LWB

Legacy Wealth Builder

INNER CIRCLE

2024

Oscillators, Fibonacci and Bollinger

OSCILLATORS

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Oscillators

- RSI
- MACD
- ATR

What is an Oscillator?

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Oscillator

- An oscillator is a tool that oscillates between two boundaries to show the momentum of the market. Oscillators are plotted above or below a price chart.
- Examples of oscillators include the Stochastic Oscillator, MACD, or RSI.
- Oscillators are often used in conjunction with other technical analysis indicators. Analysts find oscillators most advantageous when they cannot find a clear trend in a company's stock price easily.

Relative Strength Index

Relative Strength Index

Relative Strength Index

The RSI is one of the most popular momentum indicators in technical analysis. It measures the speed and change of the price movements to identify overbought and oversold conditions in the market.

Understanding RSI:

- **Formula:** RSI = 100 - [100 / (1 + RS)], where RS (Relative Strength) is the average of ‘n’ days' up closes divided by the average of ‘n’ days' down closes.
- **Scale:** RSI values range from 0 to 100.
- **Key Levels:**
  - **Above 70:** Typically considered overbought, indicating that the asset may be due for a pullback or correction.
  - **Below 30:** Typically considered oversold, suggesting that the asset may be undervalued and due for a bounce.

Myths and Reality about RSI

Myths and Reality about RSI

RSI Always Indicates Reversals at 70 and 30:

- **Myth:** When the RSI crosses above 70 or below 30, it always signals an impending reversal.
- **Reality:** RSI can stay in the overbought (above 70) or oversold (below 30) zone for extended periods during strong trends. In a strong uptrend, RSI may hover above 70 for a long time, and in a strong downtrend, it may stay below 30. This indicates the strength of the trend rather than a reversal.

RSI Alone Can Predict Market Movements:

- **Myth:** RSI by itself is a reliable tool for making trading decisions.
- **Reality:** While RSI is a powerful indicator, relying solely on it can lead to false signals. It's essential to use RSI in conjunction with other indicators, chart patterns, or fundamental analysis to make well-informed decisions.

Myths and Reality about RSI

RSI Cannot Be Used in Trending Markets:

- **Myth:** RSI is only effective in ranging markets and not in trending markets.
- **Reality:** RSI can be used in trending markets by adjusting the thresholds. For instance, in a strong uptrend, traders might consider RSI levels above 80 as overbought and below 40 as oversold. Similarly, in a downtrend, the overbought threshold could be set lower, and the oversold threshold higher.

RSI Divergences Always Lead to Price Reversals:

- **Myth:** Divergence between RSI and price always signals a reversal.
- **Reality:** While divergences can indicate a potential reversal, they don't always lead to one. In some cases, the price may continue in the direction of the trend despite a divergence, especially in strong trends. Divergences should be used in combination with other signals for better accuracy.

Myths and Reality about RSI

RSI Is Only Useful for Short-Term Trading:

- **Myth:** RSI is best suited for short-term trading and is not applicable for long-term analysis.
- **Reality:** RSI can be adapted for different time frames, including long-term analysis. The period setting of RSI can be adjusted to suit different trading strategies, whether short-term, swing, or long-term investing.

What actually works in RSI analysis?

What actually works in RSI analysis?

Tips for Using RSI Effectively:

- **Combine with Other Indicators:** Use RSI in conjunction with trend indicators like Moving Averages to improve the accuracy of signals.
- **Adjust Period Settings:** The default period for RSI is 14, but traders can adjust this based on their trading style and the market conditions.
- **Look for Divergences:** RSI divergences can provide early warning signs of potential reversals, but always confirm with other indicators or price action.
- **Use Trendlines:** Applying trendlines to the RSI itself can help in identifying breakouts and changes in momentum.

By understanding these myths and the proper application of RSI, traders can make better-informed decisions and avoid common pitfalls.

MACD(Moving Average Convergence Divergence)

Moving Average

Convergence Divergence

The Moving Average Convergence Divergence (MACD) is a popular momentum and trend-following indicator used in technical analysis. It helps traders identify changes in the strength, direction, momentum, and duration of a trend in a stock's price.

