

Technical Analysis

What is Technical Analysis

- Technical analysis is a process of identifying trading opportunities by analyzing statistical trends gathered from trading activity, such as price movement and volume.
- The job of TA is to identify a pattern and take a position accordingly.
- Technical Analysis is best for finding short term ideas for trading.
- Technical Analysis study can be applied on stocks, crypto, forex etc asset classes.

Lets Understand with Analogy

Technical Analysis consists of

- Candlestick Patterns
- Chart Patterns
- Moving Averages
- Support & Resistance
- Indicators
- Dow Theory
- Swing Trading Strategies

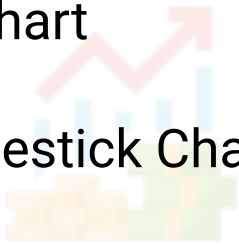


Key Assumptions of Technical Analysis

- Markets discounts everything
- The “How” is more important than “Why”
- Price moves in Trends
- History tends to repeat itself
- Buy Strength & Sell Weakness
- Be Flexible with Patterns
- Look for prior trend

Types of Charts

- Line Chart
- Bar Chart
- Candlestick Chart
- Heikin-Ashi Chart



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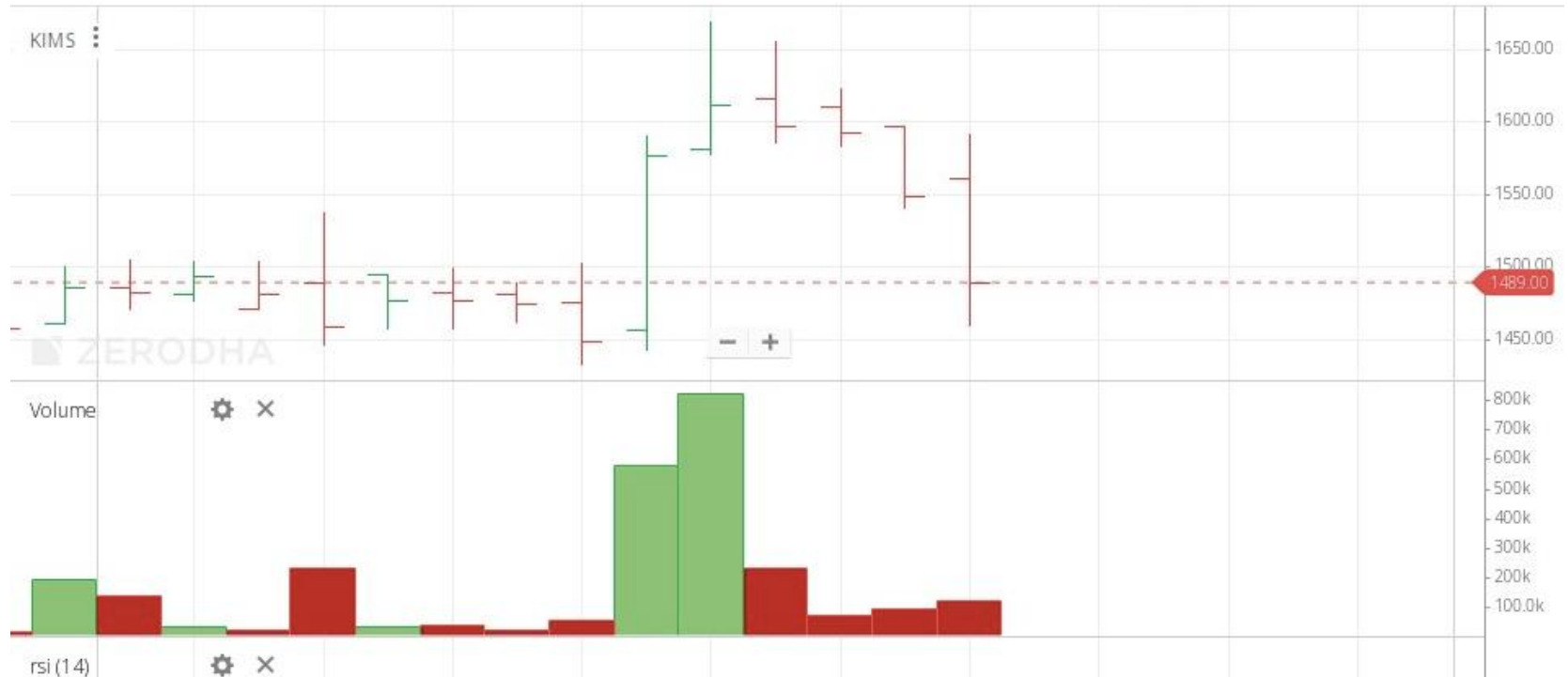
Line Chart

- A line chart is formed by connecting the data points with line. Generally each point represents only closing price of the stock. Its useful to determine the trends.



Bar Chart

- A bar chart is formed by taking 4 input points, OHLC. The vertical line define high and low and



Japanese Candlestick Pattern

- This is widely used charts for technical analysis. This use OHLC data to form a candle. We have many patterns which demonstrates the demand/supply in market.



Bullish



Bearish

Candlestick Pattern Example



Heikin-Ashi Chart

- Heikin-Ashi means average-pace. This chart is similar to normal candle sticks except it tracks range of price movements.
- The main purpose of this chart is to analyze the trends and minimize the noise.
- It used modified version of COHL
 - $\text{Close} = 1/4(\text{O} + \text{H} + \text{L} + \text{C})$
 - $\text{Open} = 1/2 (\text{Open of Previous bar} + \text{Close of previous bar})$
 - $\text{High} = \text{Max} (\text{H}, \text{O}, \text{C})$
 - $\text{Low} = \text{Min} (\text{L}, \text{O}, \text{C})$

Lets understand with practical chart.

Types of Trends

- **Uptrend**
 - When price increase and pattern makes higher highs and higher lows.
- **Downtrend**
 - When the price decreases and pattern makes lower highs and lower lows
- **Side Trend**
 - The sideways trend is formed when the price move in range bound manner.

Trend line is the line that connects all the tops and bottom in a series.

Chart Patterns

Chart patterns can be used to predict the reversal or continuation signals. The general approach is to find a pattern and use other signals to confirm a trend.

Chart Patterns are classified as

- Candlestick patterns
- Traditional Patterns

Types of Candlestick Patterns

Single Candle Sticks

Bullish

Bearish

Multiple Candle Sticks

Bullish

Bearish

The Marubozu

- Marubozu candle is formed when a candle is formed without any upper or lower shadow.
- This can appear anywhere in the charts without any prior trend.
- Avoid trading in to too short or too long candles.



Bullish



Bearish

Bullish Marubozu

Close = High

- A bullish Marubozu candle indicates that there is high buying interest from market participants bought it at every price.
- Most of the time irrespective of prior trend, this candle shows that the trend is changing due to heavy buying interest.



Open = Low

Stop Loss : Low of the Day

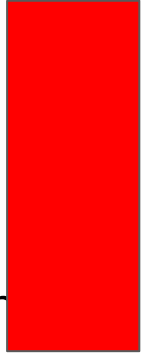
AWL ⋮



Bearish Marubozu

Open = High

- A bullish Marubozu candle indicates that there is high selling pressure, where market participants sold it at every price.
- Most of the time irrespective of prior trend, this candle shows that the trend is changing due to heavy selling interest and its turning bearish



Close = Low

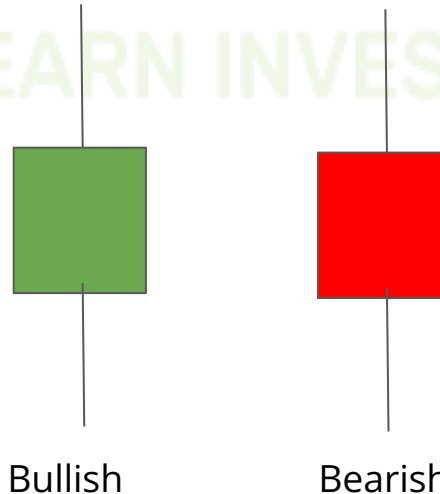
Stop Loss : High of the Day

AWL ⋮



The Spinning Top

- A spinning top is formed when candle has small body and both upper and lower shadows are almost equal.
- Spinning Top indicates both bulls and bears are unable to influence the stock trend.



