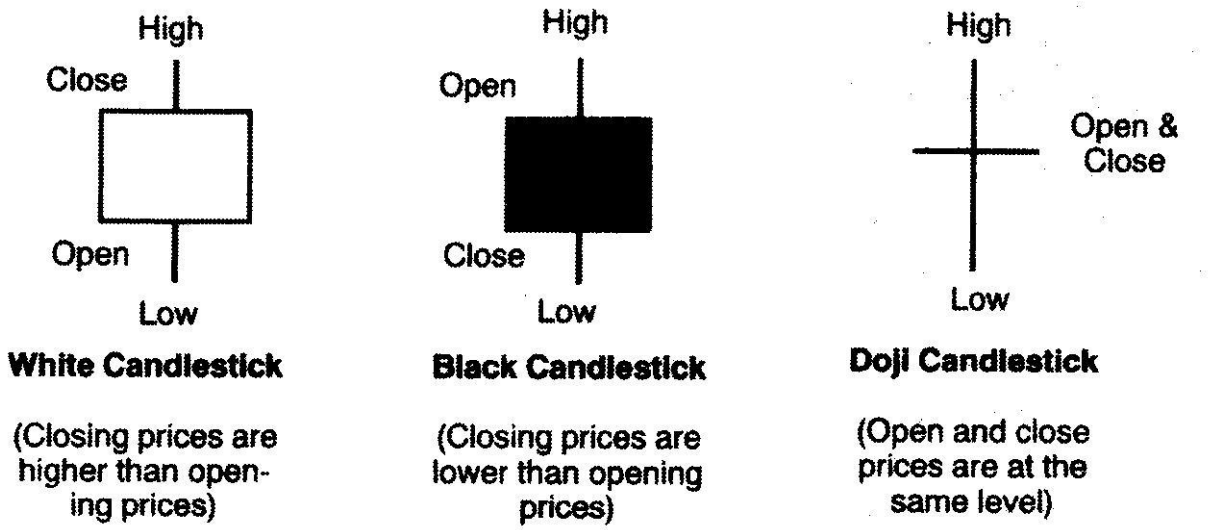
A price bar shows the opening price of the financial instrument, which is the price at the beginning of the time period, as a left horizontal line, and the closing price, which is the last price for the period, as a right horizontal line. These horizontal lines are also called tick marks.



CANDLESTICK CHARTS

Candlestick Chart is a chart that displays the opening, high, low, and closing prices of a security for a single day. The wide part or the box of the candlestick is called “the body” or the “real body” and it shows whether the closing price of the security was higher (black/red) or lower (white/green) than the opening price. The long thin lines above and below the body represent the high/low range and are called “shadows”, also referred to as “wicks” and “tails”. The body on candlestick charts have hollow and filled candlesticks. Basically hollow candlesticks, where the close is greater than the open, indicate buying pressure whereas filled candlesticks, where the close is less than the open, indicate selling pressure on the security/market under analysis.

Candlesticks show the impact of investor sentiments on the price of the security and are used by traders to determine when to enter or exit trades.



