

Technical Analysis uses price and volume to identify trading opportunities and systematize entry and exit processes, aiming to increase trading profits with high-probability entries and exits.



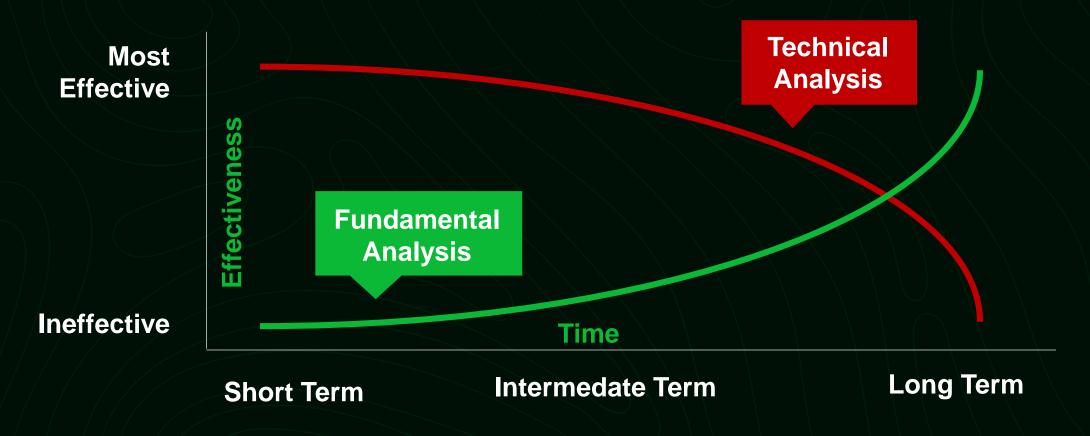
# Technical Vs Fundamental Analysis

Fundamental Analysis: Evaluating a price based on its project, team, future growth, roadmap, evaluation, news etc

❖ Technical Analysis: Forecasting future price direction by analysing past prices and volume data. This is mainly done by analysing charts and indicators.



# Technical Vs Fundamental Analysis





# Technical Analysis

### **Look-Price Action**

Rhythm, Flow, and Trends in price action.

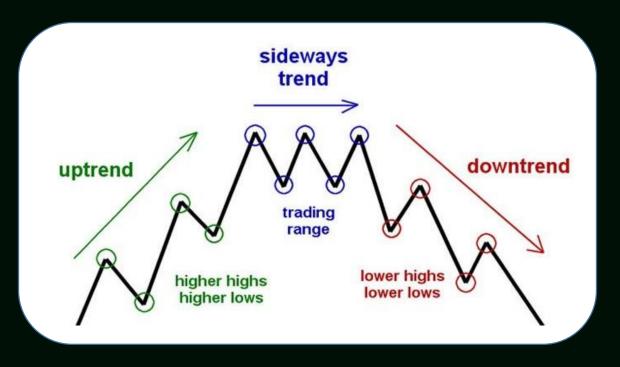
- The trend is your friend!"
- "It's all in the charts!" and "History repeats itself!"
- "The market discounts everything"





# The Trend Is your Friend









# **Candlestick Analysis**





Candlestick charts
were created in
the 1700's for
tracking rice prices.

"Psychological aspect the market is critical to trading success"

#### **Munehisa Homma**

(1724-1803) Father of Candlestick Charts



# Candlestick charts are easier to read than bar charts.









# They also make it easier to tell

whether the open or close price was higher.





# Candlestick have 3 major parts

Upper wick/shadow (buying pressure)

Real body

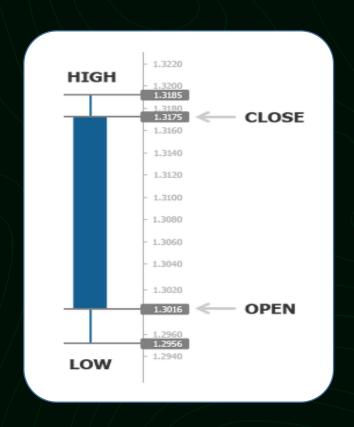
Lower wick/shadow (selling pressure)