Moving Average Convergence Divergence

How to interpret MACD

How to interpret MACD

- **MACD Crossovers:** **Bullish Crossover (Buy Signal):** When the MACD line crosses above the signal line, it indicates a potential buying opportunity. This crossover suggests that upward momentum is increasing.
- **Bearish Crossover (Sell Signal):** When the MACD line crosses below the signal line, it indicates a potential selling opportunity. This crossover suggests that downward momentum is increasing.
- **Centerline Crossovers:** **Bullish Centerline Crossover:** When the MACD line crosses above the zero line, it indicates that the 12-day EMA has crossed above the 26-day EMA, signaling that the asset is gaining positive momentum.
- **Bearish Centerline Crossover:** When the MACD line crosses below the zero line, it indicates that the 12-day EMA has crossed below the 26-day EMA, signaling that the asset is gaining negative momentum.

How to interpret MACD

- **Histogram Analysis:** The histogram visually represents the difference between the MACD line and the signal line. When the histogram is above the zero line and increasing, it suggests that the upward momentum is strengthening. Conversely, when the histogram is below the zero line and decreasing, it indicates that the downward momentum is strengthening.

- **Divergences:** Bullish Divergence: Occurs when the price makes a lower low, but the MACD line makes a higher low. This suggests that the downward momentum is weakening and could indicate a potential reversal to the upside.

- **Bearish Divergence:** Occurs when the price makes a higher high, but the MACD line makes a lower high. This suggests that the upward momentum is weakening and could indicate a potential reversal to the downside.

MACD Trading Strategies

MACD Trading Strategies

MACD Crossovers Strategy:

- Traders often enter a trade when the MACD line crosses above or below the signal line. For example, a buy signal is generated when the MACD line crosses above the signal line, and a sell signal is generated when the MACD line crosses below the signal line.

Centerline Crossovers Strategy:

- Some traders use the centerline crossovers as entry or exit points. For instance, when the MACD line crosses above the zero line, it could be seen as a buy signal, while crossing below the zero line could be seen as a sell signal.

MACD Trading Strategies

MACD Histogram Reversals:

- Traders look for changes in the direction of the histogram. A declining histogram could indicate weakening momentum, which might be a sign to exit a long position or enter a short position.

MACD and Price Action:

- Combining MACD with price action analysis can improve its effectiveness. For example, if a bullish crossover occurs near a key support level, it could strengthen the case for a potential buy.

Limitations of MACD

Limitations of MACD

Lagging Indicator:

- MACD is based on moving averages, which are lagging indicators. As a result, MACD signals can sometimes be late, especially during rapid price movements or in volatile markets.

False Signals:

- In choppy or sideways markets, MACD can generate false signals, leading to whipsaws. This occurs when the price moves back and forth around the moving averages without establishing a clear trend.

Over-Reliance on Crossovers:

- Relying solely on MACD crossovers can be risky, as they may not always result in profitable trades. It's essential to confirm signals with other indicators, chart patterns, or market context.

Conclusion

Conclusion

The MACD is a versatile tool that provides valuable insights into trend strength, direction, and momentum. By understanding how to interpret its components—crossovers, centerline movements, histograms, and divergences—traders can enhance their decision-making process. However, like all indicators, MACD should be used in conjunction with other tools and analysis methods to confirm signals and reduce the risk of false entries.

Average True Range

Average True Range

The Average True Range (ATR) is a technical indicator used to measure market volatility. Unlike many other indicators that focus on price direction, the ATR focuses solely on the magnitude of price movement, providing insight into how much an asset's price is moving over a given period. It helps traders assess volatility, set stop-losses, and identify potential breakout opportunities.

Average True Range

Understanding ATR

Understanding ATR

True Range (TR) is the foundation of the ATR. It measures the greatest of the following three values:

- The current high minus the current low.
- The absolute value of the current high minus the previous close.
- The absolute value of the current low minus the previous close.

The **True Range** accounts for gaps in the market and captures a more accurate representation of price movement, including overnight gaps or sudden jumps in price.

- **Average True Range (ATR):**
- The **ATR** is a moving average of the True Range values, typically over 14 periods (days, hours, etc.), though the period can be adjusted based on the trader's preference.
- **Formula:** ATR = (Prior ATR × (n - 1) + Current TR) / n, where n is the chosen period (e.g., 14 days).
- ATR values are expressed in terms of price, not percentages.

How to interpret ATR

How to interpret ATR

High ATR Values:

- High ATR values indicate higher volatility, meaning that the price is experiencing large price swings. This could suggest increased uncertainty in the market or that the asset is moving in a strong trend.