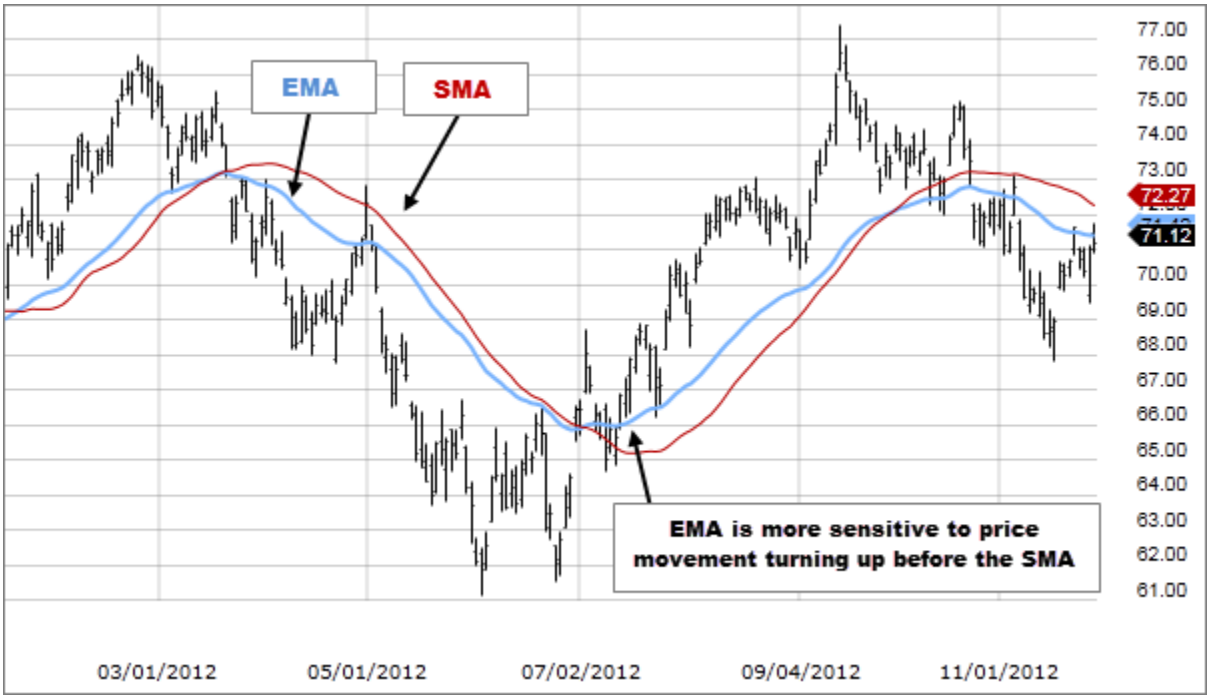
MOVING AVERAGES

A Moving Average is an indicator that shows the average value of a security's price over a period of time. When calculating a moving average, a mathematical analysis of the security's average value over a predetermined time period is made. As the security's price changes, its average price moves up or down. Moving averages smooth the price data to form a trend following indicator. They do not predict price direction, but rather define the current direction with a lag. Moving averages lag because they are based on past prices. Despite this lag, moving averages help smooth price action and filter out the noise. Simple Moving Average (SMA) is one of the most popular types of moving averages. Simple Moving Average can be used to identify the direction of the trend or define potential support and resistance levels.

Simple moving average (SMA): A simple moving average is formed by computing the average price of a security over a specific number of periods. Most moving averages are based on closing prices. For example, a 5-day simple moving average is the five day sum of closing prices divided by five. As its name implies, a moving average is an average that moves. Old data is dropped as new data comes available. This causes the average to move along the time scale.

Exponential moving average (SMA): Exponential moving average applies more weights to current data. It is more sensitive to prices than Simple moving average. When EMA rises, investors consider buying when prices fall below EMA. Conversely, When EMA falls, investors consider selling when prices rise above EMA.

EMA= (K*(C-P)) + p
Where,
P = Previous period EMA
C = Current Price
K = Exponential smoothing constant



Crossover: Two moving averages can be used together to generate crossover signals. A bullish crossover occurs when the shorter moving average crosses above the longer moving average. This is also known as a golden cross. A bearish crossover occurs when the shorter moving average crosses below the longer moving average. This is known as a dead cross. These signals work great when a good trend takes hold. However, a moving average crossover system will produce lots of whipsaws in the absence of a strong trend.

RELATIVE STRENGTH INDEX (RSI)

RSI is one of the most commonly used technical indicators that compares the magnitude of recent gains to recent losses in an attempt to determine overbought and oversold conditions of a security. In simple words RSI interprets the strength of a stock by comparing between the days that the stock closes up and the days it finishes down.