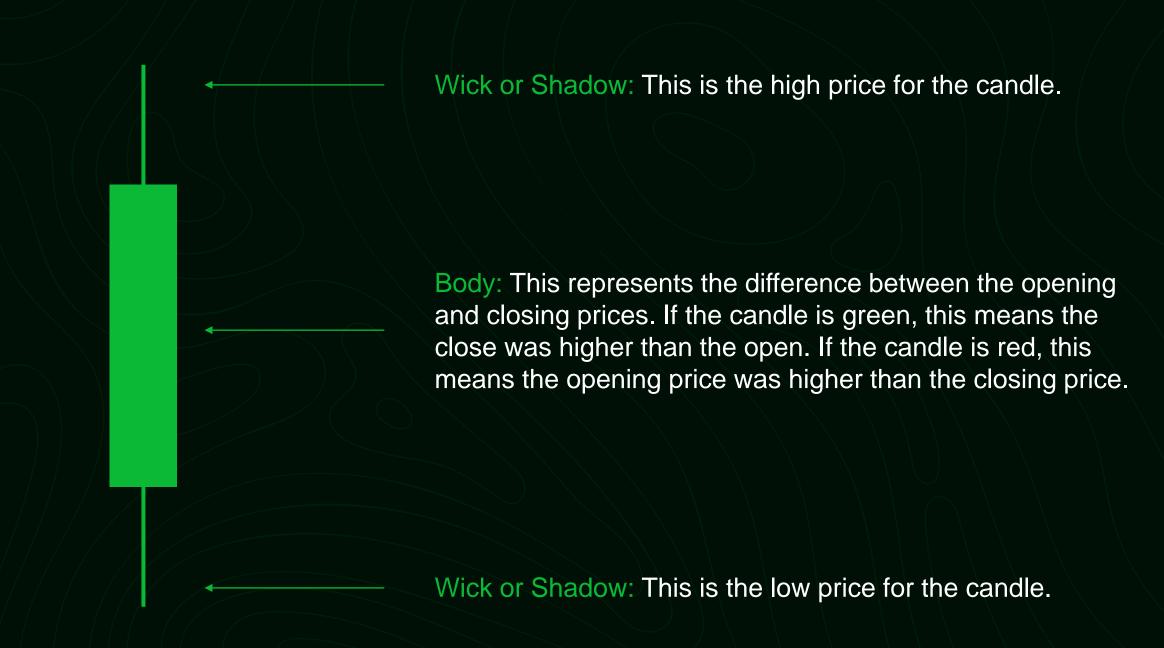


### **Bullish candlesticks**

have bodies, showing that the closing price is higher than the opening price.





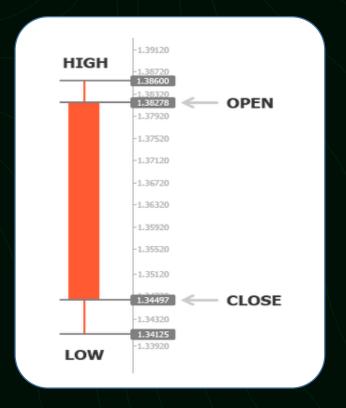




### **Bearish Candlesticks**

have solid bodies, showing that the closing price is lower than the opening price







### The basics of Candlesticks

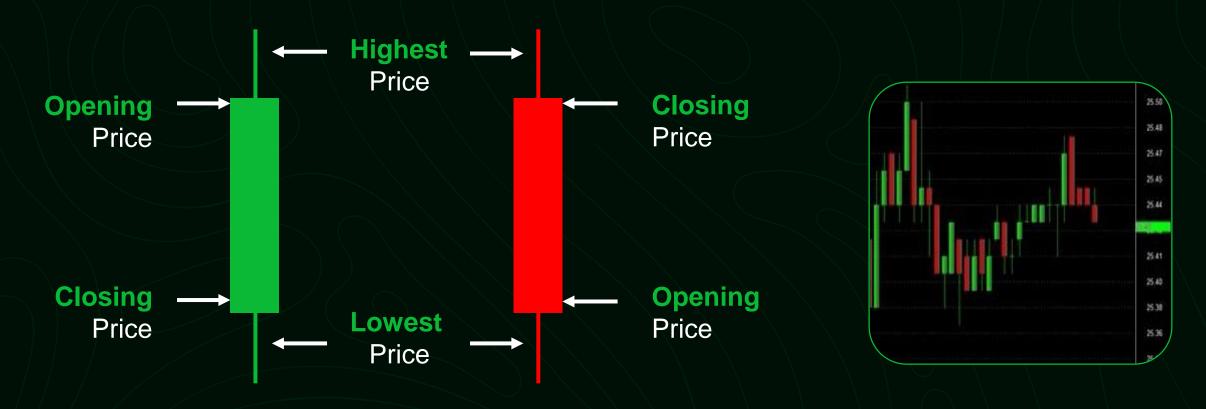
**Bullish Candle** 

**Bearish Candle** 

A bullish candle shows that the price has increased over the time period A bearish candle shows that the price has decreased over the time period



## The basics of Candlesticks



Each Japanese candlestick represents a specific time frame. If the time period is set for 30 minutes, then each individual candle will take 30 minutes to form.



## **Candlestick Patterns**







## Doji



- In Japanese, "doji" means blunder
- The open and close are very close together, creating avery small body.
- Represent indecision between Bulls and Bears

Doji candlesticks have the same open and close price or at least their bodies are extremely short. A Doji should have a very small body that appears as a thin line.

Doji candles suggest indecision or a struggle for turf positioning between buyers and sellers.