Low ATR Values:

- Low ATR values indicate lower volatility, suggesting that the asset is experiencing smaller price movements. This can occur during consolidation periods when the market is moving sideways or within a narrow range.

Uses of ATR

Uses of ATR

Measuring Volatility:

- ATR helps traders gauge the volatility of an asset. A high ATR signals that an asset is volatile, while a low ATR suggests the asset is more stable. This can help traders adjust their strategies accordingly.

Setting Stop-Loss Orders:

- Traders often use ATR to set stop-loss levels that account for volatility. A stop-loss placed too close to the entry price may be hit prematurely due to normal market fluctuations. ATR helps set a stop-loss at a distance that reflects the asset's volatility, minimizing the chances of being stopped out due to noise.
- For example, a trader might set a stop-loss at 1.5 times the ATR below the entry price to allow for normal price swings.

Identifying Breakout Opportunities:

- When the ATR starts to rise from a low level, it can signal an upcoming breakout, as it indicates increasing volatility. This can help traders spot potential entry points in trending markets or after consolidations.

Uses of ATR

Trailing Stop-Loss:

- ATR is often used for setting trailing stop-losses. As the market moves in the trader's favor, they can adjust their stop-loss by a certain multiple of the ATR to lock in profits while giving the trade enough room to continue moving.

Determining Trade Size:

- Some traders adjust their position size based on the ATR. In a highly volatile market (high ATR), traders might reduce their position size to manage risk, while in low-volatility markets (low ATR), they may take larger positions.

Example:

- Suppose a stock has a current ATR value of 2.5. This means that over the past 14 days (if using the default period), the stock has moved an average of 2.5 points per day. A trader can use this information to gauge how volatile the stock is, adjust their position size, or set stop-losses accordingly.

Limitations of ATR

Limitations of ATR

Does Not Provide Direction:

- ATR only measures volatility and does not indicate the direction of the trend. Traders must combine ATR with other indicators to determine the market's direction.

Subjective Interpretation::

- Since ATR is a volatility measure, there's no specific value that indicates "high" or "low" volatility. What is considered high or low depends on the asset being traded and the trader's strategy.

Lagging Indicator:

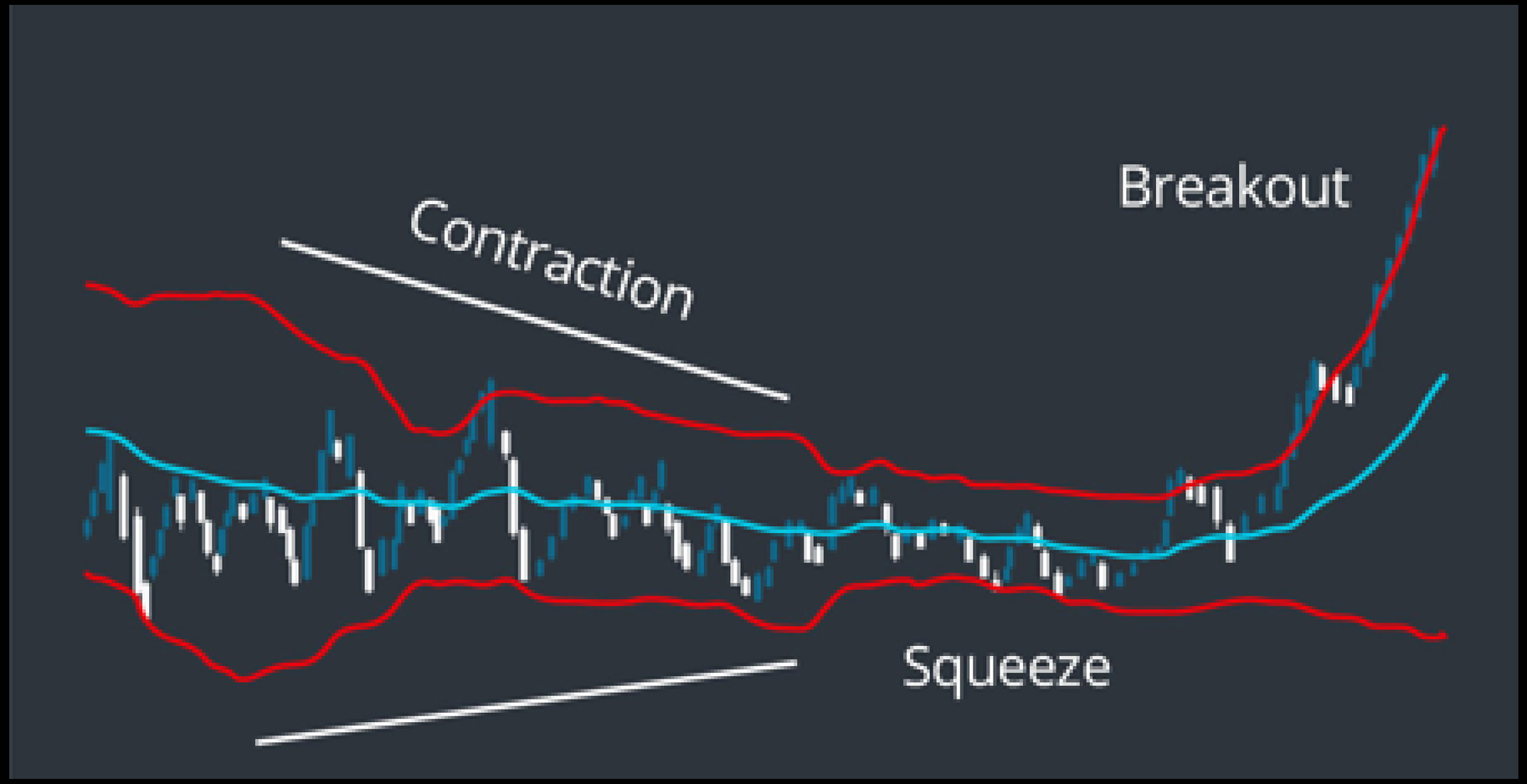
- Like most moving averages, ATR is a lagging indicator, meaning that it is based on past price data. It may not predict future volatility spikes or sudden price changes.