RSI is calculated using the following formula: RSI = 100 - 100/(1 + RS*)

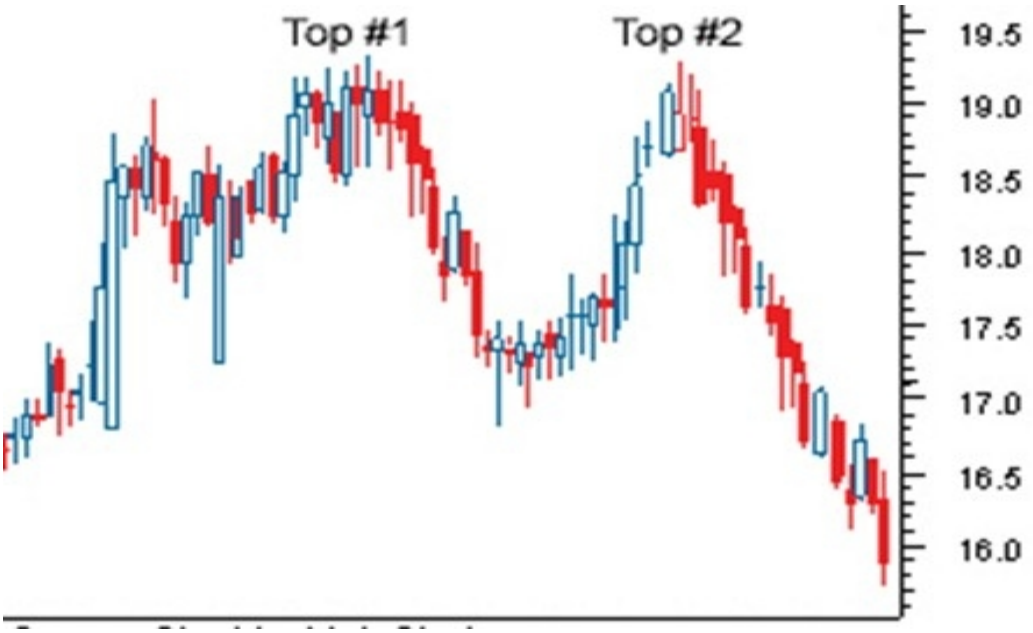
* RS = Average of x days' up closes / Average of x days' down closes

RSI ranges from 0 to 100. Generally when RSI reaches around 20, it is considered to be an oversold market signaling it is time to buy, whereas when RSI reaches around 80 it is considered overbought and it indicates a sell signal. However, this is not a hard and fast rule and the trader must consider other factors when making a decision.