**Dragonfly Doji** 

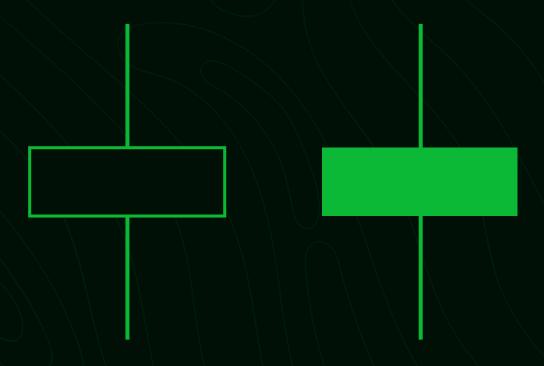
**Gravestone Doji** 





## Spinning Top Doji

Small real bodies with equal buying and selling pressure.



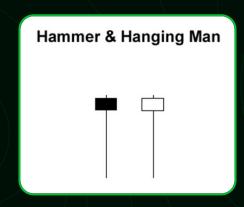


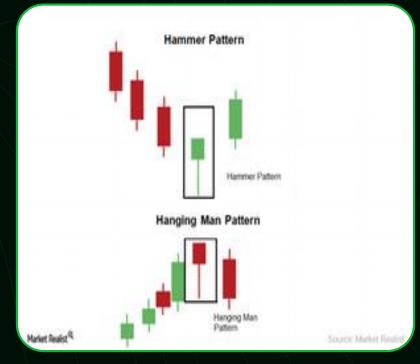


# Single candlestick patterns: Hammer & Hanging Man

The Hammer is a bullish reversal pattern that forms during a downtrend. The long lower shadow indicates that sellers pushed prices lower, but buyers were able to overcome this selling pressure and closed near the open.

The Hanging Man is a bearish reversal pattern that can also mark a top or strong resistance level. When price is rising, the formation of a Hanging Man indicates that sellers are beginning to outnumber buyers.





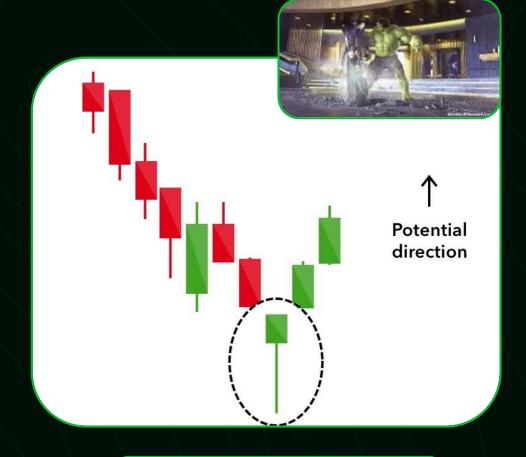


### Hammer

The bears losing control of the market

### **Recognition Criteria for a Hammer:**

- The long shadow is about two or three times of the real body.
- Little or shadow.
- The real body is at the upper end of the trading range.
- The color of the real body is not important.



A trader should always wait for the next confirmation



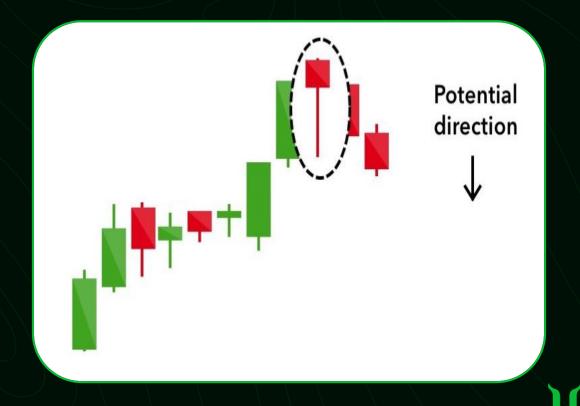
## Hanging man

The bulls losing control of the market

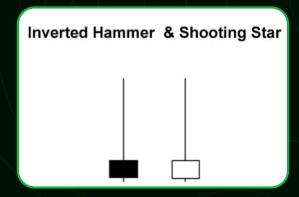
**Recognition Criteria for a Hanging Man:** 

- A long lower shadow which is about two or three times of the real body.
- Little or no upper shadow.
- The real body is at the upper end of the trading range.
- The color of the body is not important, though a red body is more bearish than green body.
- The longer the shadow, the stronger the potential for reversal





### Single candlestick patterns: Inverted Hammer & Shooting Star



The Inverted Hammer occurs when price has been fall suggests the possibility of a reversal. Its long upper shadow shows that buyers tried to bid the price higher.

The **Shooting Star** is a bearish reversal pattern that looks identical to the inverted hammer but occurs when the price has been rising.