Conclusion

The Average True Range (ATR) is an essential tool for assessing market volatility and managing risk. While it doesn’t provide buy or sell signals directly, it is extremely valuable for setting stop-loss levels, adjusting position sizes, and identifying potential breakouts. However, because it does not indicate price direction, it’s best used in conjunction with other indicators or analysis techniques

Bollinger Bands

Bollinger Bands



Bollinger Bands

- John Bollinger, a financial analyst and technical trader, developed **Bollinger Bands** in the early 1980s as part of his work in the field of technical analysis.

- Bollinger Bands are a popular technical analysis tool developed by John Bollinger. They help traders identify overbought or oversold conditions in the market, as well as potential breakout points.

Components of Bollinger Bands

Components of Bollinger Bands

- **Middle Band (SMA):** A simple moving average (SMA) is typically used as the middle line, often with a period of 20 days.
- **Upper Band:** This is calculated by adding two standard deviations to the SMA. The upper band represents a resistance level.
- **Lower Band:** This is calculated by subtracting two standard deviations from the SMA. The lower band acts as a support level.

Key Concepts

Key Concepts

- **Volatility Indicator:** When markets are volatile, the bands widen (expand), and when the market is calm, they contract.
- **Overbought and Oversold Conditions:**
  - If the price touches the upper band, the market is potentially overbought.
  - If the price touches the lower band, the market may be oversold.
- **Breakouts:** Although prices typically stay within the bands, when a breakout occurs (either above the upper band or below the lower band), it can signal the start of a strong trend in that direction.

Trading Strategies

Trading Strategies

Let’s explore two popular Bollinger Band trading strategies: Trend Reversal and Breakout Trading.

Bollinger Band Trend

Reversal Strategy

Bollinger Band Trend Reversal Strategy

- This strategy works best in a range-bound market where prices fluctuate between the support (lower band) and resistance (upper band). Here’s how it works:

- **Steps:**

- **Buy Setup (Oversold):**
  - Wait for the price to touch or cross below the lower Bollinger Band.
  - Look for a bullish reversal candlestick pattern (e.g., hammer, bullish engulfing) near the lower band.
  - Confirm with a momentum indicator like the RSI (Relative Strength Index) to check if the market is in oversold territory (RSI < 30).
  - Enter a long position (buy) when the price begins to reverse from the lower band.
  - Stop-loss can be placed just below the recent low or lower band.
  - Target the middle band (SMA) or the upper band for taking profits.

