A Study on Technical Analysis of Indian FMCG Sector

Rithvik Kammili

Abstract: The Indian fast-moving consumer goods (FMCG) sector plays a crucial role in the country’s economy, experiencing strong growth and catering to the needs of its vast population. This research aims to conduct a close examination of the Indian FMCG sector using technical analysis techniques in order to identify patterns, trends, and potential investment opportunities. Using a quantitative approach, this study employs various technical indicators and chart patterns to assess the price and volume movements of FMCG sector stocks listed on Indian stock exchanges. Historical price data and trading volumes are collected and analyzed to identify recurring patterns and trends that can assist investors in making well-informed decisions. The study covers a time period between 26/04/2021 to 02/06/2021, allowing for a comprehensive evaluation of the FMCG sector’s performance and behaviour. Few technical analysis tools such as moving averages convergence and divergence (MACD), relative strength index (RSI), on balance volume (OBV), and trendlines are utilized. By applying these techniques, the study aims to identify potential signals for buying and selling, levels of support and resistance, and price targets within the Indian FMCG sector. Additionally, the research explores the impact of market trends, economic factors, and industry-specific events on the sector’s performance. The findings of this study contribute to the existing knowledge in technical analysis and provide valuable insights for investors and traders interested in the Indian FMCG sector. The results enhance understanding of the sector’s price movements, volatility, and potential investment opportunities, enabling market participants to develop effective trading strategies and risk management approaches. It is important to note that this study solely focuses on the technical analysis of the Indian FMCG sector and does not consider fundamental analysis or qualitative factors that may influence investment decisions. Therefore, readers are encouraged to combine the findings of this study with additional research and analysis before making investment choices.

Keywords: Indian FMCG Sector, Investment Opportunities, Technical Analysis, Price Movements

I. INTRODUCTION

1.1 Background of Technical Analysis

The ideology of technical analysis is cited from centuries of money market data. In 17th century, a few features of technical analysis had begun to feature in the reports of the Dutch market exchanges by merchant named Joseph De La Vega from Amsterdam, Europe. In 18th century, the technical analysis is a practice developed by Homma Muneshisaa in Asia which advanced the utilization of candlestick approach. By studying the price of rice, he progressed the practice. Candles are the main charting tool of raw data analysis today. It is be sure that contents of the paper are fine and satisfactory. Charles Dow (1851-1902), a journalist, also informally known as the ‘grandfather of Technical Analysis’ composed and closely analyzed American stock market data, published a few interpretations in articles for “The Wall Street Journal”.

In his “Dow theory”, he intensified that patterns and business cycles could possibly be found in this data. In 1920-1930s, Richard W. Schabcker published several books which followed the work of Dow and W. Hamilton in their books “Stock Market Theory and Practice” and “Technical Market Analysis” which is widely accepted as pivotal studies of the discipline. It is more engaging with trend analysis and graph patterns which are still used in present times. Earlier, technical analysis was explicitly the examination of charts because there is no computer’s performance for the modern measure of statistical study. Dow originated a form of “point and figure chart analysis.” Paul V Azzopardi synced technical study with behavioral finance after the publication of behavioral finance as a separate study in economics and devised “Behavioral Technical Analysis”. Other inquisitors of the discrete data analysis include R N Elliot, W D Gann and R Wyckoff who advanced their respective methodologies in the 20th century. There a number of quantitative tools and theories evolved and enhanced in the recent years with an increasing importance on computerized techniques using impulsively devised computer software.

1.2 Meaning of Technical Analysis

Technical analysis predicts the price data propagated in the procedure of trading in the given time period. It is defined as “The study of market action, mainly through use of charts for the objective of forecasting future price trends.” The term ‘market action’ involves three main sources of information available to technical analysts i.e., open interest, volume, and rate. The trading archive of a security isolated by perpetuating price changes and volume traded in a chart or a graphical form. Computers and easy internet access now enabled traders to analyze a whole lot of data very quickly and take trading decisions in their favor.

1.3 Critical Assumptions of Technical Analysis

Market action discounts everything. This statement forms what is probably foundation of technical analysis. The analysts believe that anything that can possibly affect the current price fundamentally, politically, psychologically, or otherwise is reflected in the price of that market [1].
It therefore signifies the study of price action is required. If demand is more than supply, the prices raise. If supply is more than demand, the prices fall. This action is the basis of all economic and fundamental interpretation. The technical analysts indirectly study fundamentals.

Price moves in trends. The conception of overall direction of a market is completely important to the market action study. The market movement is not random and is in a specific order. The whole purpose of the charting of price action of a market is to identify trends in early stages of their development for the reason of trading in direction of those trends. Most of the techniques in technical analysis are trend following. There is a sequel to the assumption that price moves in trends. A trend in motion is more likely to continue than reverse. This sequel is an adaptation of sir “Isaac Newton’s first law of inertia”.