#### **Inverted Hammer**



### **Shooting Star**

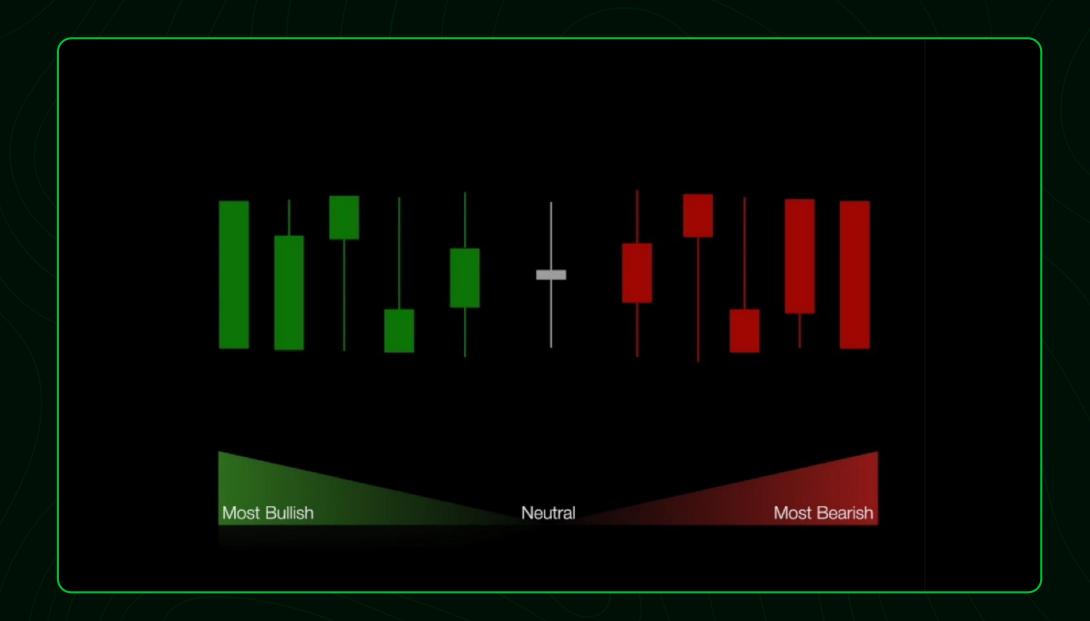










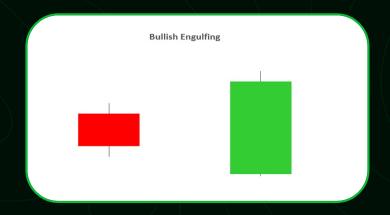




### **Dual Candlestick Patterns**

### The Bullish Engulfing Pattern





The Bullish Engulfing pattern is a two candlestick reversal pattern that signals a strong up move may be coming.

It happens when a bearish candle is immediately followed by a larger bullish candle.

This second candle "engulfs" the bearish candle.



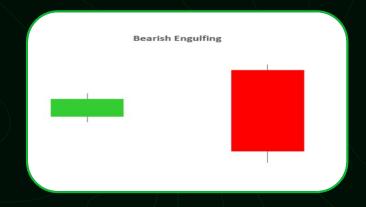




### **Dual Candlestick Patterns**

### The Bearish Engulfing Pattern





The Bearish Engulfing pattern is a two candlestick reversal pattern that signals a strong down move may be coming.

This type of candlestick pattern occurs when the bullish candle is immediately followed by a bearish candle that completely "engulfs" it.







### **Dual Candlestick Patterns**

The first candlestick is the same as the overall trend. If price is moving up, then the first candle should be bullish.

The second candlestick is opposite the overall trend. If the price is moving up, then the second candle should be bearish.

The shadows of the candlesticks should be of equal length.

**Tweezers** 

Tweezers













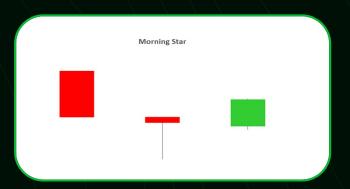


## **Triple Candlestick Patterns**

### **Morning Star**



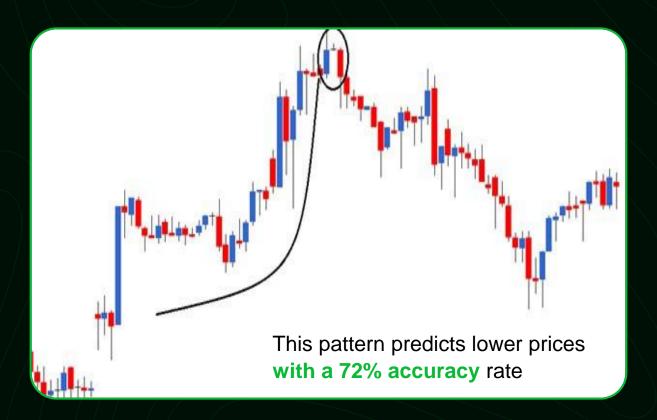
The morning star is a bullish candlestick pattern. It is a downtrend reversal pattern.