COMMONLY USED CHART PATTERNS

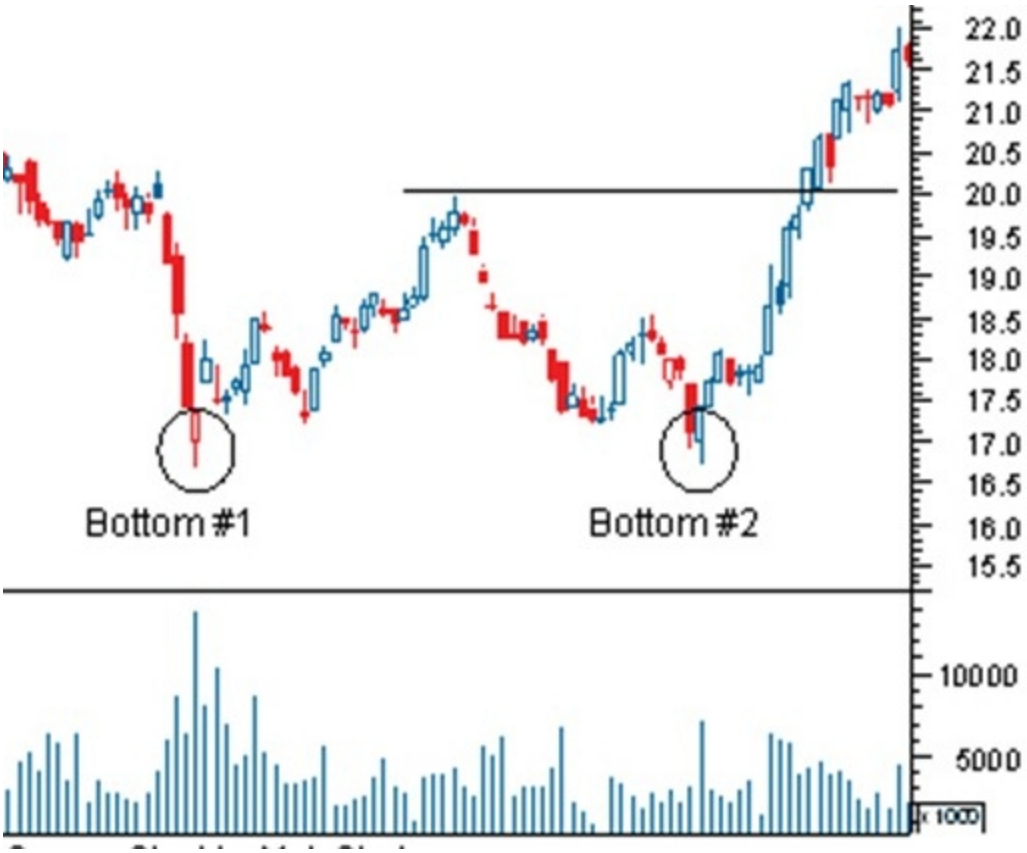
Double Top

The double top is a frequent price formation at the end of a bull market. It appears as two consecutive peaks of approximately the same price. The two peaks are separated by a minimum in price, a valley. The price level of this minimum is called the neck line of the formation. The formation is completed and confirmed when the price falls below the neck line, indicating that further price decline is imminent.



Double bottom

A double bottom is the opposite pattern of the double top signaling a declining market. The pattern closely resembles the shape of a 'W' and is formed by two price minima separated by local peak defining the neck line. The formation is completed and confirmed when the price rises above the neck line, indicating that further price rise is imminent. However to confirm this pattern the security needs to break through the support line to signal a reversal in the downward trend and should be done on higher volume.



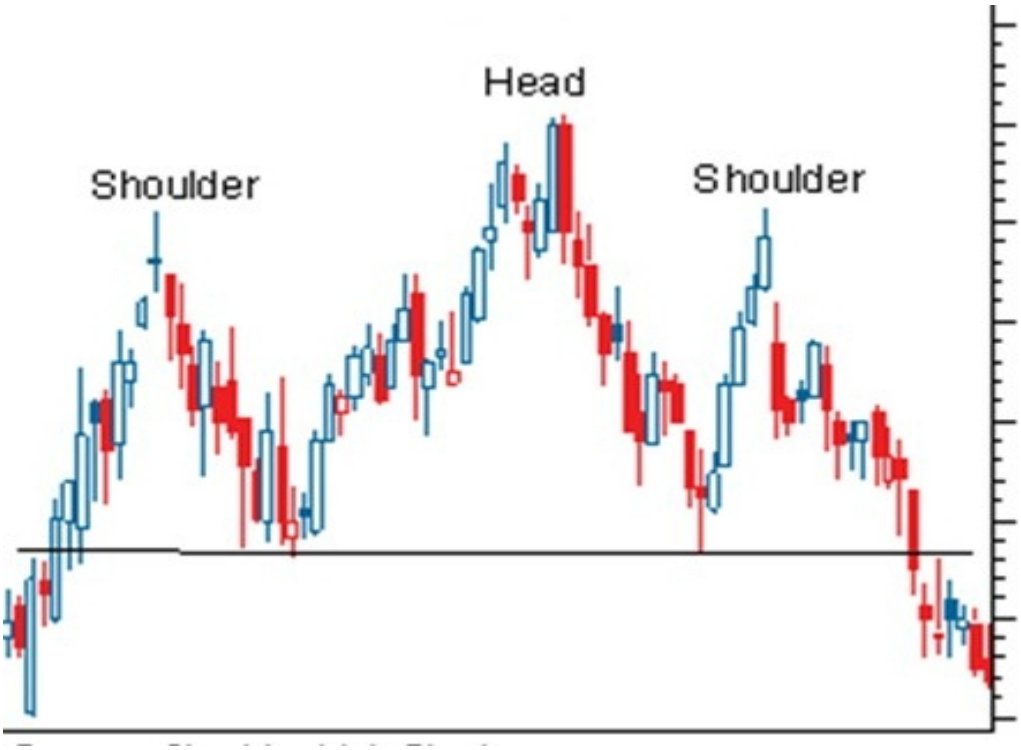
Head and shoulders

The head and shoulders chart pattern is one of the most popularly used and most reliable pattern in technical analysis. It is a reversal pattern whose formation consists of a left shoulder, a head, and a right shoulder and a line drawn as the neckline.