History repeats. This assumption defines that human psychology never change. The chart patterns that are there over the past hundred years reflect certain changes in the price charts. Since the patterns are worked well in the past, it is assumed that they will continue to work well in future too.

1.4 Importance of Technical Analysis

There are numerous reasons that signifies technical analysis for trading and investing. Some of them are as follows:

- Technical analysis helps to getting into a better risk and reward trading. It helps on making entries and exits [7][13][14].
- It helps in identifying periods where in there would be an unexpected rise or fall, in the price in the shorter period [2].
- It helps in accelerating the return on investment.
- Technical analysis attempts to measure the market psychology [8].
- Technical analysis helps to identify stocks that will outperform and underperform faster than the market or other stocks.
- Technical analysis helps to determine a buy price, sell price, and stop loss [9][15].

1.5 Theoretical Implication of Technical Analysis

Market action analysis is used widely by people who participate in the capital markets, traders, and investors to determine the short- and long-term trends. The scope of technical forecasting is increasing everyday as many retail and institutional investors had adapted and developing this stream of study in the present market scenario.

Market action Analysis is dependent on the following factors:

- The demand and supply of a security in the market determines the price.
- Variation in supply and demand can cause price change.
- Prices can be estimated with charts, trends, chart patterns, technical indicators, market cycles and other technical analysis theories.

The trend analysis involves collecting historical and the current market price data and plotting them in a chart to identify the direction of the market with the objective of finding actionable patterns from the given data. The trend moves in upwards, downwards, and sideways direction. Uptrend or a bull market implies that economy is moving upward and the stock prices are moving upward. There is a huge demand in the market.

Downtrend or a bear market implies that the economy is not performing well and moving downwards and the stock prices are moving down. There is a huge supply and very few buyers in the market. Sideways or horizontal trend refers to the suspectable movement of the trend in sideways. There will be an uptrend or downtrend after the sideways movement. The government tries the push up the economy. All the investors and traders should be more cautious about this movement.

Charts can be framed by using different time frames so it is easy to identify the price pattern. There are various types of charts. “Line charts, Bar charts, Candle charts and Point and Figure charts” are popular and widely used. Some charts like “Hollow Candle, Mountain, Colored Bar, Baseline, Volume Candle, Heikin Ashi, Kagi, Line Break, Renko, Range Bars” were rarely used. The data might be same but each method will provide its own unique interpretation which has both pros and cons. I personally prefer candlestick charts for the analysis.

The use of numerous time frames can prevent a trader from getting rolled by the whipsaw and noise lead the short-, medium- and long-term trends. Markets exist concurrently in several time frames. They exist from one minute, five minutes, ten minutes, half an hourly to hourly, a daily chart, weekly chart, and so on. When charts of different times frames are in sequence, it is easy to trade. At least two- or three-time frames should be used to analyze the direction of the market.

An indicator is a numerical assessment that can be exercised to a security’s technical metrics [4][11][12]. There are several technical indicators in the field of technical analysis [3][5]. The most used technical indicators are moving averages, Average Directional Index. Out of those indicators, they are divided into leading indicators or oscillators and lagging indicators or trend following indicators. Relative Strength Index [6], Stochastic Oscillator, Ichimoku Cloud, Fibonacci Retracements, On Balance Volume, Pivot Points, Williams % R, Commodity Channel Index, Average Directional Index, Bollinger Bands and Parabolic SAR are among the leading indicators. Moving averages (simple and exponential), MACD are among the trend following indicators. Both the leading and lagging indicators are used in conjunction for effective decision making [10].

1.6 Recent Trends in Technical Analysis

a. Automated Trading

It is a fact that humans sentiment plays a dominant role in financial instrument’s pricing and play an important role in decision making. Many market participants were willing to remove this excitement from executing their positions with the help of computers to make decisions form them. Computer testing is useful to determine the historical aspects under various conditions and help to advance the trading tactics.
Algorithmic trading or black box trading uses a computer program that follow a defined set of instructions to execute a trade. Theoretically, the trade can generate returns at a pace and abundance that any human stockist cannot do. The defined set of rules are based on quantity, price, time, or a mathematical paradigm. “Implementation Shortfall, Percentage of Volume, Trend following strategies, Arbitrage Opportunities, Mean Reversion Strategies, Index Fund Rebalancing, Mathematical model-based Strategies, Time Weighted Average Price and Volume Weighted Average Price” are the common trading strategies in algorithmic trading.

b. High Frequency Trading

HFT is a part of algo trading. This practice uses robust machine programs to trade a huge number of orders in nano seconds. It uses complex parametric to examine multiple markets and execute orders based on the present market situations.

c. Artificial Intelligence (AI)