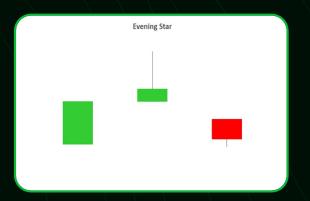


#### **Triple Candlestick Patterns**

#### **Evening Star**



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.





## Three white/advancing soldiers



The three white/advancing soldiers pattern occurs over three days. It consists of consecutive long green (or white) candles with small wicks, which open and close progressively higher than the previous day.

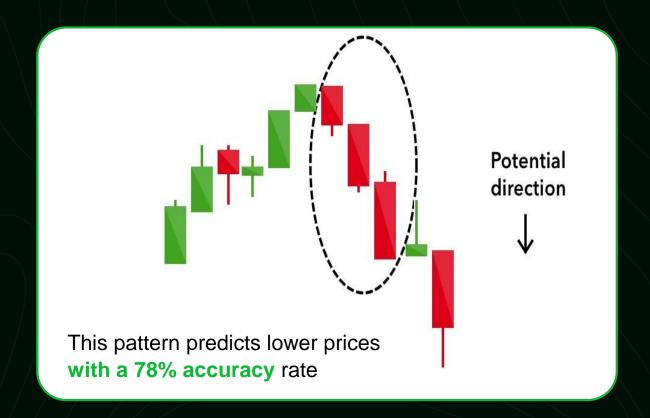
It is a very strong bullish signal that occurs after a downtrend, and shows a steady advance of buying pressure.







#### Three black/winged Crows



The three black/winged 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.

Traders interpret this pattern as the start of a bearish downtrend









# Three important things a professional trader should look into

- Length of the body shows who's in control
- Length of the wick shows the price rejection
- Ratio of the wick to the body shows the
- complete picture
- Candlestick analysis should not be ever done in isolation



# TECHNICAL INDICATORS



#### Simple Moving Averages

- A moving average is simply a way to smooth out price fluctuations to help you distinguish between typical market "noise" and the actual trend direction. Fibonacci tool works best when the market is trending.
- This type of technical indicator is called a "chart overlay".
- \* They do NOT predict price direction; instead, they define the current direction with a lag.

A simple moving average (SMA) is an arithmetic moving average calculated by adding recent prices and then dividing that figure by the number of time periods in the calculation.

A simple buy signal occurs when **prices close above** the moving average. And a simple sell signal occurs when the **price closes below the moving average**.





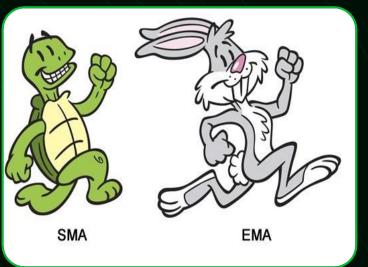
# **Exponential Moving Averages**

- When trading, it is far more important to see what traders are doing Now rather than what they were doing last week or last month.
- An exponential moving average (EMA) is a type of moving average (MA) that places a greater weight and significance on the most recent data points.
- They do NOT predict price direction; instead, they define the current direction with a lag.

The EMA gives higher weights to recent prices, while the SMA assigns equal weights to all values.

EMA reflects a quicker shift in sentiment.









Throughout the uptrend, the 10 SMA is above the 20 SMA.

As you can see, you can use moving averages to help show whether a pair is trending up or down.





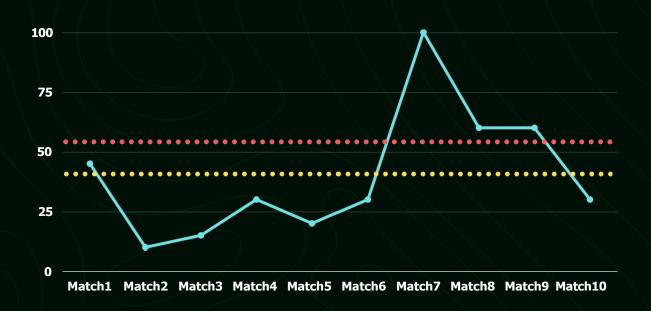
#### Golden Crossover

When a short period MA (Moving Average, can be SMA or EMA) breaks above, then a longer period Moving Average is known as Golden Crossover. Traders usually see it as a long-term uptrend. Moving Average can be 50, 100 or 100, 200 or 50, 200.





## **Developing a Trading Strategy**



Career Average Last 10 Match Avg
55 40

How much will Virat Kohli score in the next match?



## Moving Average Crossover System

The black 50 day EMA line is closer to the current market price (as it reacts faster) when compared to the pink 100 day EMA (as its reacts slower).