The Spinning Top in Uptrend

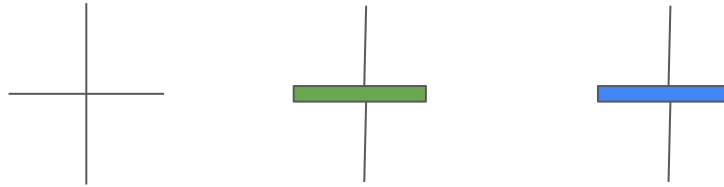


The Spinning Top in Downtrend



The Dojis

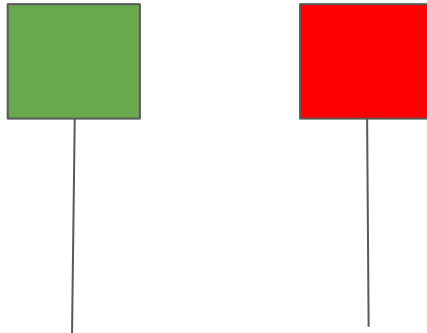
- These are similar to spinning tops but without any body or body of very small size.
- Most of the times Spinning Tops and Dojis appear in clusters indicating indecision in markets.





Umbrella

- Umbrella candle is formed when lower shadow is at least twice of the body of the candle.
- Based on the prior trend umbrella pattern is classified as “Hammer” and “Hanging Man” Pattern.



Hammer (Bullish)

- Hammer is considered or
- Hammer color can be rec
- The longer the bottom shadow the bullish the trend.



Stop Loss : Low of the hammer

Hanging Man (Bearish)

- The prior trend must be upward
- The shadow must be at least two
- It may have a small upper shadow



Stop Loss : High of the hammer

Shooting Star (Inverted Umbrella)

- Shooting Star format always form after uptrend.
- It has small body and upper shadow at least twice the body size
- The lower shadow can be a negligible size.



Example of Shooting Star



Multiple Candle Patterns



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Bullish Engulfing Pattern

- This is a 2 candlestick pattern.
- This is formed after a down trend
- The candle must be red and 2nd candle must be green.



↑
Potential
direction

Stop Loss : The stop loss can be set a lowest of Candle 1/Candle 2.

Bearish Engulfing Pattern

- This is a 2 candlestick pattern.
- This is formed after a uptrend trend
- The 1st candle must be green and 2nd candle must be red.



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Potential
direction



The Piercing Pattern

Similar to Bullish Engulfing Pattern

- This is a 2 candlestick pattern.
- This is formed after a down trend
- The 2nd candle should engulf at

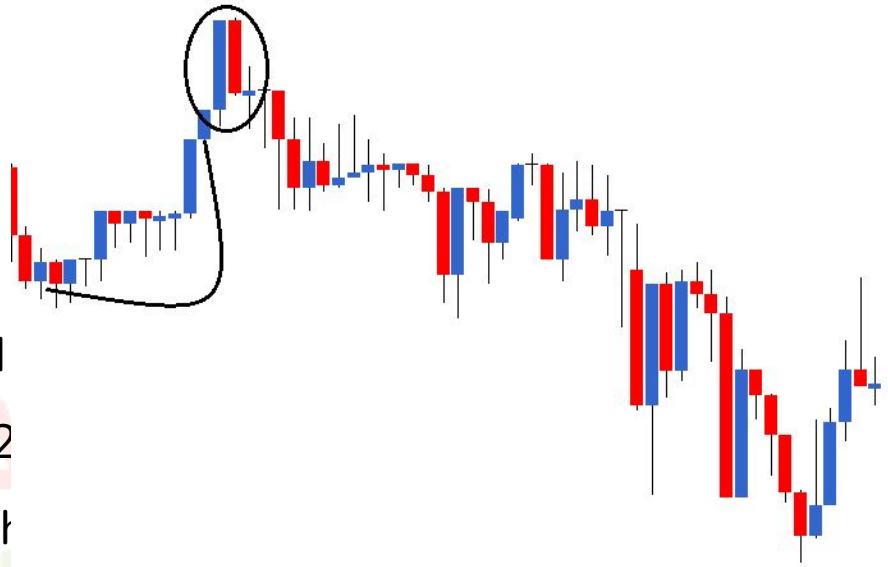


Stop Loss : The stop loss can be set a lowest of Candle 1/Candle 2.

Dark Cloud Cover

Similar to Bearish Engulfing Pattern

- This is a 2 candlestick pattern.
- This is formed after a uptrend trend
- The 1st candle must be green and 2
- The 2nd candle must engulf more th

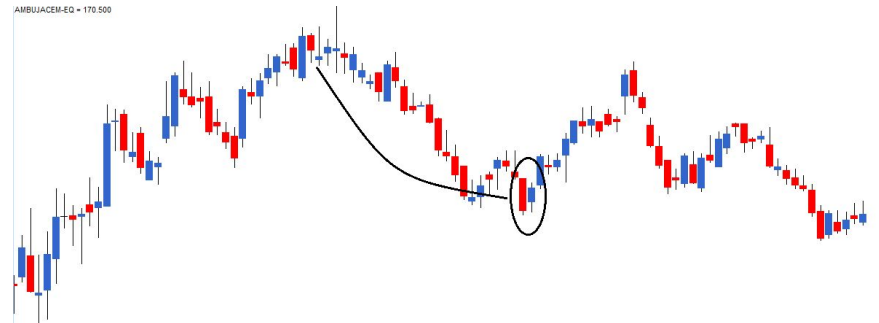


TCS Example



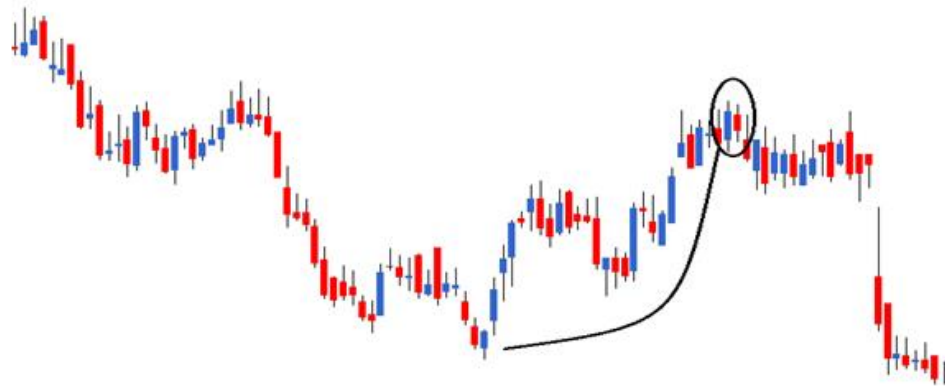
Bullish Harami Pattern

- This is a 2 candlestick pattern.
- This is formed after a down trend
- This pattern is formed with first candle as long and 2nd as short. Generally the 2nd candle will open at a higher price than previous day low.
- Both candles will be opposite color.



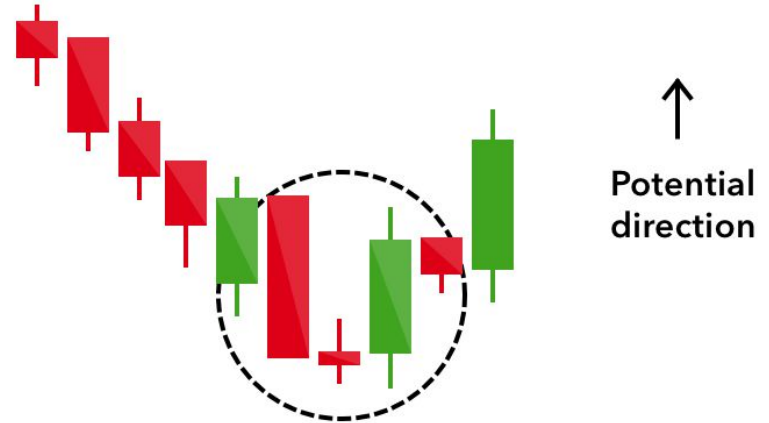
Bearish Harami Pattern

- This is a 2 candlestick pattern.
- This is formed after a uptrend trend
- This pattern is formed with first candle as long and 2nd as short.
- The open on 2nd day will be lower than previous days close.
- Both candles will be opposite color.