Artificial Intelligence is a game changer for stock market and technical analysis as it is shaping the future of stock trading. Using robot advisor analyses crores of data points and execute trades at the superlative price. Analysts forecasts market accurately and trading firms efficiently averse the risk to provide higher returns. AI solutions are capable of counting numbers rapidly and taking optimal decisions based on huge volumes of data which is highly applicable in to the stock market scenarios. The trend pattern and market sentiment can be easily predicted within a very short period. The best output of using AL in stock market trading is a trading signal. These signals are result of AI system’s big data analysis on a particular security providing accurate advocacy for successful trading decisions like best entry price, exit price, and stop loss. Trading signals are produced by AI systems stand on advanced analysis of multiple indicators like price actions, security valuation and even analysis of data about the particular security in the news and social media. The technical analysis of stock price dynamics is also included in the dataset. AI implements machine learning, deep learning, and other techniques to tackle real issues. Techniques like decision tree, roughest approach and artificial neural networks are being applied to technical analysis. The new Chat GPT tool has now replaced humans and allowing companies to replace the AI bot instead of humans in decision making and analysis.

d. Machine Learning and Deep Learning

Machine Learning and Deep Learning are the areas of Artificial Intelligence. They have enabled machines to further advance their intellectual functions, by not just learning the given input but also their experience with decision making. Machine Learning for trading allows to get a complete image of the stock market situation with the help of deep, continuous stock price analysis and unstructured data processing. Machine Learning and Deep Learning can use these approaches from determining future stock prices to virtually use financial modelling. Learning techniques like neural networks, genetic algorithms can represent a greater area for research.

e. Financial Information Exchange or (FIX)

Over the past decade, FIX Protocol has transformed the trading backdrop by founding foundation in accelerating numerous online trading transformations that emerged. It has become the lingo of universal financial markets used rigorously by buy and sell side firms, trading podiums and regulators to interface trade documentation. It is the method the globe trades and it is becoming a main aspect in reducing trade costs, enlarging efficiencies, and achieving growth of transparency. Essential benefit to firms eager to probe new investment opportunities are offered. With participants able to swiftly communicate internally and internationally the cost of market entry is decreased, additionally reducing swapping costs. Series of messaging specifications used in trade interface is comprised in this protocol language. To support equity trading in the pre trade and trade atmosphere it is primitively developed. By reinforcing straight through processing (STP) from indications of open interest (IOI) to allotments and establishments, it is now experiencing fast expansion into the post trade scenario. In fixed income, foreign exchange and listed derivative markets there is a substantial growth.

f. Data Mining

Data mining and technical analysis is an elevating drift throughout several areas. The use of numerals, enumerations and cognitions has led to something more than a computer program. This concept can help technicians in decision making. It can be defined as the derivation of data from large database. Some of its functions are clustering, deviation analysis, classification, prediction, associations, and correlations, discovering concepts or class descriptions, trend analysis, and similarity analysis. Market action study will function with facts and it is the heart of the entire process. A chart is a vivid display of input. They must be suffused with applicable information for charts to work. The broad majority of charts require the stock prices collected at different intervals throughout the day. In a data mining solution, all these details must be gathered and assembled. These programs are ground on uncomplicated spreadsheets and data collection that lot of individuals or groups transmit on a daily cause. Scans could be executed programs and users can that would transfer thousands of data points in seconds. This method for market action analysis requires updated automation and mathematical knowledge. This concept will continue to revolutionize numerous areas in the economy and society.

II. LITERATURE REVIEW

1) Technical analysis is a methodology that provides insights into the prospective share prices of chosen companies for investment purposes. With an understanding of technical analysis, one can make accurate predictions and informed investment decisions in the stock market. By utilizing technical indicators, it becomes possible to gain knowledge about the future market trends of securities, aiding in identifying investment opportunities.
A Study on Technical Analysis of Indian FMCG Sector

2) Technical analysis gives investor a better understanding of the stocks and gives them right direction to go on further to buy or sell the stocks. The author had made a study on market action analysis of picked out stocks of energy sector. The author described that role of price behaviour, major turning points, and signals in the market. She had successfully interpreted the buy or sell decision using technical analysis and strategies. The techniques like B e t a, Relative Strength Index and Simple Moving Average are used.

3) Examining different technical indicators is beneficial for gaining a deeper comprehension of stock price movements, returns, and the development of viable trading strategies. The significance of technical analysis has been increasing in recent times, as it has demonstrated accuracy in predicting future trends in securities. Its simplicity in application and understanding has led to a growing number of investors utilizing this tool to analyse the movement of share prices.

4) Technical analysis is a highly subjective method of analysis that offers multiple options for the parameters employed in its indicators. It operates as a rule-based technique, leaving little room for personal judgment. The study on description of technical indicators in technical analysis to interpret the stocks in Nifty. The indicators used are moving average, Moving Average Crossovers and MACD in application to Nifty. The author concluded that using these technical signals is successful and generated good profit.

5) Technical analysis is always used by financial market participants to make investing decisions in all markets. The author used technical indicators like MACD, RSI to anticipate the future trend of the market. The research is conducted on few stocks in the NSE of India. The main role of the study is to signify the use of MACD and RSI in developing and developed markets.