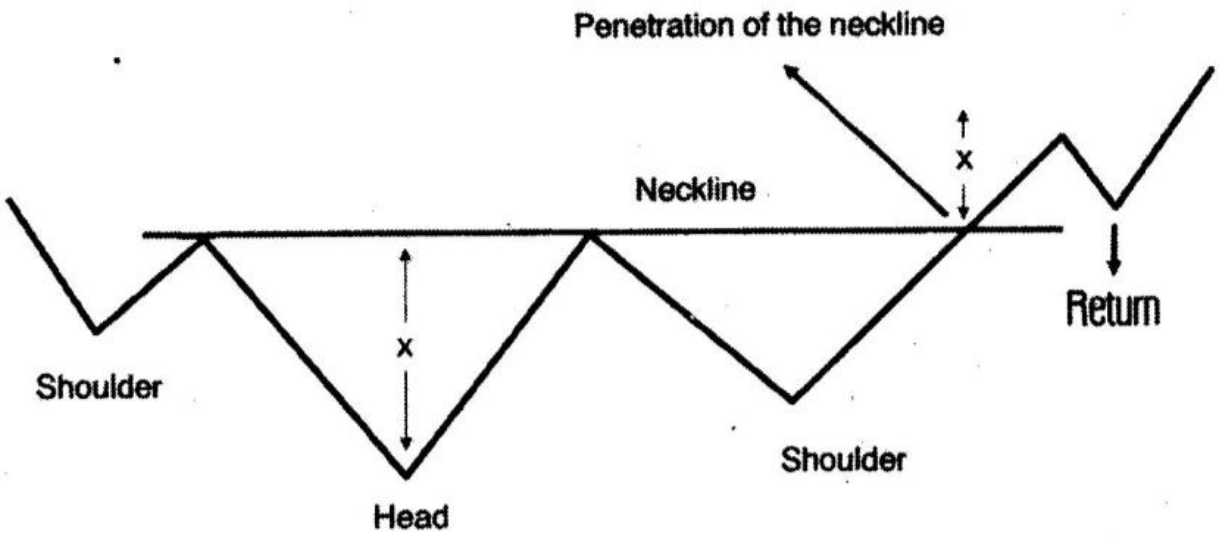
The left shoulder is formed at the end of an extensive move during which volume is noticeably high. After the peak of the left shoulder is formed, there is a subsequent reaction and prices slide down to a certain extent which generally occurs on low volume. The prices rally up to form the head with normal or heavy volume and subsequent reaction downward is accompanied with lesser volume.

The right shoulder is formed when prices move up again but remain below the central peak called the Head and fall down nearly equal to the first valley between the left shoulder and the

head or at least below the peak of the left shoulder. Volume is lesser in the right shoulder formation compared to the left shoulder and the head formation. A neckline is drawn across the bottoms of the left shoulder, the head and the right shoulder. When prices break through this neckline and keep on falling after forming the right shoulder, it is the ultimate confirmation of the completion of the Head and Shoulders Top formation. It is quite possible that prices pull back to touch the neckline before continuing their declining trend.