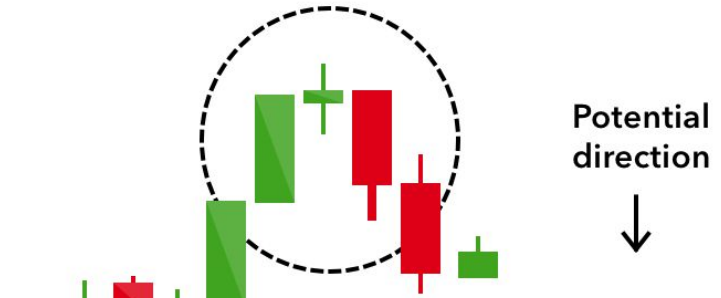
The Morning Star

- This is a 3 candlestick pattern and the pattern as shown in circle above.
- Candle 1, market in downtrend and price falls.
- Candle 2, it starts with gap down, It forms a doji/spinning top
- Candle 3, It starts with gap up and green candle is form and it closes above high of candle 1



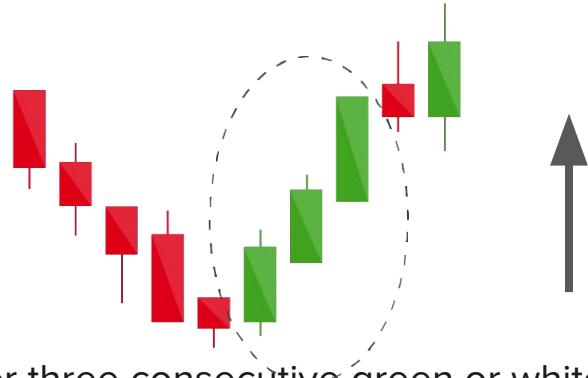
The Evening Star

- This is a 3 candlestick pattern
- Candle 1, market in in uptrenc
- Candle 2, it starts with gap up
- Candle 3, It starts with gap downward and red candle is formed.



Three White Soldiers

- This is a 3 candlestick pattern.
- This is formed after a down trend
- To identify the three white soldiers pattern, look for three consecutive green or white candlesticks. Each must open and close progressively higher than the first. The candlesticks should have big bodies and very small (or no) wicks.



Three Black Crows

- This is a 3 candlestick pattern.
- This is formed after a uptrend trend
- The three black crows candlestick pattern comprises of three consecutive long red candles with short or non-existent wicks. Each session opens at a similar price to the previous day, but selling pressures push the price lower and lower with each close.

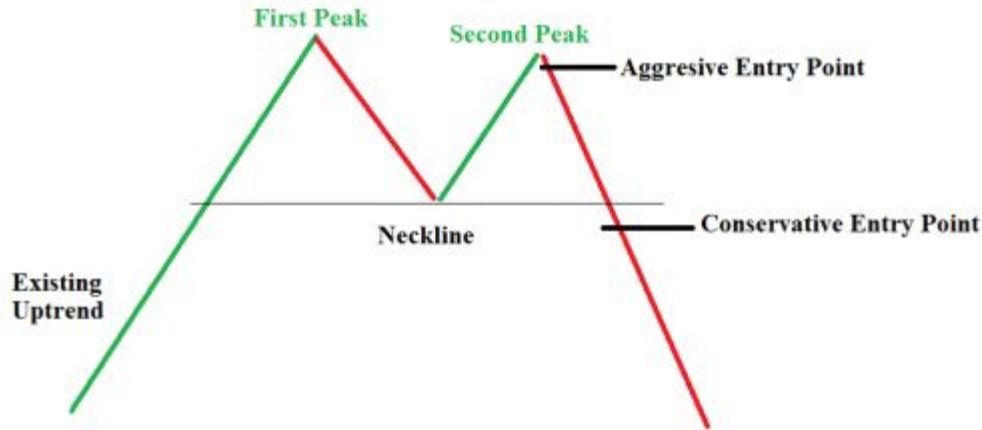


Traditional Patterns

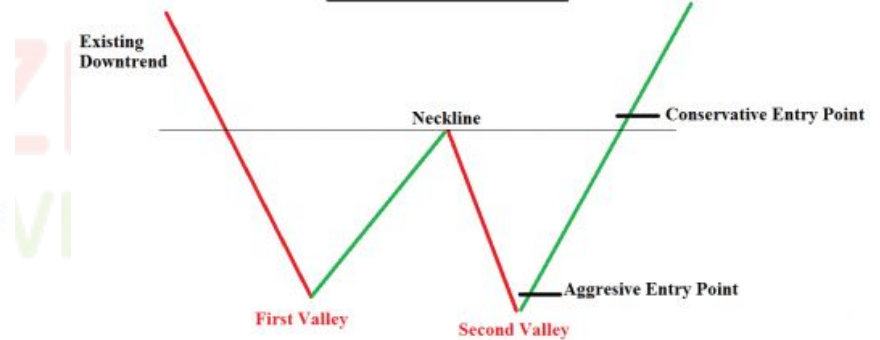
Bearish	Bullish
Double Top	Double Bottom
Triple Top	Triple Bottom
Head and Shoulder	Inverted Head & Shoulder
Rising Wedge	Falling Wedge
Bearish Rectangle	Bullish Rectangle
Bearish Flag	Bullish Flag
Bearish Symmetrical Triangle	Bullish Symmetrical Triangle
Inverted Cup and Handle	Cup and Handle
Descending Triangle	Ascending Triangle