Trend Reversal – Buy Setup

Bollinger Band Trend Reversal Strategy

Sell Setup (Overbought):

- Wait for the price to touch or cross above the upper Bollinger Band.
- Look for a bearish reversal candlestick pattern (e.g., shooting star, bearish engulfing) near the upper band.
- Confirm with RSI to see if the market is overbought (RSI > 70).
- Enter a short position (sell) when the price begins to reverse from the upper band.
- Stop-loss can be placed just above the recent high or upper band.
- Target the middle band or the lower band for profit-taking.

Key Points:

- Always wait for confirmation; don’t trade solely based on touching the bands.
- This strategy works well in sideways markets but may fail during strong trends.

Trend Reversal – Sell Setup

Bollinger Band

Breakout Strategy

Bollinger Band Breakout Strategy

- This strategy helps traders identify breakouts, which are often followed by strong trends. Bollinger Bands naturally expand and contract based on market volatility, so when the bands squeeze tightly, a breakout could be imminent.
- **Steps:**
- **Buy Setup (Bullish Breakout):**
  - Look for a “Bollinger Band Squeeze,” where both bands contract tightly.
  - A breakout above the upper Bollinger Band is often a signal of an upward trend.
  - Enter a long position (buy) once the breakout above the upper band is confirmed, ideally with a strong bullish candlestick.
  - Confirm the breakout with increased volume.
  - Place a stop-loss below the middle band (SMA) or the recent swing low.
  - Set your profit target based on risk-reward ratios or by trailing your stop-loss.

Breakout Example – Buy Setup

Bollinger Band Trend Reversal Strategy

Sell Setup (Bearish Breakout):

- In a similar way, if there is a breakout below the lower Bollinger Band, it signals a potential downward trend.
- Enter a short position (sell) after the breakout below the lower band.
- Stop-loss can be placed above the middle band or recent swing high.
- Look for a strong increase in volume to confirm the breakout.
- Use a similar risk-reward ratio for your profit target or trail your stop-loss.

Key Points:

- False breakouts are common, so volume confirmation or another indicator like the MACD can help verify the strength of the breakout.
- This strategy works best in trending markets after a period of low volatility.