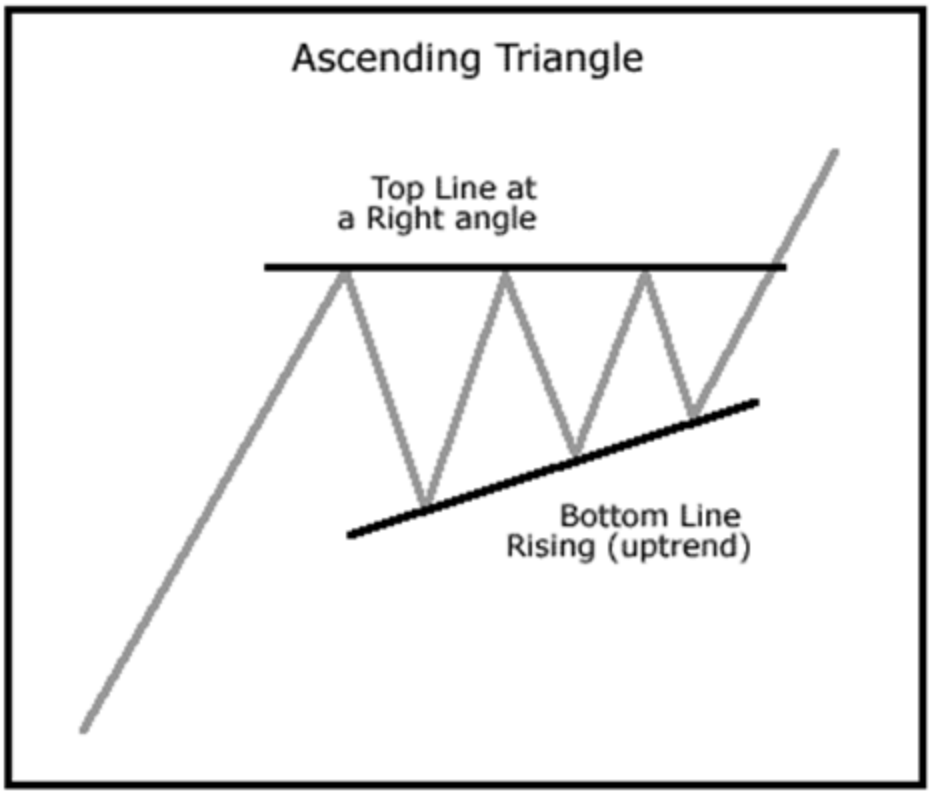


Inverse Head and Shoulder Pattern

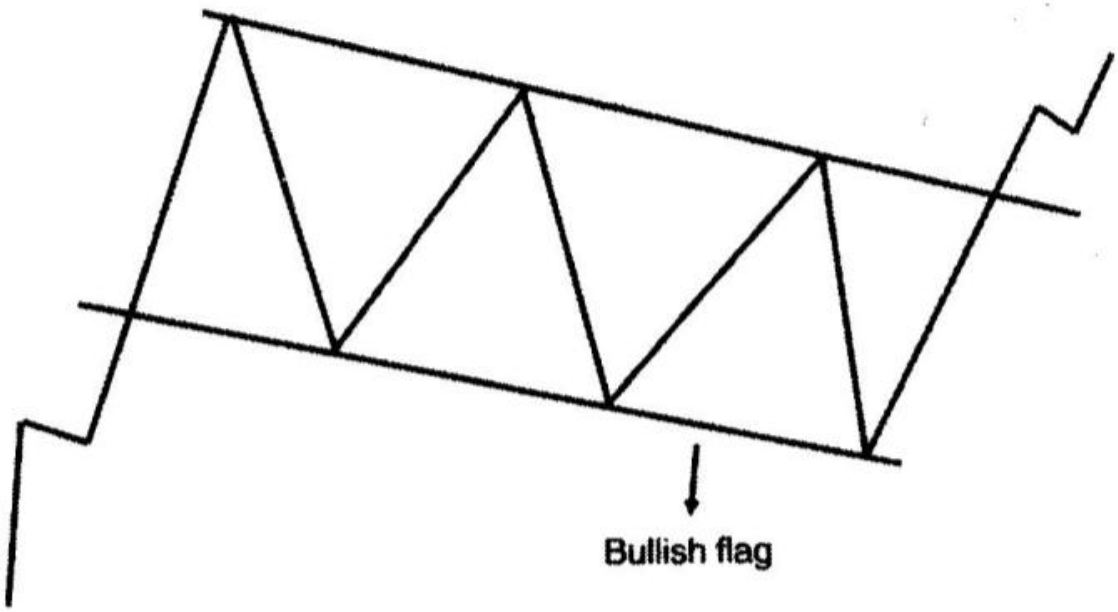


Ascending Triangle Pattern

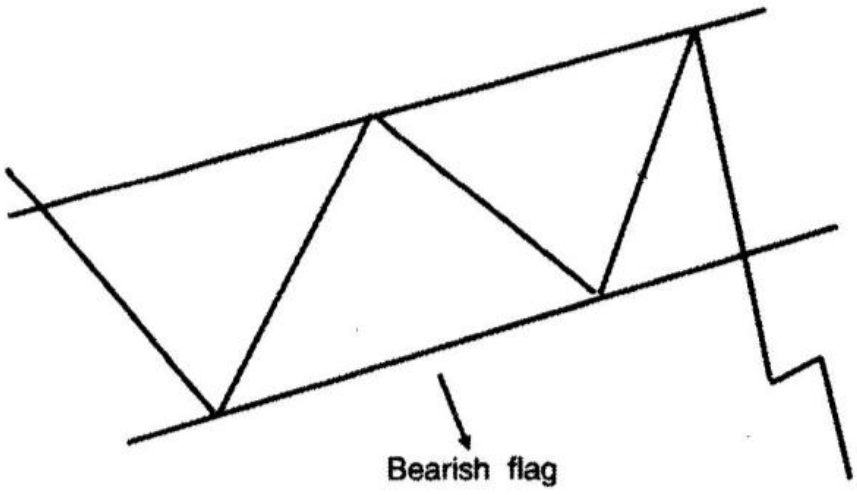
An ascending triangle is considered a bullish continuation signal. It is considered a consolidation pattern prior to continuation of the uptrend. An Ascending Continuation Triangle shows two converging trend lines. The lower trend line is rising and the upper trend line is horizontal. This pattern occurs because the lows are moving increasingly higher but the highs are maintaining a constant price level. The pattern will have two highs and two lows, all touching the trend lines. This pattern is confirmed when the price breaks out of