Double Top & Double Bottom

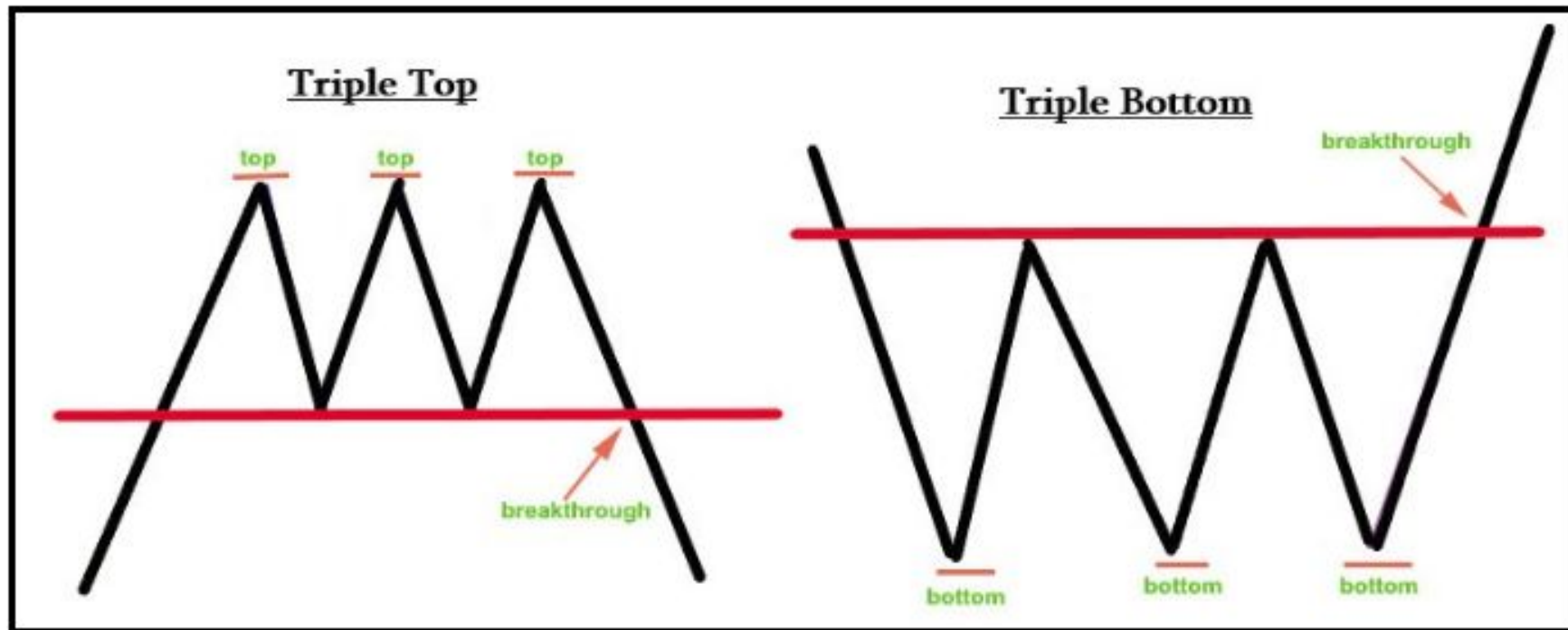
Double Top Chart Pattern



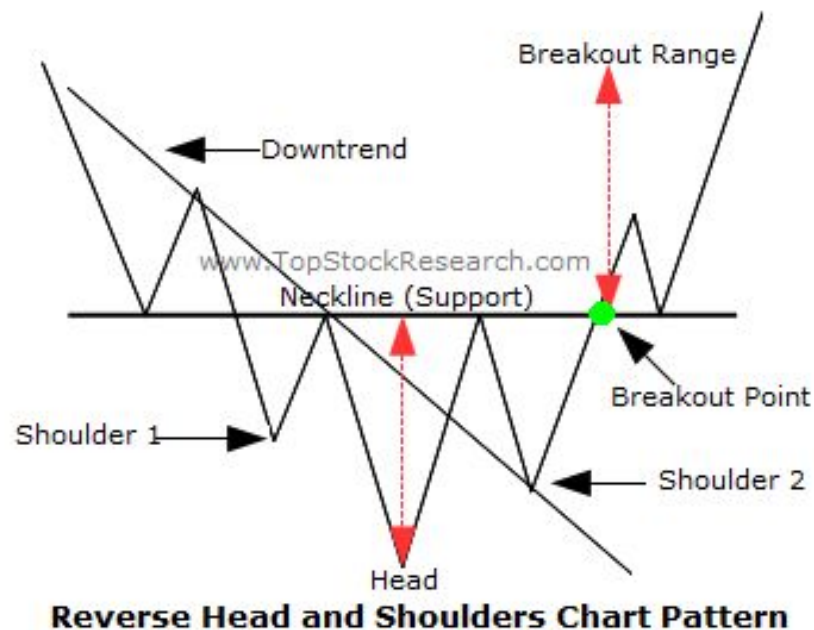
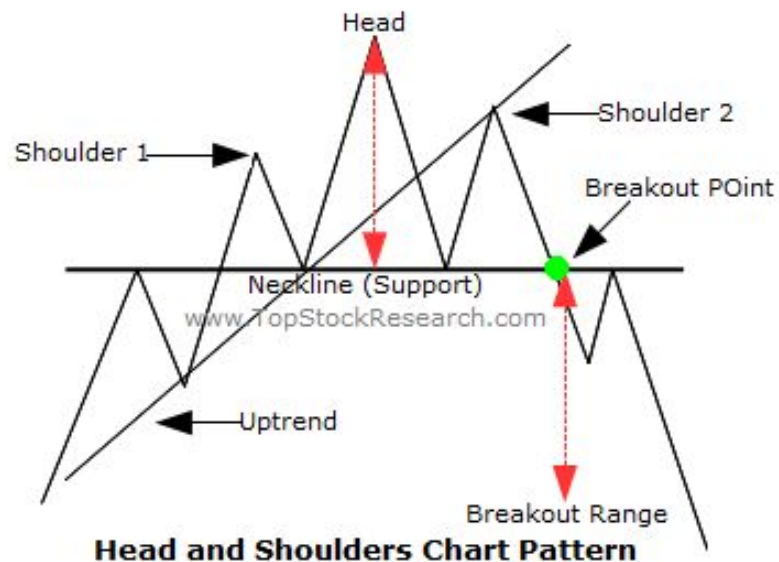
Double Bottom Chart Pattern