6) Technical analysis is important to understand while making investment decisions. They chose pharmaceutical sector for the study. They emphasized that technical analysis helps to understand the price behavior, signals, and major turning points in the stocks. They have chosen methods like B E T A, R S I and S M A for the study.

7) Using technical analysis in FMCG sector could make trading decisions efficient. This paper describes important technical tools like various charts, moving average, MACD, RSI, accumulation distribution line relating to consumer goods stocks.

8) Market behavioral analysis on picked out companies that are listed in CNX Nifty 50 of twenty leading public companies from 2012 to 2107. The technical tools used are Guppy Multiple Moving Average, M A C D, Stochastic R S I, Average Directional Index to Heikin Ashi Charts. Their main objective is to determine in and out points of a trade using technical analysis.

9) A study on technical indicators for prediction of selected indices on NSE. The study used technical analysis on all sectors on NSE from April 2016 to March 2021. The most used technical tools are S M A, E M A, MACD, Williams % R, rate of change, Bollinger Bands, Stochastic Oscillator, Directional Movement Index and Commodity Channel Index. The author concluded that technical analysis is more useful for predicting future prices of the stock and making buy or sell decision.

10) The study of various technical indicators and combined them to generate accurate buy or sell signals. The data was collected from past six month from Banking and Finance, Auto, Pharma, FMCG, IT industries. The study was taken on all bullish and bearish reversal in the period. The technical indicators such as Bollinger Bands, 50-day SMA, Williams %R, Candlestick patterns with volumes trend lines and patterns were used. She concluded that using all those technical indicators together are efficient in generating high returns.

III. RESEARCH DESIGN

A. Statement of Problem

Trading in securities needs a thorough research fundamentally, technically. Most of the hunters just follow the underlying analysis. The setback of the analysis is to interpret the role and significance of technical analysis in buying and selling a security in the Indian daily moving consumer durables sector and to make an invaluable trading decision while participating in the financial market. The FMCG is the fourth largest sector in contributing economic growth in the Indian economy is increasing by 21.5% every year.

B. Research Gap

The stock prices cannot be predictable in all time horizons. Experts debate that it is not worthy to search for underrated stock or try to predict swings in the market through elementary and market action study. Neither any of these analyses could produce risk modified redundant returns consistently. The imbalances in trading performance in different market conditions i.e., accurate in downtrend and awful in uptrend is a gap which this research explains.

C. Nature of Study

This is a descriptive study in which the main motive is investigating relationship between characteristics of given sample size and given technical indicators. This is also behavioral study or quantitative study as it studies the market behavior and previous price fluctuations.

Need of the Study

- To acknowledge the main characteristics of technical analysis.
- To understand price movements and trends of the security.
- To conclude buy or sell decision of a security using technical analysis.

D. Scope of the Study

- The analysis is applied to five consumer packed goods stocks in Nifty FMCG index.
- The study is linked to technical analysis to predict the future movement of stocks.
- The study involves using of three technical indicators out of numerous technical tools.
- This research helps to interpret the point of entry and exit.
E. Objectives of the Study
- To know how technical tools are used to predict future behavior of stocks.
- Understanding the importance of different time horizons in technical analysis.
- To understand the scope and significance of technical analysis while participating in the market.
- To enable investors with a technique to make calculated profits by trading stocks.

F. Limitations of the Study
- The study is limited to few stocks in one sector.
- The analysis covers only three technical indicators.
- Technical analysis is limited to predict stocks for short term.
- The study mostly depends upon secondary data.
- Sometimes technical analysis gives mixed signals which leads to indecision in buying and selling of securities.

G. Research Methodology
A) The sample size of research study is FIVE FMCG companies selected from BSE and NSE. They are:
   • ITC
   • Dabur
   • Tata Consumer Products
   • Mario
   • Godrej Consumer Products

The major technical analysis tools used in the study are:
   • On Balance Volume
   • M A C D
   • R S I

B) Data collection Method

Primary Data
The primary data in the study include the data generated from personal research and data collected from the recent and live platform in the stocks of FMCG on NSE and BSE.

Secondary Data
The secondary data is collected from websites, books, journals, and newspapers related to technical analysis. Most of the data in this research is secondary data.

Charting Data
The charting data is collected from Kite, Zerodha.

