

TECHNICAL ANALYSIS

- Analysts use technical analysis to understand the effect of supply and demand on prices.
- Technical analysts focus on market action (primarily price, volume, and time) and try to identify patterns that can predict future stock prices.
- Technical analysis assumes:
 - Market prices reflect all market influences.
 - The market does not move haphazardly. It moves in trends that are usually long lasting.
 - Past trends can predict future trends.

Comparing Technical Analysis to Fundamental Analysis

- An investor should use a balance of these two types of analysis. The fundamentals are investment decision-making tools, and technical analysis is an investment timing tool.

Commonly-Used Tools in Technical Analysis

- There are four main tools in technical analysis:
 - Chart analysis.
 - Quantitative analysis.
 - Sentiment indicators.
 - Cycle analysis.

Chart Analysis

- Two types of charts used to analyze prices:
 - Bar charts
 - Price charts
- A bar chart plots the movement of the price of a security and its trading volume over a period of time.

- A price chart shows the high, low, and close price of a security. These charts indicate levels of support and resistance, and price patterns.
 - **Support levels** are when demand is high and supply is low. Price will rise above the support level.
 - **Resistance levels** are when supply surpasses demand and prices fall.
 - Price patterns indicate the behaviour of the market:
 - **Reversal patterns**, such as head and shoulders, are the point at which there is a major movement up or down in price.
 - **Continuation patterns**, or consolidation points, are pauses in existing price trends, after which the prevailing trend usually continues. They are a normal occurrence.

Quantitative Analysis

- Quantitative analysis is statistical analysis enhanced by computer technology. Trends are shown by **moving averages** and **oscillators**.
- **Moving Averages:**
 - Calculated by adding a stock or index's closing prices over a period of time and then dividing the sum by that time (e.g., if looking at five weeks, divide by five).
 - Comparing the moving average against the market average shows whether a short-term price change is a signal of a major change in valuation.
 - When a price moves above the moving average, it can be interpreted as a sign to buy. When a price falls below the moving average, it can be interpreted as a sign to sell.
- **Oscillators:**
 - A group of momentum-based indicators in which readings fluctuate from 0 to 100 or -1 to +1.
 - When the oscillator reaches an upper extreme, the market is overbought, and when the oscillator reaches a low point, the market is oversold.

- The **moving average convergence-divergence (MACD)** oscillator tracks trading momentum and indicates divergence over time (standard periods are 12 days and 26 days).
 - The difference between the 26-day moving average and 12-day moving average produces the MACD. It is then smoothed by the 9-day moving average to produce the signal line.
 - When the MACD is higher and the stock moves lower, this may mean the market is bottoming out. When the MACD is below a stock price and the stock moves higher, the market may be losing its momentum.

Sentiment Indicators

- Investor expectations are revealed by their sentiments – or emotions.
- **Contrarian** investors do the opposite of majority expectations.
- Investor sentiment underlies bullish and bearish market expectations: when 75% are bullish, the market is considered to be overbought (an indication that it is time to sell); when only 25% are bullish, the market is oversold (an indication that it is time to buy).

Cycle Analysis

- Used to predict the timing of market movements, and the end of one cycle and the start of another.
- Common cycle lengths:
 - Long term: > 2 years.
 - Seasonal: 1 year.
 - Primary/intermediate: 9 to 26 weeks.
 - Trading: 4 weeks.
- The **Elliot Wave Theory** is an example of cycle analysis:
 - The rhythms found in nature can be applied to predict patterns in stock price movements.
 - The market moves up in a series of five waves, and it moves down in a series of three waves. The large waves have smaller waves within them.

Other Indicators in Equity Market Analysis

- ***Volume changes:***
 - In a bull market, volume increases as prices increase (i.e., more buying occurs). A bull market may be coming to an end when prices continue to increase but volume no longer increases.

 - In a bear market, volume increases as prices decrease (i.e., more selling occurs). When prices rally, volume will decrease.

- ***Breadth of the market:***
 - Breadth is indicated by the number of issues that trade, advance, or decline.

 - The extent or broadness of a market trend is measured by:
 - The **advance-decline line**: A non-price measure of market trends using the difference between the number of stocks that advance and decline.

 - New highs and new lows: The number of new high prices and new low prices are divided by the number of stocks traded. The market is considered to be strong when new highs are increasing and new lows are decreasing.