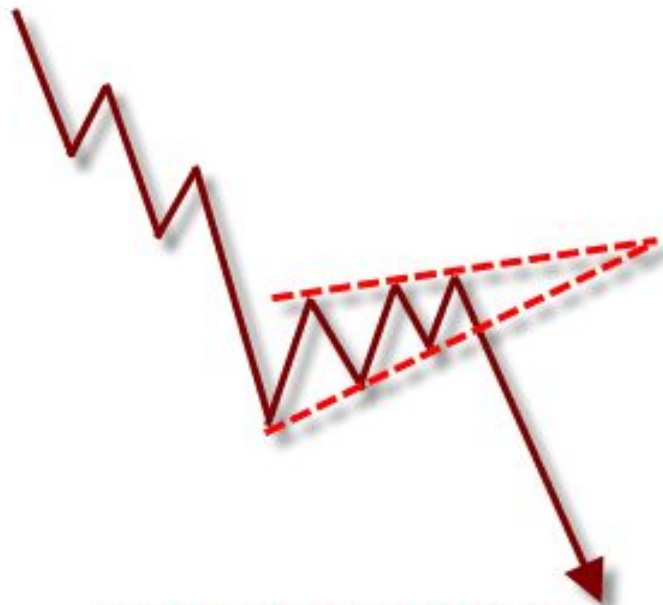
Triple Top & Triple Bottom



Head and Shoulder / Inverted H&S



Rising Wedge / Falling Wedge



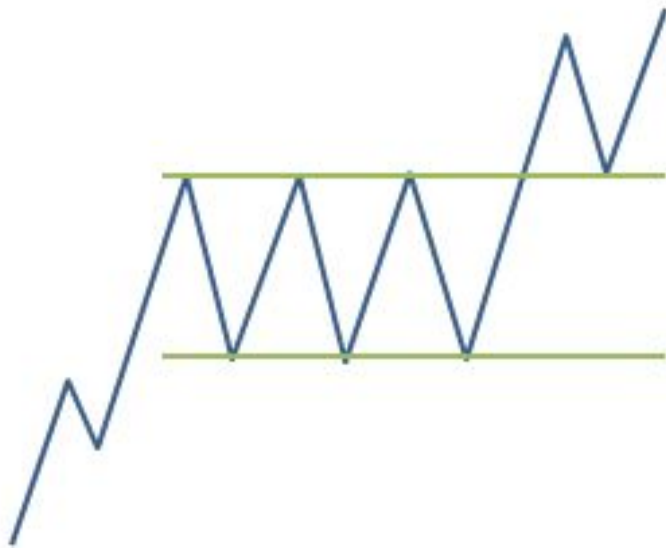
BEARISH RISING WEDGE



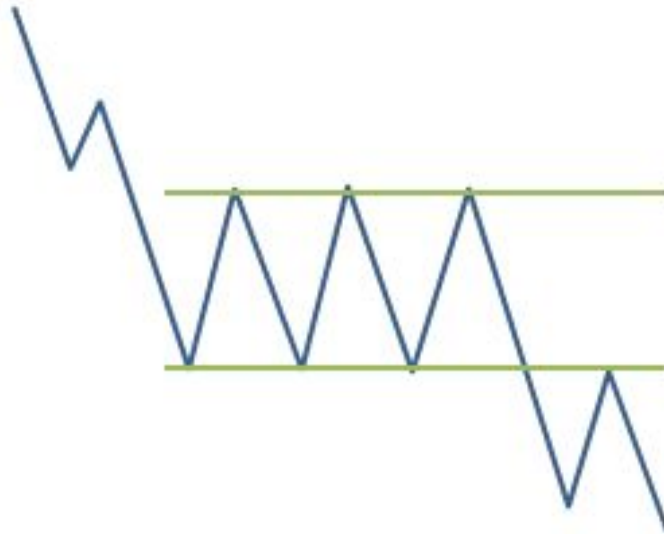
BULLISH FALLING WEDGE

Bullish / Bearish Rectangle

Bullish Rectangle

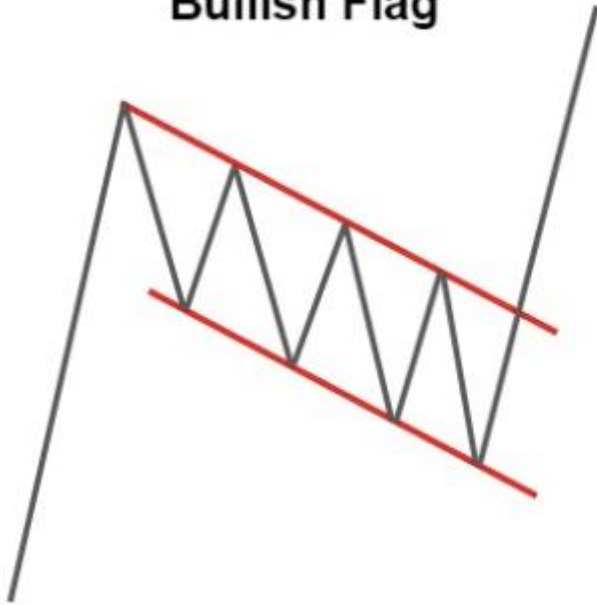


Bearish Rectangle



Bullish / Bearish Flag

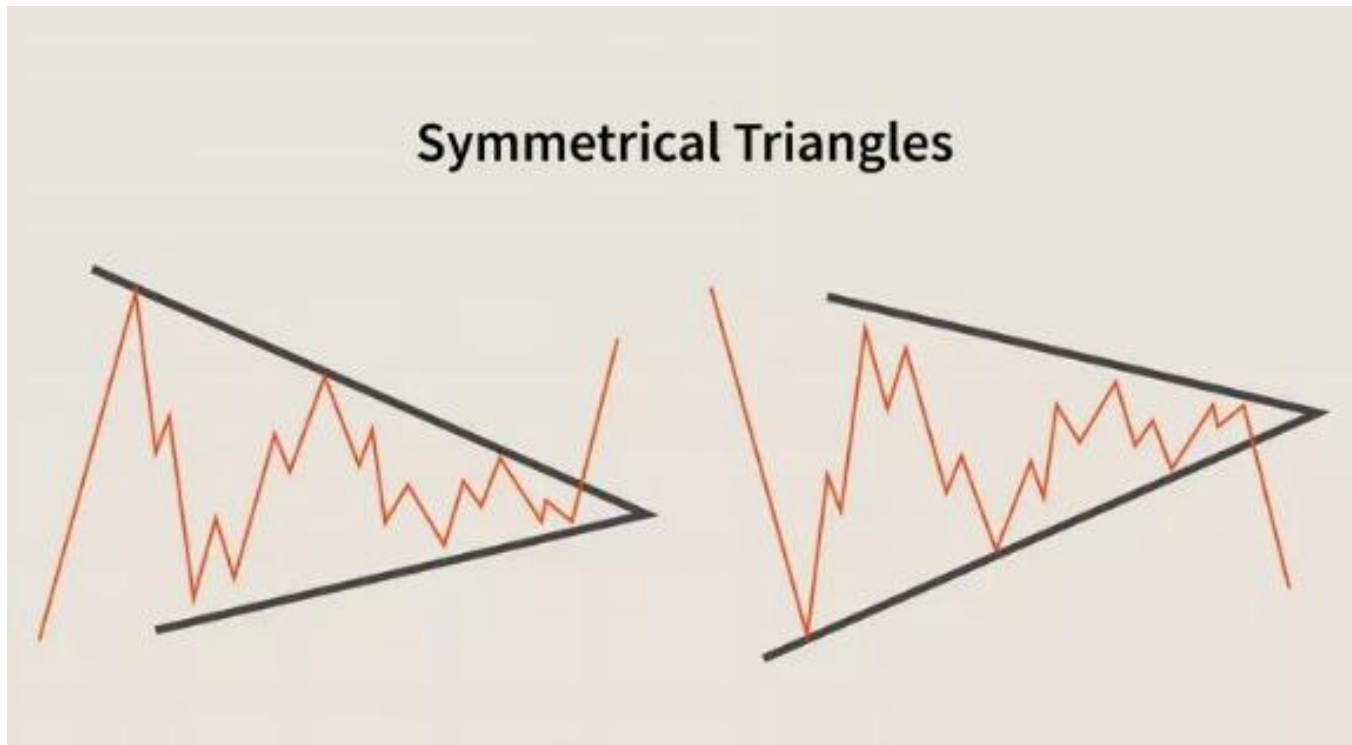
Bullish Flag



Bearish Flag



Symmetrical Triangle

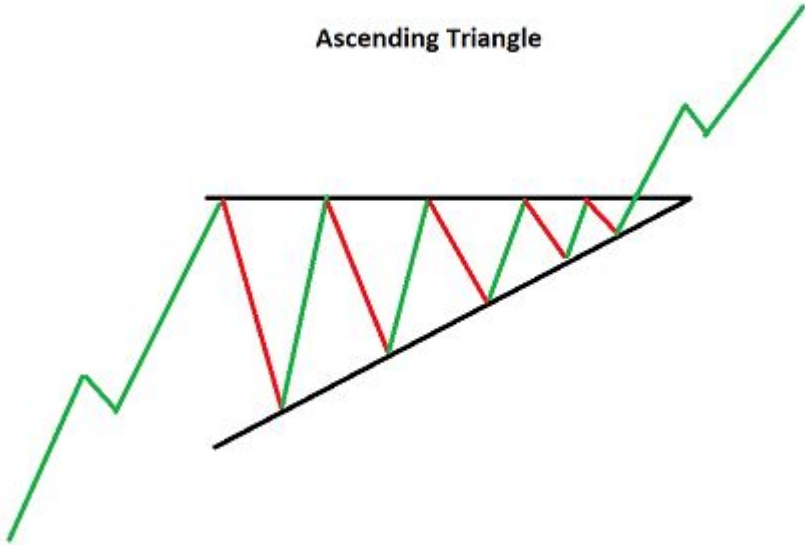


Cup and Handle Pattern & Inverted Cup & Handle

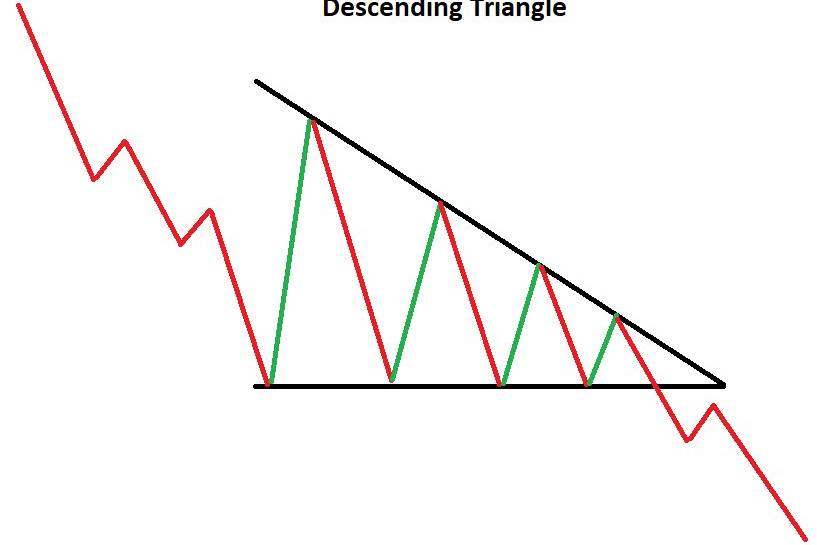


Ascending & Descending Triangle

Ascending Triangle



Descending Triangle



Volumes

- Volumes provide us the data of total numbers of shares bought and sold over a given period of time.
- Volumes chart can be used to define the demand and supply and strength of the given trend.
- Volume can be further defined as traded volume & delivery volume.
- Live volume of the shares can be seen in Market Depth Section.
- Average volume is generally taken as last 10 days volume.