IV. DATA ANALYSIS AND INTERPRETATION
Technical indicators used to analyze the stock prices:

A. On Balance Volume or (OBV)
- On Balance Volume tracks the changes in volume over time and is a running total which rises or falls every trading day.
- A volume oscillator works by defining the relationship two moving averages, quick and lag moving averages.
- The difference between the lead moving average and lag moving average is presented on the OBV chart.
- The leading moving average is of 14 period range and the lagging one is about 28 period range that is set according to the time frame.
- OBV is a leading technical tool as it usually rises or falls before the price act.
- Volume increases when FII, DII and other financial institutions start buying.
- Rising OBV may indicates that smart money is flowing in which drives price up. And vice versa as the institutions begin to sell their position. It is like buying from the retailers at the lowest and sell at the highest.
- If a market is upward, OBV should also rise. When market becomes overbought the OBV will reverse its direction.
- A jumping trend in OBV is a healthy move.
- A doubtful or sideways trend in the OBV leaves the price trend suspect and a probable for reversal.
- A falling OBV indicates a mass exit from the security irrespective of the price activity and cautious that price may follow OBV if the trend is not reversed.
- The histogram is like an oscillator that swings over and under zero line.
- Volume provides strength and weakness of a price values below zero line. This strategy plots optimal value above zero line and pessimal value below zero line.
- A positive value suggests that the price is up and negative value suggests that there is lack of support, and prices may begin to fall, stagnate, or reverse.
- OBV = Fast volume moving average (14 period) – Slow volume moving average (28 period)

B. Moving Average Convergence/ Divergence Or (MACD)
- M A C D is a momentum tool which is a trend supporting indicator depend upon association between two moving averages of prices.
- It measures the divergence or convergence between a near term moving average and a lengthy term moving average and is represented in a line form and a histogram.
- It is a measure of both price trend and momentum. Mass and velocity show the strength of the swing.
- It is the difference between two moving averages, calculated by subtracting 26-day E M A from 12-day E M A, a 9-day E M A of M A C D is called the signal line, is plotted on the top of the M A C D and functions as a trigger for buy and sell signal.
- It is a reliable indicator as it uses moving averages, which themselves are lagging indicators and which are in turn converted a momentum oscillator by subtracting longer term and shorter-term moving average. The resulting chart forms a line that swings above and below zero without any adjusted upper or lower boundaries.
- If it is greater than zero, it implies that the short-term average is higher than the long- term average, which is a sign of an uptrend.
- If it is less than zero it implies a down trend.
- Strong momentum is represented by the volatility in price, which results in a steeper slope of the M A C D plot.
- This is best applied in trending markets. There are three main ways to use MACD: Bullish/bearish moving average/center line crossovers
A Study on Technical Analysis of Indian FMCG Sector

Overbought/oversold Positive/ negative divergence
- The MACD histogram is the representation of difference between MACD line and signal line. The difference is plotted and represented as a histogram where center line crossing overs and divergences can be easily identified.
- The histogram of MACD gives a deepest insight into the balance of power between the bulls and bears than the MACD does.
- When the spread in between the MACD line and its signal line expands MACD histogram becomes larger or shallower depending upon the direction. Additional incline or decline in the gap between MACD line and its trigger line will be reflected in the histogram.

C. Relative Strength Index or (RSI)
- For tracking the technical strength or weakness in a security, RSI is used.
- It contrasts the grade of recent rewards and recent drops in a trail to determine heavy bought and heavy sold conditions of a security.
- The standard time period of RSI is 14-day RSI. Analysts also use 5-day RSI, 7-day RSI or 9-day RSI for quick trading.
- Traders using RSI should be wide awake that large advances and falls of a security will have an impact that the RSI by creating false acquire or sell signals.
- It is designed to follow the price momentum as the oscillator that ranges between 0 and 100. RSI gives four types of trading signals. They are Divergences, Charting pattern, RSI levels and over bought and over sold.
- Bullish divergences occurs when price dips to a new bottom but RSI will make a deeper base than during the preceding fall.
- Bearish divergence occurs when price hikes to a new high but RSI will make a lower high than the erstwhile rally.
- When RSI broke its down trend line, buy order shall be placed above the price trend line to utilize an upside breakout.
- When RSI broke its up-trend line, sell order shall be placed below the price trend line to utilize a downside breakout.
- When RSI fell below its lower reference band, and then rallies above it, it implies a buy signal.
- When RSI rose above its greater reference band and then crosses below it, it is a sell signal.
- It signifies inclined trend for the stock if the RSI is going up above 30 after falling below 25.
- It is a bearish signal if RSI is dipping below the level of 70 or 80 after reaching extreme 80-90.

The prices of ITC from 26/4/21 to 2/6/21 are mentioned below:

