

# **TECHNICAL ANALYSIS**

SAPM

## Technical Analysis:

- Technical analysis is the study of historical prices for the purpose of predicting prices in the future
- Technical analysts frequently utilize charts of past prices to identify historical price patterns
- These price patterns are then used to forecast prices in the future
- A basic belief of technical analysts is that market prices themselves contain useful and timely information
  - Prices quickly reflect all available fundamental information, as well as other information, such as traders' expectations and the psychology of the market

### Role of Technical Analysis

- Identify and predict changes in direction of price trends
- Determine the timing of action – entry and exit decisions

# Technical Analysis: Chart Analysis

**Chart Analysis** - the basic tool of technical analysis

- 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
- Chart analysts plots historical prices in a two-dimensional graph in order to identify price patterns which can then be used to predict the futures direction of prices
  - The goal of any chart analyst is to find consistent, reliable, and logical price patterns with which to predict future price movements
- Chart analysts rely primarily on three bodies of data
  - Prices (monthly, weekly, daily, and intra-day)
  - Trading volumes, and
  - Open interest

# Technical Analysis: Chart Analysis

## Price Pattern Recognition Charts

- The most commonly used price pattern recognition charts are: *bar* charts, *line* charts, *candlestick* charts, and *point-and-figure* charts
- On these charts, the *Y*-axis (vertical axis) represents the price scale and the *X*-axis (horizontal axis) represents the time scale. Prices are plotted from left to right across the *X*-axis with the most recent plot being the furthest right.

## Bar Charts:

- Bar charts mark trading activity of a specified trading period (e.g., day) by a single vertical line on the graph
  - This line connects the high and low prices for the trading period
  - The closing price is indicated by a horizontal bar

# Technical Analysis: Chart Analysis – Bar Chart



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# Technical Analysis: Chart Analysis – Bar Chart

- Bar charts can also be displayed using the open, high, low and close. The only difference is the addition of the open price, which is displayed as a short horizontal line extending to the left of the bar.



# Technical Analysis:

## Chart Analysis – Bar Charts

### Bar Charts: One-Day Price Reversals

- Bar charts are frequently used to identify one-day price reversals.
- A one-day price reversal occurs in a **rising market** when prices make a **new high** for the current **advance** but then **close lower** than the previous day's close
- A one-day price reversal occurs in a **falling market** when prices make a **new low** for the current **decline** but then **close higher** than the previous day's close

# Technical Analysis: Chart Analysis – Line Charts

## Line Charts:

- In a line chart, only the closing prices are plotted for each time period.
- Some investors and traders consider the closing level to be more important than the open, high or low.
- By paying attention to only the close, intraday swings can be ignored.



# Technical Analysis:

## Chart Analysis – Candlestick Charts

### Bulls vs. Bears

- A candlestick depicts the battle between Bulls (buyers) and Bears (sellers) over a given period of time.
  1. Long white candlesticks indicate that the **Bulls** controlled trading for most of the period – **buying pressure**.
  2. Long black candlesticks indicate that the **Bears** controlled trading for most of the period – **selling pressure**.
  3. Small candlesticks indicate that neither the bulls nor the bears were in control of trading – **consolidation**.
  4. A long lower shadow indicates that the Bears controlled trading for some time, but lost control by the end and the Bulls made an impressive comeback.
  5. A long upper shadow indicates that the Bulls controlled trading for some time, but lost control by the end and the Bears made an impressive comeback.
  6. A long upper and lower shadow indicates that both the Bears and Bulls had their moments during the trading period, but neither could put the other away, resulting in a standoff.

# Technical Analysis:

## Common Technical Price Patterns

- Chart analysis uses both trend lines and geometric formations to predict market *tops* and *bottoms*, as well as future price movements
- The most popular technical price patterns are
  - Support and Resistance,
  - Trend lines,
  - Double tops and bottoms, and
  - Head-and-shoulder.
- **Support and Resistance**
  - A **support** level is a price level at which there appears to be **substantial buying pressure to keep prices from falling further**
  - A **resistance** level is a price level at which there appears to be **substantial selling pressure to keep prices from rising further**
  - A **congestion area** occurs when prices move sideways, fluctuating up and down within a well defined range for a considerable time period