Breakout Example – Sell Setup

FIBONNACI

RETRACEMENT

Leonardo Pisano Bogollo

1+1 =2

1+2=3

2+3=5

3+5=8

5+8=13

8+13=21

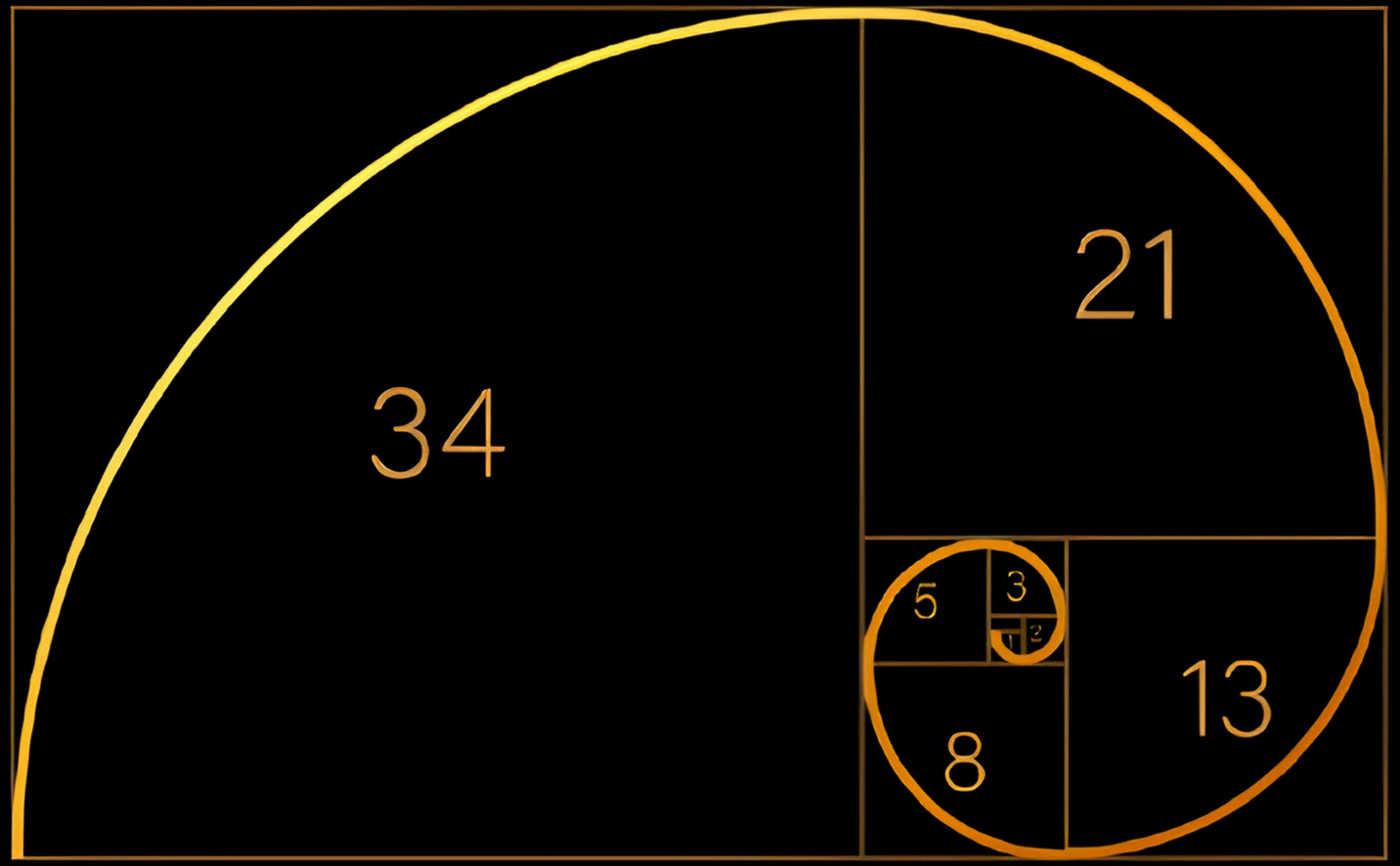
13+21=34

21+34=55

The Fibonacci Sequence

GOLDEN RATIO

GOLDEN RATIO



GOLDEN RATIO

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

- For example:
  - 610/377 = 1.618
  - 377/233 = 1.618
  - 233/144 = 1.618

1.618 often referred to as PHI.

Fibonacci numbers have their connection to nature.

FIBONNACI

NUMBERS

FIBONNACI NUMBERS

0,1,1,2,3,5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181...

- For example:
  - 89/144 = 0.618
  - 144/233 = 0.618
  - 377/610 = 0.618

0.618, when expressed in percentage is 61.8%.

Any number in the Fibonacci series is divided by a number two places higher.

- For example:
  - 13/34 = 0.382
  - 21/55 = 0.382
  - 34/89 = 0.382

0.382, when expressed in percentage terms, is 38.2%

FIBONNACI NUMBERS

0,1,1,2,3,5,8,13,21,34,55,89,144,233,377,610,987,1597,2584,4181...

- For example:
  - 13/55 = 0.236
  - 21/89 = 0.236
  - 34/144 = 0.236
  - 55/233 = 0.236

0.236, when expressed in percentage terms, is 23.6%.

FIBONNACI RATIOS

FIBONNACI RATIOS

The Fibonacci ratios are derived from the Fibonacci sequence:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, and so on.
Here, each number is equal to the sum of the two preceding numbers.

- Fibonacci ratios are informed by mathematical relationships found in this formula.
- As a result, they produce the following ratios: 23.6%, 38.2%, 50%, 61.8%, 78.6%, 100%, 161.8%, 261.8%, and 423.6%.
- Although 50% is not a pure Fibonacci ratio, it is still used as a support and resistance indicator.

FIBONACCI IN TECHNICAL ANALYSIS

FIBONACCI IN TECHNICAL ANALYSIS

It is believed that the Fibonacci ratios, i.e. 61.8%, 38.2%, and 23.6%, finds its application in stock charts.

Fibonacci analysis can be applied when there is a noticeable up-move or down-move in prices.

Whenever the stock moves either upwards or downwards sharply, it usually tends to retrace back before its next move.

Exploring Fibonacci Retracement

What Do Fibonacci Retracement Levels Tell You?

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

- **Example-** A trader may see a stock moving higher. After a move up, it retraces to the 61.8% level. Then, it starts to go up again. Since the bounce occurred at a Fibonacci level during an uptrend, the trader decides to buy. The trader might set a stop loss at the 61.8% level, as a return below that level could indicate that the rally has failed.