# **Best used Moving Averages for the Golden Cross**

- ❖ 20 and 50 EMA
- ❖ 50 and 200 SMA



The entry and exit rules for the crossover system is as stated below:

Rule 1) – Buy (fresh long) when the short term moving averages turns greater than the long term moving average. Stay in the trade as long as this condition is satisfied

Rule 2) – Exit the long position (square off) when the short term moving average turns lesser than the longer term moving average







#### **Bollinger Bands**

- Bollinger Bands, a technical indicator developed by John Bollinger, are used to measure a market's volatility and identify "overbought" or "oversold" conditions.
- ❖ When the market is quiet, the bands contract and when the market is LOUD, the bands expand.
- Bollinger Bands consist of a band of three lines which are plotted in relation to security prices.
- The line in the middle is usually a Simple Moving Average (SMA) set to a period of 20 days usually.
- The SMA then serves as a base for the Upper and Lower Bands (2 standard deviations from the middle brand)
- The Upper and Lower Bands are used as a way to measure volatility by observing the relationship between the Bands and price. Typically the Upper and Lower Bands are set to two standard deviations away from the SMA (The Middle Line)



- 1) When the price action hugs the upper band, it indicates strongly trending bullish price action. Traders can initiate long positions with a trailing stop. The reverse applies for prices hugging the lower band.
- 2) Short positions can be initiated when the price rejects a down sloping moving average, with a target at the lower band.
- 3) A change of trend can often be determined when the price first rejects one of the bands and then break through the band at roughly the same level





# **Mean Reversion Strategy**

Mean reversion is a financial theory which suggests that, after an extreme price move, asset prices tend to return back to normal or average levels. Prices routinely oscillate around the mean or average price but tend to return to that same average price over and over.





#### **Bollinger Bounce**

One thing you should know about Bollinger Bands is that price tends to return to the middle of the bands.

That is the whole idea behind the "Bollinger Bounce."





The reason these bounces occur is because the **Bollinger bands act like dynamic** support and resistance levels.

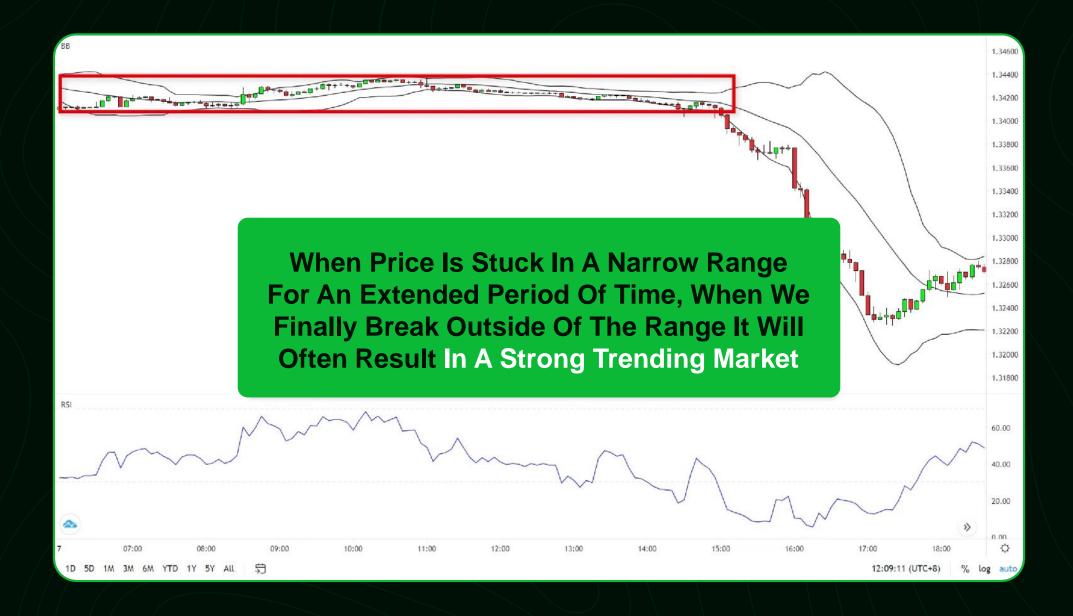


#### **Bollinger Squeeze**

- When the bands squeeze together, it usually means that a breakout is getting ready to happen.
- If the candles start to break out above the TOP band, then the move will usually continue to go UP.
- If the candles start to break out below the BOTTOM band, then price will usually continue to go DOWN.

Ripple 4 ko"ís ckaíť: arťcí sc:cíal daQs or low:olaťiliťQ maíkcť, ťkcíc's a sťío→ig b"llisk ca→idlc bícaki→ig abo:c ťkc "ppcí ba→id (gícc→i ciíclc). Arťcí ťkc bícako"ť, ťkc XRPUSK i→iťiaťcd a→i cxplosi:c "pwaíd mo:cmc→iť, gai→ii→ig moíc ťka→i 100%, skowi→ig sc:cíal →icw kigks abo:c ťkc "ppcí ba→id.





## RSI (Relative Strength Indicator)

The RSI is based on a 14 day time limit usually although this can be altered. The RSI is measured on a scale of 0-100 with overbought assets between 70-100 and oversold assets between 0-30. As the RSI index moves between oversold to overbought, or vice versa it can be seen as indicating a trend but in general at 50 it is considered to have no trend.