the triangle formation to close above the upper trend line. Volume is an important factor to consider. When breakout occurs, there should be a noticeable increase in volume.



Flags and Pennants are the other commonly found chart patterns .Both are continuation patterns and in general is preceded by either a sharp rise or fall in the value of the scrip. These patterns are considered to be one among the most reliable chart patterns.

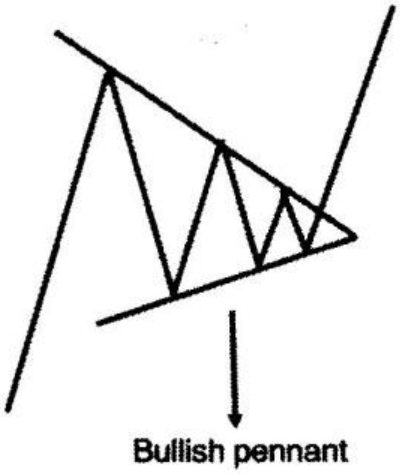


This formation looks like a parallelogram, with two trendlines stooping against the trend.

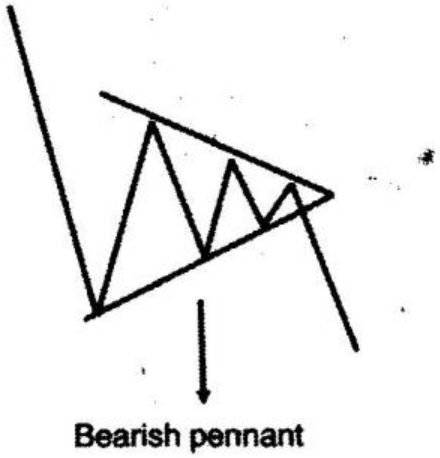


In a bearish flag, the two trendlines would be stooping upwards.

Pennant



Bullish pennant



Bearish pennant