Practical: How to Set the Volume Chart

Practical: How to add moving average on volume

Volume Trends

S.No	Price	Volume	Expectation
1	Increase	Increase	Bullish
2	Increase	Decrease	Cautious - Weak hands buying
3	Decrease	Increase	Bearish
4	Decrease	Decrease	Caution - Weak hands selling

Moving Averages

Moving average is indicator which can be calculated by using the average price in the given time frame.



Day	Closing Price
1	120
2	122
3	120
4	125
5	127

$$\text{Average Closing Price} = (120+122+120+125+127)/5 = \mathbf{122.8}$$

Moving forward on 6th day we will have new data point to calculate the average of last 5 days, we need to ignore the 1st day.

Day	Closing Price
1	120
2	122
3	120
4	125
5	127
6	130

Average Closing on 6th Day = $(122+120+125+127+130)/5 = 124.8$

Simple Moving Average

SMA is calculate as we discussed in the formula based on our given time frame.
Most popular time frames are 10, 20, 50, 200 days.



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Practical: How to Define SMA

Exponential Moving Average (EMA)

- EMA is given weightage to each data point based on its freshness. (ie) The latest data point will get higher weightage and older data will get lower weightage.
- EMA will be more reactive to price movement and will match closely compared to SMA.
- In most technical analysis we prefer using EMA.
- Most popular time frames are 9, 10, 20, 21, 50, 200.

Practical: How to Define EMA

Support & Resistance

- Support and Resistance are the zones are formed based on demand and supply of the shares are given price point.
- **Support :** This is the zone in the chart where there will be maximum demand for shares and price may not fall further. Support level will be always below the present market price.
- **Resistance:** This is the zone in the chart where there is maximum supply of shares and price may not move further up due to excessive supply. Resistance level will be always above the current market price.

How to define Support & Resistance Line

- **Step 1 :** Load the chart with 3-6 months data for short term and 12-18 months for long term S&R
- **Step 2 :** Identify at least 3 price action zone
- **Step 3 :** Align the price zones with a horizontal line.
- **Step 4 :** Based on current market price, we can define the line as Support or Resistance.

Note: If the stock breaks the resistance with good volume its called as breakout. If the stock breaks the support with good volume its called as breakdown.

Dynamic Support & Resistance

- Dynamic S&R are formed based on trend lines or moving averages.



Indicators

- Indicators help analyze the price movement of the stock. Most indicators are developed individually by different traders or companies.
- Indicators helps in identifying the buy/sell and trend analysis of the stocks.
- Indicators are of 2 Types
 - **Leading Indicator** : An indicator which usually signals the occurrence of reversal or trend in advance. Most leading indicators are called as Oscillators.
 - **Lagging Indicator** : An indicator which usually signals the occurrence of reversal or trend after it has happened.

Relative Strength Index (RSI)

- RSI is a leading indicator which helps in identifying the trend reversal. It oscillates between 0 and 100.
- The main objective of this indicator is to identify the overbought and oversold zones.
- Most shares will form a reversal after overbought or oversold zones.
- The default duration for setting this indicator is 14 days. We can also set it to 5, 10, 20 days
- RSI between 80 to 100 is overbought zone and RSI between 20 - 0 is oversold zone.

Practical: How to SET RSI

Moving Averages Convergence Divergence (MACD)

- MACD is a lagging indicator which is developed using moving average data.
- This is calculated using 12 day and 26 Days EMA by default.
- Convergence : when 2 moving averages come close to each other.
- Divergence: when 2 moving averages move away from each other.Ω



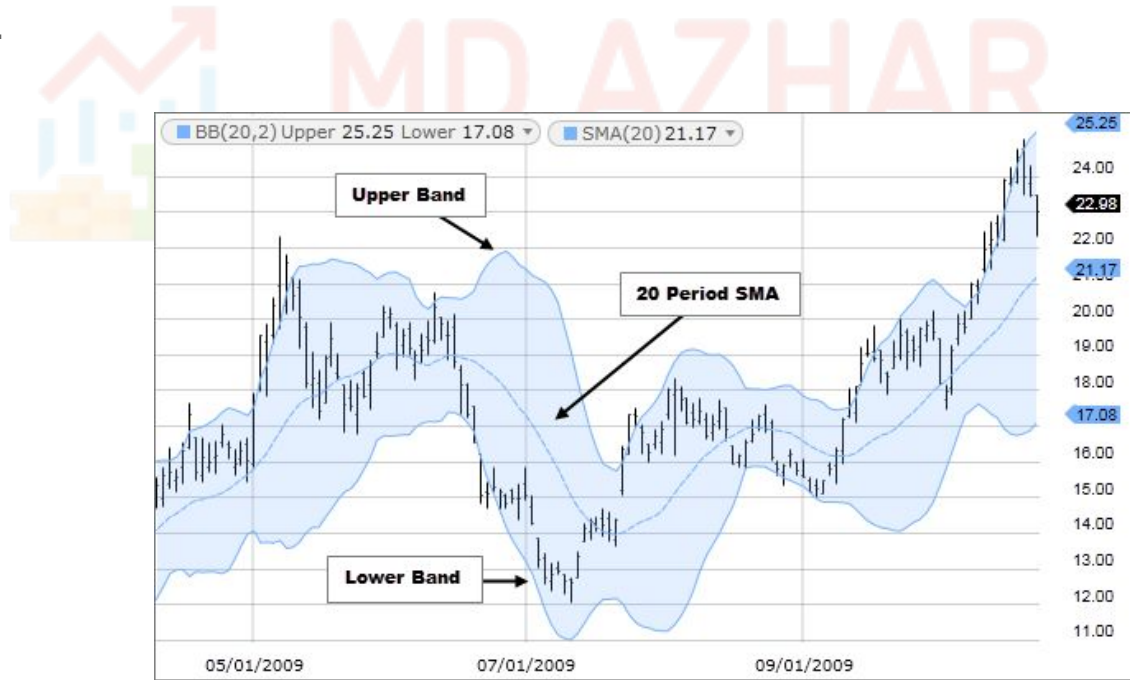
MACD Usage

- By calculating the difference of 2 EMAs we get a MACD Line.
- This indicator oscillates between positive and negative values.
- We also use an additional 9 days EMA to further provide signal for Buy/Sell.
- When the 9 days EMA moves above MACD line, its buy signal and vice versa.



Bollinger Bands

Bollinger band indicator is used to determine the overbought and oversold levels. Its defined with 2 bands upper and lower bands. The center line is defined as 20 days SMA.



Fibonacci Numbers

The Fibonacci series is a sequence of numbers starting from zero arranged so that the value of any number in the series is the sum of the previous two numbers.

The Fibonacci sequence is as follows:

0 , 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610...

Notice the following:

$$233 = 144 + 89$$

$$144 = 89 + 55$$

$$89 = 55 + 34$$

This series extends to infinity.

Divide any number in the series by the previous number; the ratio is always approximately 1.618.

For example:

$$610/377 = 1.618 \text{ or } 377/233 = 1.618 \text{ or } 233/144 = 1.618$$

Further into the ratio properties, one can find remarkable consistency when a number in the Fibonacci series is divided by its immediate succeeding number.

For example:

$$89/144 = 0.618 \text{ or } 144/233 = 0.618 \text{ or } 377/610 = 0.618 \Rightarrow \text{In percentage its } 61.8\%$$

Similarly we divide by number 2 places, 3 places higher we get 38.2% and 23.6% etc.

Fibonacci Retracements

Fibonacci retracement levels—stemming from the Fibonacci sequence—are horizontal lines that indicate where support and resistance are likely to occur.

Each level is associated with a percentage. The percentage is how much of a prior move the price has retraced.

The Fibonacci retracement levels are 23.6%, 38.2%, 61.8%, and 78.6%. While not officially a Fibonacci ratio, 50% is also used in technical analysis.

Fibonacci retracements can be used to place entry orders, determine stop-loss levels, or set price targets.