The RSI is calculated by calculating the momentum of the ratio of higher closes to lower closes - so themore the stock moves up - the more positive the RSI.



If you look at the **Bitcoin price** chart above you can see the 14 day RSI and two periods over the full 3 month time period that the chart shows. The first period is where the RSI indicator is showing the bitcoin price to be overbought as it is generally above the 70 mark. The second period is showing the Bitcoin price to be oversold as the indicator is breaching oversold territory and is therefore indicating a buy signal.









#### **MACD**

MACD is an acronym for Moving Average Convergence Divergence.

With a MACD chart, you will usually see three numbers that are used for its settings.

- MACD line is typically made up of the 12-period exponential movingaverage (EMA) minus the 26-period exponential moving average (12 day EMA- 26 day EMA) The Signal line is typically the 9-period EMA of the MACD line.
- The MACD is calculated by subtracting the 26-period Exponential Moving Average (EMA) from the 12- period EMA.
- \* MACD triggers technical signals when it crosses above (to buy) or below (to sell) its signal line.
- ❖ MACD helps investors understand whether the bullish or bearish movement in the price is strengthening or weakening. When the MACD crosses above the signal line, it is known as a bullish cross and when it crosses below, its known as a bearish cross



#### **MACD**

#### **Calculation**

MACD Line = 12 periods EMA (Exponential Moving Average) – period 26 EMA (Exponential Moving Average)

Signal Line = 9 period EMA (Exponential Moving Average)
of the MACD line

**Histogram** = the difference MACD Line and Single Line

On November 16, 2017, the MACD blue line made a bullish cross above the signal line, presenting a buy signal. The MACD stayed above the signal line for over a month when the rice went on to rally more than 150 percent before its next bearish cross.

The bear cross occurred on Dec. 20, 2017, signaled a bullish-to-bearish trend change.

It's recommended to use the MACD in conjunction with other indicators like volume, RSI or price action because like any indicator the MACD is not 100 percent accurate and can give off false signals.





The MACD also helps in identifying overbrought and oversold conditions in the market





#### Parabolic **SAR**

One indicator that can help us determine where a trend might be ending is the Parabolic SAR (Stop And Reversal).

A Parabolic SAR places dots, or points, on a chart that indicates potential reversals in price movement. When the dots are below the candles, it is a **BUY** signal. When the dots are above the candles, it is a **SELL** signal

You can also use Parabolic SAR to help you determine whether you





## Volume

SI No	Price	Volume	What is the expectation?
01	Increases	Increases	Bullish
02	Increases	Decreases	Caution – weak hands buying
03	Decreases	Increases	Bearish
04	Decreases	Decreases	Caution – weak hands selling







## VWAP (Volume Weighted Average Price)

VWAP stands for volume-weighted average price. As the name would suggest, it's the average price of the asset for a given period weighted by volume

**VWAP** =  $\sum$  (Typical Price \* Volume ) /  $\sum$  Volume

Trend Identification is a major benefit of using the Volume Weighted Average Price indicator.

Bullish Trend is characterized by prices trading above the VWAP.

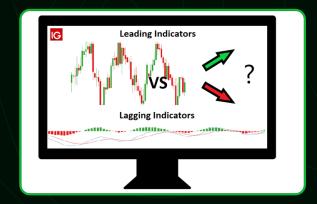
Bearish Trend is characterized by prices trading below the VWAP.

Sideways Market is characterized by prices trading above and below the VWAP.

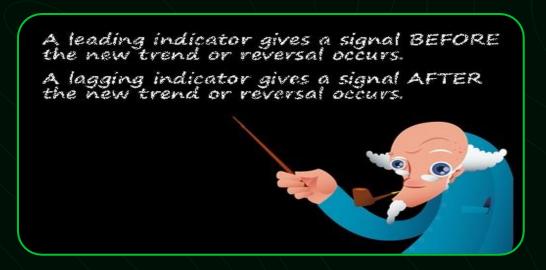
The downside of the indicator is that is is a lagging indicator



#### **Leading and Lagging Indicators**



There are two types of indicators: leading and lagging.



A **leading** indicator or oscillators gives a signal **before** the new trend or reversal occurs. These indicators help you profit by predicting what prices will do next. Leading indicators typically work by measuring how "overbought" or "oversold" something is. This is done with the assumption that if a cryptocurrency pair is "oversold", it will bounce back. They may give you fake breakouts. You should combine leading indicators with other tools such as Japanese candlestick patterns classic chart patterns, and support and resistance.

A <u>lagging</u> indicator gives a signal <u>after</u> the trend has started. They simply lag the market. They confirm the trend. Lagging indicators only give signals after the price change is clearly forming a trend. The downside is that you'd be a little late in entering a position.