<table>
<thead>
<tr>
<th>Date</th>
<th>Open</th>
<th>High</th>
<th>Low</th>
<th>Close</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>26/04/21</td>
<td>206.00</td>
<td>206.80</td>
<td>204.75</td>
<td>205.30</td>
<td>8,40,42,104</td>
</tr>
<tr>
<td>27/04/21</td>
<td>205.45</td>
<td>206.95</td>
<td>205.20</td>
<td>205.65</td>
<td>7,59,11,708</td>
</tr>
<tr>
<td>28/04/21</td>
<td>206.00</td>
<td>206.50</td>
<td>205.30</td>
<td>205.55</td>
<td>17,98,05,604</td>
</tr>
<tr>
<td>29/04/21</td>
<td>206.70</td>
<td>207.50</td>
<td>204.05</td>
<td>204.35</td>
<td>22,84,88,072</td>
</tr>
<tr>
<td>30/04/21</td>
<td>204.00</td>
<td>205.60</td>
<td>202.10</td>
<td>202.70</td>
<td>25,32,79,273</td>
</tr>
<tr>
<td>3/05/21</td>
<td>201.80</td>
<td>201.85</td>
<td>200.00</td>
<td>200.95</td>
<td>31,05,60,772</td>
</tr>
<tr>
<td>4/05/21</td>
<td>201.80</td>
<td>202.40</td>
<td>199.10</td>
<td>199.55</td>
<td>29,27,38,674</td>
</tr>
<tr>
<td>5/05/21</td>
<td>199.60</td>
<td>202.05</td>
<td>199.45</td>
<td>201.55</td>
<td>8,98,04,173</td>
</tr>
<tr>
<td>6/05/21</td>
<td>202.40</td>
<td>205.95</td>
<td>202.15</td>
<td>202.75</td>
<td>29,92,77,101</td>
</tr>
<tr>
<td>7/05/21</td>
<td>202.75</td>
<td>206.40</td>
<td>202.75</td>
<td>205.35</td>
<td>35,47,81,358</td>
</tr>
<tr>
<td>10/05/21</td>
<td>206.00</td>
<td>207.35</td>
<td>204.90</td>
<td>205.55</td>
<td>25,36,67,805</td>
</tr>
<tr>
<td>11/05/21</td>
<td>204.00</td>
<td>206.50</td>
<td>203.80</td>
<td>204.05</td>
<td>23,91,32,387</td>
</tr>
<tr>
<td>12/05/21</td>
<td>203.50</td>
<td>205.20</td>
<td>202.85</td>
<td>203.30</td>
<td>24,25,79,666</td>
</tr>
<tr>
<td>14/05/21</td>
<td>204.50</td>
<td>213.05</td>
<td>204.10</td>
<td>212.35</td>
<td>1,32,63,69,872</td>
</tr>
<tr>
<td>17/05/21</td>
<td>216.55</td>
<td>217.00</td>
<td>211.60</td>
<td>212.55</td>
<td>60,20,58,312</td>
</tr>
<tr>
<td>18/05/21</td>
<td>214.00</td>
<td>214.65</td>
<td>209.65</td>
<td>210.05</td>
<td>20,14,34,752</td>
</tr>
<tr>
<td>19/05/21</td>
<td>210.05</td>
<td>211.35</td>
<td>207.50</td>
<td>207.75</td>
<td>17,52,24,577</td>
</tr>
<tr>
<td>20/05/21</td>
<td>209.90</td>
<td>209.90</td>
<td>206.85</td>
<td>207.00</td>
<td>14,60,66,813</td>
</tr>
<tr>
<td>21/05/21</td>
<td>208.35</td>
<td>209.85</td>
<td>207.40</td>
<td>209.05</td>
<td>12,88,12,160</td>
</tr>
<tr>
<td>24/05/21</td>
<td>210.00</td>
<td>212.00</td>
<td>207.80</td>
<td>211.50</td>
<td>16,23,27,635</td>
</tr>
<tr>
<td>25/05/21</td>
<td>213.60</td>
<td>213.60</td>
<td>210.30</td>
<td>210.85</td>
<td>14,99,19,425</td>
</tr>
<tr>
<td>26/05/21</td>
<td>210.80</td>
<td>212.45</td>
<td>210.35</td>
<td>210.55</td>
<td>10,39,30,639</td>
</tr>
<tr>
<td>27/05/21</td>
<td>211.45</td>
<td>214.15</td>
<td>210.25</td>
<td>211.20</td>
<td>26,95,56,839</td>
</tr>
<tr>
<td>28/05/21</td>
<td>212.05</td>
<td>213.45</td>
<td>211.45</td>
<td>212.85</td>
<td>38,38,67,682</td>
</tr>
<tr>
<td>31/05/21</td>
<td>215.50</td>
<td>217.95</td>
<td>214.40</td>
<td>216.60</td>
<td>52,10,85,548</td>
</tr>
<tr>
<td>1/6/21</td>
<td>218.45</td>
<td>219.35</td>
<td>214.20</td>
<td>215.20</td>
<td>28,72,55,942</td>
</tr>
<tr>
<td>2/6/21</td>
<td>211.10</td>
<td>212.50</td>
<td>208.70</td>
<td>209.00</td>
<td>52,39,03,329</td>
</tr>
</tbody>
</table>