Practical Method of Applying Fibonacci Retracement

Example



Stochastic Oscillator

The Stochastic Oscillator is a popular technical analysis tool used to measure momentum and identify potential trend reversals in financial markets. It compares the closing price of an asset to its price range over a specified period of time.

The Stochastic Oscillator oscillates between 0 and 100. The readings above 80 are overbought and below 20 are oversold.



Stochastic RSI

Stochastic RSI (Relative Strength Index) is a technical analysis indicator that combines the concepts of both the Stochastic Oscillator and the RSI. It is designed to provide more sensitive and accurate signals for potential trend reversals.

The Stochastic RSI combines these two indicators to create a more refined and responsive indicator. It uses the RSI values to calculate the Stochastic values and provides a more precise assessment of overbought and oversold conditions.



Ichimoku Cloud

The Ichimoku Cloud, also known as Ichimoku Kinko Hyo, is a comprehensive technical analysis indicator that provides insights into support and resistance levels, trend direction, momentum, and potential breakout points.

The price position relative to the cloud indicates the trend direction, with a price above the cloud suggesting a bullish trend and a price below the cloud suggesting a bearish trend.

The cloud can serve as dynamic support and resistance levels. Entry and exit points can be found when the price crosses the Tenkan-sen or Kijun-sen lines, and the cloud can be used as a guide for stop-loss placement.



Dow Theory

Dow Theory was first introduced by Charles Dow, who was the founder of Dow Jones and Company and the first editor of the Wall Street Journal.

In 1932, the writings of these two men were collectively published as the Dow Theory by Robert Rhea.

What is Dow Theory?

The theory explains how the stock market can be used by investors to understand the health of the business environment. It was the first theory to explain that the market moves in trends. And while a lot has changed in the stock markets over the years, the basic tenets of Dow Theory still hold water.

Key Points of Dow Theory

1. The Market Discounts Everything
2. There Are Three Primary Kinds of Market Trends

Primary - 1+ year, Secondary - 3W to 3 mths, Minor trends = < 3 W.

3. Primary Trends Have Three Phases

Accumulation, Public Participation Phase, Panic Phase

4. Indices Must Confirm Each Other
5. Volume Must Confirm the Trend
6. Trends Persist Until a Clear Reversal Occurs

Swing Trading Strategies



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Moving Average Crossover Strategy

In this strategy we use a short term moving average crossing over long term moving average.

- 10 Days EMA cross 20 Days EMA (Short)
- 20 Days EMA cross 50 Days EMA (Medium)
- 50 Days EMA cross 200 Days EMA (Long Term) - Golden Crossover

How to Use Crossover Strategy

1. Track selected stocks for Crossover Pattern. When the crossover happens. Take Entry
2. We also need to backtest the stocks for confirmation of the data. Take **entry** only after confirmation of the crossover.
3. We can set our **target** based on next resistance or 10-12% from our entry point.
4. **Stop loss** has to be set point where 10 EMA crosses 20 EMA.
5. Use trailing stop loss to continue the profits if the trend is strong.

Example 1



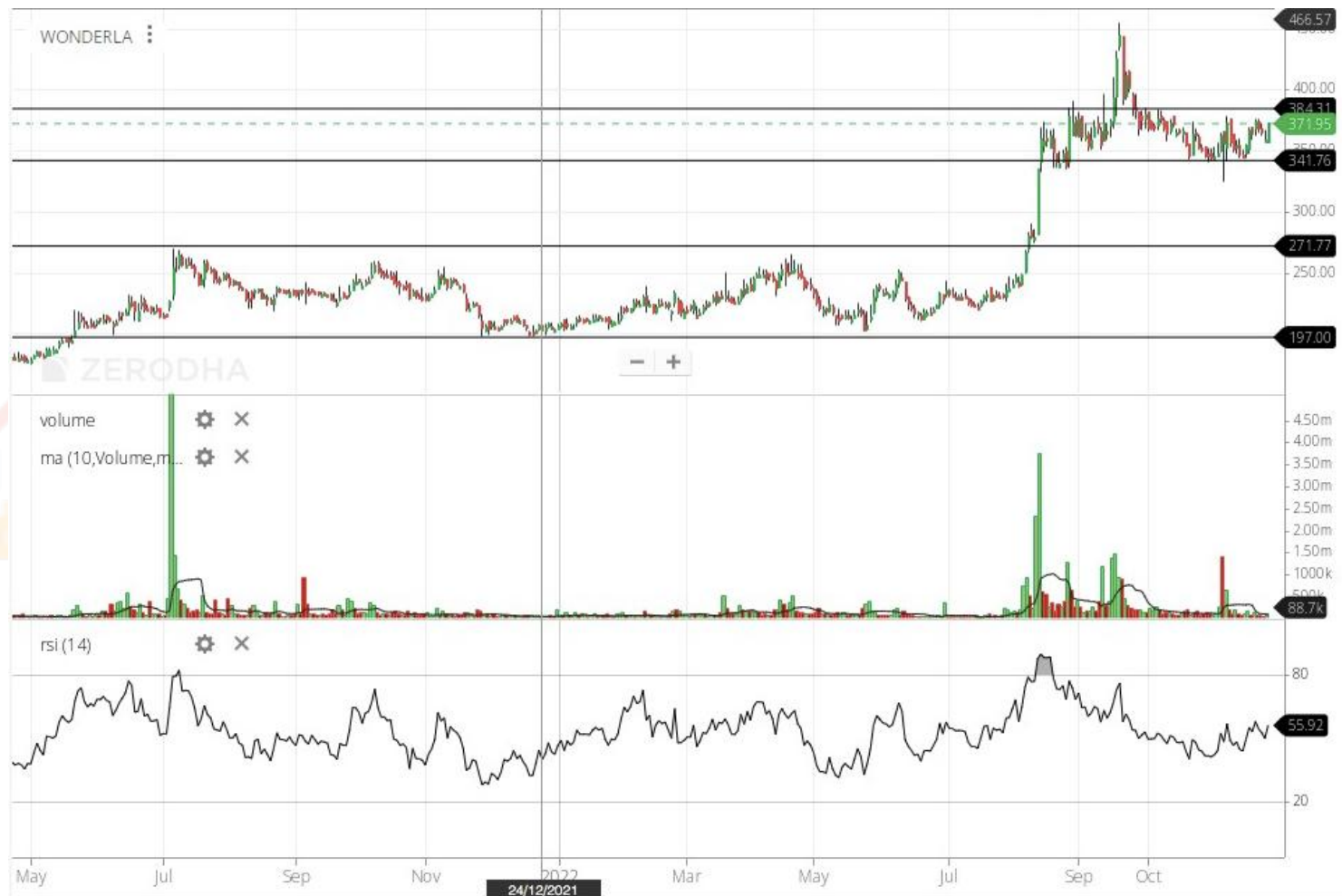
Example 2



Breakout Trading Strategy

- When a share trades in range or channel, then if it breakout with good volumes, it's a good point of entry to take advantage of next up move.
- This strategy will work mostly in bull market or strong momentum stocks.
- **Setup**
 - Look for a breakout of 3-5% on the day and take entry on EOD.
 - Stop Loss: 0.5% lower than the low of the entry day
 - Target: Its based on next resistance level or 10% from the entry point.
 - Trailing Stop Loss is very important if the momentum is strong.

Example 1



Example 2 (Trendline Breakout)



IPO Trading Strategy

- The stock must be recently listed and less than 1 year.
- Volume must be good
- Look for a breakout of 2-3% on daily charts.
- If the share belongs to industry which is favour of market or belong to segment which are seen with exuberance in the market.