#### Fibonacci Trading

(61.8%, 38.2%, and 23.6%)

- Leonardo Pisano Bogollo an Italian mathematician from Pisa, known to his friends as Fibonacci discovered Fibonacci numbers.
- The Fibonacci series is a sequence of numbers starting from zero arranged in such a way 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...
- Divide any number in the series by the previous number; the ratio is always approximately
   1.618 (Phi golden ratio).

For example:  $610/377 = 1.618 \ 377/233 = 1.618$ 

- ❖ Further into the ratio properties, one can find remarkable consistency For example:89/144 = 0.618 144/233 = 0.618 (expressed in percentage as 61.8%)
- ❖ Similar consistency can be found when any number in the Fibonacci series is divided by a number two places higher. For example:13/34 = 0.382 21/55 = 0.382 (expressed in percentage as 38.2%)
- ❖ Also, there is consistency when a number in the Fibonacci series is divided by a number 3 place higher. For example: 13/55 = 0.236 21/89 = 0.236 (expressed in percentage as 23.6%)



Fibonacci discovered every number in the sequence is approximately 61.8% of the next number in the sequence.

- 55/890.6179775280898876 = 61.8%
- 233/3770.6180371352785146 = 61.8%
- 144/2330.6180257510729614 = 61.8%
- This is not the only correlation. Fibonacci also uncovered that every number in the sequence is approximately 38.2% of the Fibonacci number two steps ahead.
- (13, 21, 34) 13/34 = 0.3823529411764706-38.2%
- (21, 34, 55) 21/55 = 0.3818181818181818=38.2%
- (55, 89, 144) 55/144=0.381944444444444 = 38.2%
- (144, 233, 377) 144/377 = 0.3819628647214854 = 38.2%
- Also, we have another ratio! Every number in the Fibonacci sequence is 23.6% of the number after the next two numbers in the sequence:
- ♦ (55, 89, 144, 233) 55/233 = 0.2360515021459227 = 23.6%



#### Using Fibonacci Retracements (61.8%, 38.2%, and 23.6%)

- \* Fibonacci retracement levels are horizontal lines that indicate the possible support and resistance levels where price could potentially reverse direction. Fibonacci support and resistance levels are the levels at which you can expect a reversal, and the levels can signal entry points
- Fibonacci tool works best when the market is trending
- In technical analysis, this tool is created by taking two extreme points (usually a peak and a minimum) on the chart and dividing the vertical distance by the key Fibonacci coefficients equal to 23.6%, 38.2%, 50%, 61.8%, and 100%.





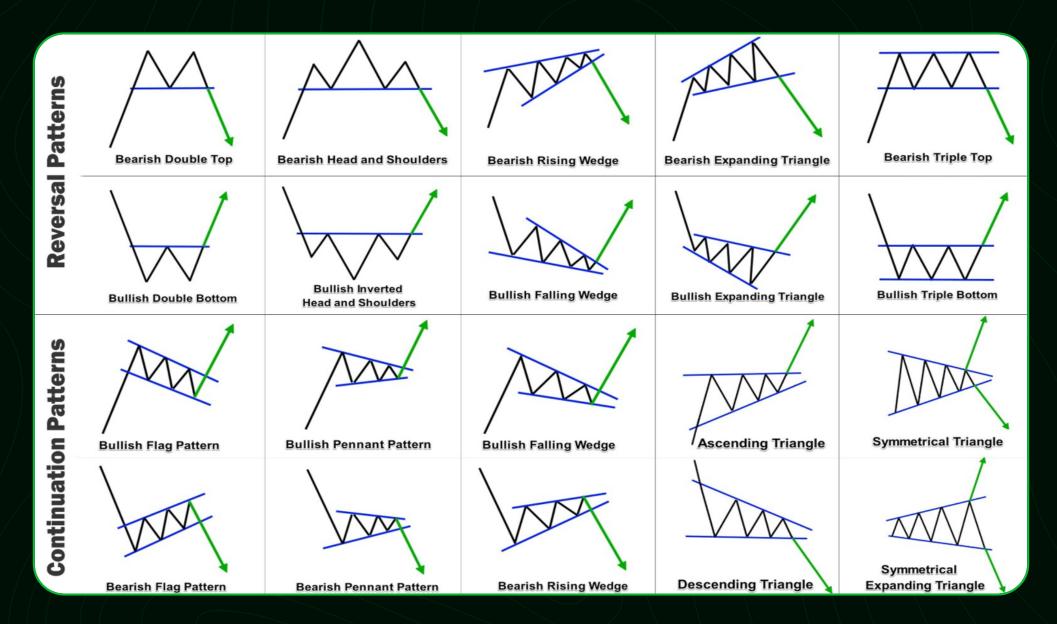
Retracements, which means periods in which the price moves against the trend, after which it moves back in the trend direction



## Fibonacci Retracement







# THANK YOU TO BE CONTINUED...