Strategy

1. All major indices are trading above 20, 50, 200 EMA
2. Entry:
 - a. After 3-5% move around breakout or
 - b. Breakout is near and share is near its resistance range, all the Indicators are in favour.
3. Stop Loss:
 - a. If buying on breakout day, the SL should be low of Breakout day.
 - b. If bought in stage 2, then the stop will be 1% lower of the establishes range.
4. Target: We will focus on 1:2 or 1:3 reward and make sure to trail the stop loss. (2.5 Days to 8 days the most ideal time for achieving the target)

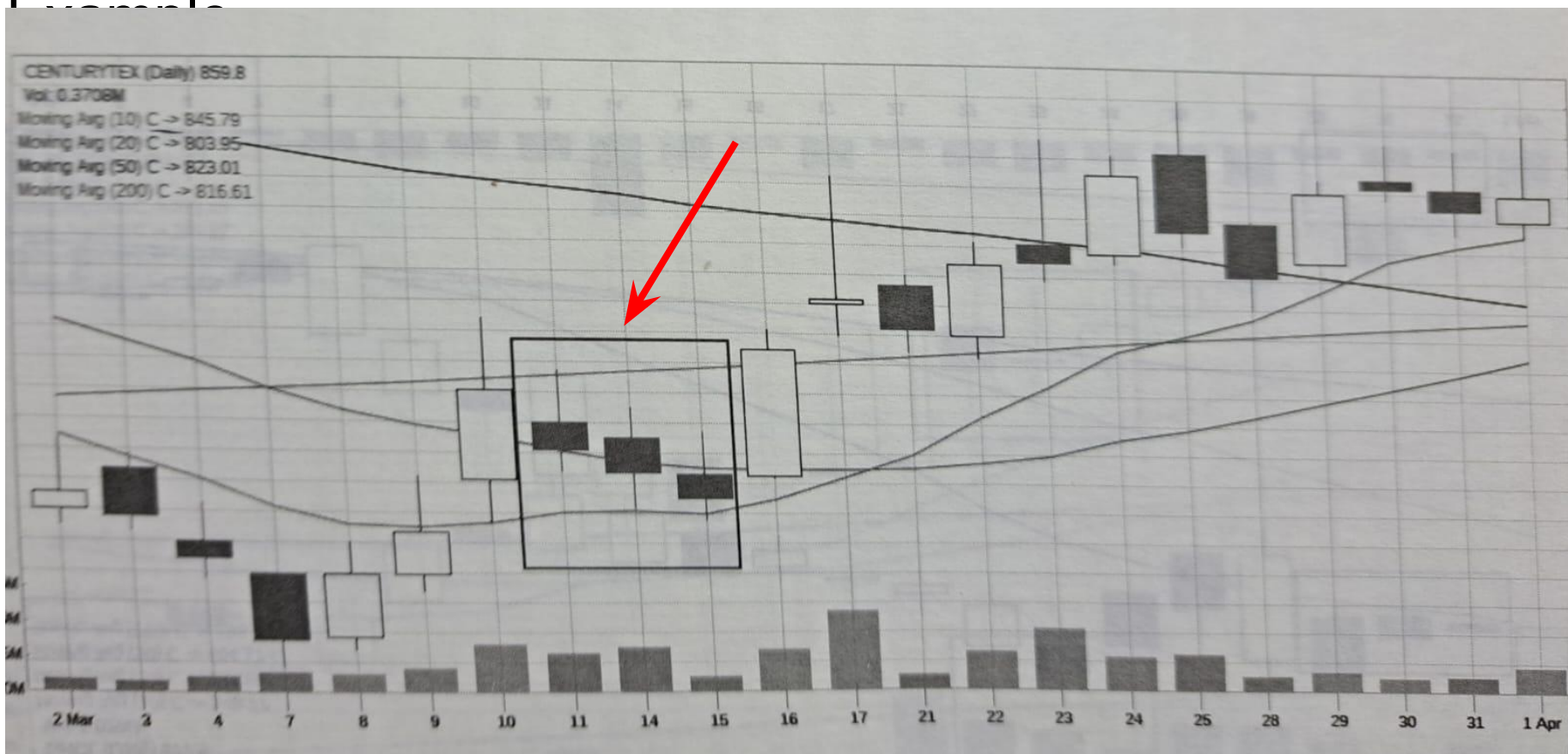
Example 1



2.5 Days Strategy

- Basic Scenario
 - This strategy is applicable only for uptrend
 - When the stock is in uptrend, it will start moving upwards and some of the retail, speculative traders will start booking profits which can create a negative candle with high volume, next day it will fall with lower volume and by 3rd day the volume completely dry off.
 - We need to enter the trade mostly first half of 3rd day, that's why it's called as 2.5 days Strategy.
- Execution
 - Entry: 1st half of 3rd Day
 - SL: Lowest of the first day's candle
 - Target: 5-8 % from the entry level

Example



Candlestick Strategy

- This trading strategy depends on candle sticks and other indicator for confirmation.

Execution:

- Scan for Bullish Candlestick Formation
 - Marubozu
 - Hammer
 - Piercing
 - 3 White soldiers etc.
- Use the RSI for strength of the trend.

Entry, Target and SL are set based on type of candle we are trading.

Example



Hammer Formation
and RSI is at
oversold level.

BTST Strategy (High Risk Strategy) - Not Recommended

- BTST means Buy Today and Sell Tomorrow. The core concept of this strategy is to buy stocks which has strong demand on the day and we assume demand will continue.
- **Conditions**
 - Popular Liquid Stocks which are not operator driven (Circuit Limit 10 - 20%)
 - The stock is in uptrend or its near a reversal.
 - Look for positive bullish candle and possible breakout
 - Scan for stocks where Open = Low and we need to take entry at EOD
 - We must exit the trade if stock is moving towards downtrend before 9:20 AM and book the loss.
 - If the momentum is strong, we will hold the share with proper trailing SL.

RISK: Gap down due to bad market conditions, Short Delivery Penalty Risk



Price & Volume Strategy

- The idea behind the strategy is when price increases along with heavy volumes, it's a indication of momentum in the share, this can be used for swing trading.
- **Conditions**
 - Daily gain must be above 5%
 - Share must have liquidity and not operator driven
 - The volume must be 10X of the average daily volume.
 - If its breaking out of any range/ channels it's a sure shot buy.
 - Other indicators must confirm to your analysis
- **Setup**
 - Entry can be taken on EOD or Next Day Morning
 - Stop Loss : Lowest of the Previous Day (upto 5%)
 - Target: we must look at minimum 10-15% and if price is in favour trail the SL.
 - Capital: 10% of the overall capital

Tip - We can use scanners to find Volume Shockers, But we need to monitor the given stock before taking a position.



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Trade

TATAMOTORS ⋮



Post Earnings Announcement Drift (PEAD) Strategy

- One of the major event for a company every quarter is quarterly results. Companies announce the results in June, Sep, Dec and Mar. In march company also announces Annual Report along with Q4.
- The basic theory behind this strategy is that every stock shows a gap-up on better than expected earnings and trend may continue for several weeks.
- The most important aspect to watch is how the market is reacting to the earnings report.
- **Conditions:**
 - Stock gained more than 3-5%
 - Higher than average volume
 - At Least 50% higher volume than previous day
 - The price is trading above 50 Day EMA.

Execution:

Entry: Same day once earnings are out or next day, If the stock is sideways then buying at breakout of 10/20 EMA is recommended.

Stop Loss: 0.5% below the low of Entry Day

Target: 2.5 - 8 Days for Swing and 2.5 to 8 weeks if taken as positional trade. We can expect

Note: This strategy has a tendency to sustain the trend for longer period as its also based on fundamentals of the business.

Swing Trades: You may sell 50% from 2.5 to 5 days from buy and sell the remaining 50% when stock closes below 10/20 EMA

Positional Trade: You should sell 50% after 2.5 weeks and sell rest if stock closes below 50 EMA.

<div>Standalone</div> <div>Consolidated</div>		Print/Copy to Excel : <div>Quarterly</div> <div>Go</div>				
QUARTERLY RESULTS OF TVS MOTOR COMPANY (in Rs. Cr.)		SEP '22	JUN '22	MAR '22	DEC '21	SEP '21
Net Sales/Income from operations		8,560.76	7,315.70	6,585.20	6,597.35	6,483.42
Other Operating Income		--	--	--	--	--
Total Income From Operations		8,560.76	7,315.70	6,585.20	6,597.35	6,483.42





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Thankyou