Five-week chart of ITC using On Balance Volume

Data analysis and presentation:
The above charts are analyzed from 26/4/21 to 2/6/21 of five weeks. From 26/4/21 to 3/5/21, the OBV had moved sideways which was suspected and then fell on 4/5/21. Considering the OBV’s trend support on 4/5/21 from 4/5/21 to 17/5/21, (570m to 686m) there is an uptrend in the OBV as well as the chart, which drove the price from 199 to 216 INR. From 17/5/21 to 20/5/21, (686m to 603m) there is a downtrend in the chart and the OBV which drove the price from 216 to 206 INR. Again from 20/5/21 to 31/5/21 (606m to 800m) there is an uptrend in the OBV and the charts of ITC and the price moved from 207 to 219 INR. And from 31/5/21 to 2/6/21 (796m to 634m) the OBV fell price fell from 219 to 209. Buy signals: 4/5/21, 12/5/21, 20/5/21, 25/5/21, 2/6/21. Sell signals: 28/4/21, 10/5/21, 17/5/21 and 31/5/21

Analysis:
- If the close price of the stock is excess than the former close price, then the computation is:
  OBV = Preceding OBV + Current day’s volume
- The formula when the ending price of the stock is equal as the former close price is:
  OBV = Preceding OBV (+0)
- The computation if the close price of the stock is lower than the former close price is:
  OBV = Preceding OBV - Current day’s volume

Five-week chart of ITC using Moving Average Convergence and Divergence

Data analysis and presentation:
The above chart of ITC is presented with MACD for period of one month. The black line is the M A C D line and the red is the signal line. The blue arrow indicates a buy signal and orange arrow indicates a sell signal. It is a buy signal when the M A C D line intersects the signal line from the top, and the point where the signal line cross over the M A C D line from the bottom is a sell sign. The MACD indicator helps to assume the swing’s movement and momentum of the stock. MACD above 0 indicates an uptrend and below 0 indicates a downtrend. Sometimes MACD line and signal line below down indicates both the trends. Buy signal: 26/4/21, 5/5/21, 24/5/21. Sell signal: 30/4/21, 20/5/21, 2/6/21.

Interpretation:
The computation of M A C D is given below: M A C D line = 12-day EMA – 26-day EMA wherein E M A = (current close price X, k) + (yesterday’s E M A x (1 – k)) here, k = 2 / Number of days + 1 Signal line = Exponential moving average of MACD line.

Five-week chart of ITC using Relative Strength Index

Data analysis and presentation:
The above chart of ITC is presented with RSI for period of one month. The chart of 10 period RSI shows the numerous falls and peaks. The upper blue line (80) represents overbought condition and lower blue line (20) is the oversold zone. The best time to buy the stock is when the RSI touches or is below 20. The best time to sell the stock is when the RSI touches or is above 70-80. One should cross check with the trend direction, volume, candlestick pattern and candlestick chart pattern and use other indicators in conjunction to make a perfect buy or sell decision. Buy signal: 3/5/21 and 12/5/21. Sell signal: 14/521 and 31/5/21.

Analysis:
The RSI is computed using the calculation given below: R S I = 100. – 100. / (1 + R S)
Where (R S) Relative Strength = Average gain of up interval during the specific interval / Average loss of down interval during the specific interval.

The prices of Dabur from 26/4/21 to 2/6/21 are mentioned below:

<table>
<thead>
<tr>
<th>Date</th>
<th>Open</th>
<th>High</th>
<th>Low</th>
<th>Close</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>26/04/21</td>
<td>561.90</td>
<td>561.90</td>
<td>539.25</td>
<td>541.40</td>
<td>7,01,17,483</td>
</tr>
<tr>
<td>27/04/21</td>
<td>542.95</td>
<td>544.35</td>
<td>534.50</td>
<td>538.35</td>
<td>4,22,14,333</td>
</tr>
<tr>
<td>28/04/21</td>
<td>538.35</td>
<td>545.60</td>
<td>536.35</td>
<td>540.95</td>
<td>3,14,56,711</td>
</tr>
<tr>
<td>29/04/21</td>
<td>545.00</td>
<td>546.80</td>
<td>540.25</td>
<td>541.70</td>
<td>2,29,26,829</td>
</tr>
<tr>
<td>30/04/21</td>
<td>541.70</td>
<td>545.00</td>
<td>536.00</td>
<td>538.45</td>
<td>2,27,38,016</td>
</tr>
<tr>
<td>3/05/21</td>
<td>539.00</td>
<td>548.25</td>
<td>539.00</td>
<td>542.05</td>
<td>5,08,05,069</td>
</tr>
<tr>
<td>4/05/21</td>
<td>546.90</td>
<td>546.90</td>
<td>535.40</td>
<td>537.25</td>
<td>2,50,28,530</td>
</tr>
<tr>
<td>5/05/21</td>
<td>541.00</td>
<td>542.00</td>
<td>536.90</td>
<td>541.20</td>
<td>1,48,11,838</td>
</tr>
<tr>
<td>6/05/21</td>
<td>540.50</td>
<td>547.15</td>
<td>539.00</td>
<td>545.45</td>
<td>5,12,61,578</td>
</tr>
<tr>
<td>7/05/21</td>
<td>550.00</td>
<td>550.00</td>
<td>532.50</td>
<td>534.70</td>
<td>21,17,14,243</td>
</tr>
<tr>
<td>10/05/21</td>
<td>534.60</td>
<td>535.00</td>
<td>519.35</td>
<td>522.65</td>
<td>16,81,78,364</td>
</tr>
<tr>
<td>11/05/21</td>
<td>525.00</td>
<td>526.50</td>
<td>520.70</td>
<td>525.45</td>
<td>4,57,20,075</td>
</tr>
<tr>
<td>12/05/21</td>
<td>525.50</td>
<td>532.30</td>
<td>525.15</td>
<td>529.25</td>
<td>10,81,73,140</td>
</tr>
<tr>
<td>14/05/21</td>
<td>530.00</td>
<td>538.30</td>
<td>529.55</td>
<td>534.80</td>
<td>11,89,24,608</td>
</tr>
<tr>
<td>17/05/21</td>
<td>216.55</td>
<td>217.00</td>
<td>211.60</td>
<td>212.55</td>
<td>60,20,58,312</td>
</tr>
<tr>
<td>18/05/21</td>
<td>214.00</td>
<td>214.65</td>
<td>209.65</td>
<td>210.05</td>
<td>20,14,34,752</td>
</tr>
<tr>
<td>19/05/21</td>
<td>210.05</td>
<td>211.35</td>
<td>207.50</td>
<td>207.75</td>
<td>17,52,24,577</td>
</tr>
<tr>
<td>20/05/21</td>
<td>209.90</td>
<td>209.90</td>
<td>206.85</td>
<td>207.00</td>
<td>14,60,66,813</td>
</tr>
<tr>
<td>21/05/21</td>
<td>208.35</td>
<td>209.85</td>
<td>207.40</td>
<td>209.05</td>
<td>12,88,12,160</td>
</tr>
<tr>
<td>24/05/21</td>
<td>210.00</td>
<td>212.00</td>
<td>207.80</td>
<td>211.50</td>
<td>16,23,27,635</td>
</tr>
<tr>
<td>25/05/21</td>
<td>213.60</td>
<td>213.60</td>
<td>210.30</td>
<td>210.85</td>
<td>14,99,19,425</td>
</tr>
<tr>
<td>26/05/21</td>
<td>210.80</td>
<td>212.45</td>
<td>210.35</td>
<td>210.55</td>
<td>10,39,30,639</td>
</tr>
<tr>
<td>27/05/21</td>
<td>211.45</td>
<td>214.15</td>
<td>210.25</td>
<td>211.20</td>
<td>26,95,56,839</td>
</tr>
<tr>
<td>28/05/21</td>
<td>212.05</td>
<td>213.45</td>
<td>211.45</td>
<td>212.85</td>
<td>38,38,67,682</td>
</tr>
<tr>
<td>31/05/21</td>
<td>215.50</td>
<td>217.95</td>
<td>214.40</td>
<td>216.60</td>
<td>52,10,85,548</td>
</tr>
<tr>
<td>1/6/21</td>
<td>218.45</td>
<td>219.35</td>
<td>214.20</td>
<td>214.20</td>
<td>28,72,55,942</td>
</tr>
<tr>
<td>2/6/21</td>
<td>211.10</td>
<td>211.10</td>
<td>208.70</td>
<td>209.00</td>
<td>52,39,03,329</td>
</tr>
</tbody>
</table>

Five-week chart using on balance volume for Dabur

Data analysis and presentation:
The chart presented above of Dabur is analyzed with the on balance Volume indicator. From 25/4/21 to 29/4/21, the OBV is in a small uptrend. From 29/4/21 to 6/5/21, the OBV is in sideways move which is suspected. From 6/2/21 to 11/5/21, the OBV from (33m to 14m) as well as the prices fell. And from 11/5/21 to 17/5/21, there is a small uptrend.
From 17/5/21 to 27/5/21, the OBV is in downtrend whereas the prices of the stock are sideways. From 27/5/21 to 31/5/21 there is a small uptrend but the prices raised from 524 to 544 where it nearly reached the price of 7/5/21. And from 31/5/21 to 2/6/21, the OBV as well as the prices fell. Buy signal: 11/5/21, 27/5/21, 2/6/21. Sell signal: 5/5/21, 19/5/21, 31/5/21.

**Analysis:**
- The formula if the ending price of the stock is greater than the former close price is:
  \[ OBV = \text{Preceding OBV} \times \text{Current day’s volume} \]
- The computation if the close price of the stock is same as the former end price is:
  \[ OBV = \text{Preceding OBV} (+0) \]
- The computation if the closing price of the asset is lower than the preceding closing price, then is:
  \[ OBV = \text{Preceding OBV} - \text{Current day’s volume} \]

**Five-week chart using MACD for Dabur**

**Data analysis and presentation:**

The above chart of Dabur is presented with MACD. The black line is the MACD line and the red is the signal line. The blue arrow indicates a buy signal and orange arrow indicates a sell sign. The point where the MACD line intersects the signal line from the top is a buy signal and the point where the signal line crosses over the MACD line from the bottom intersect is a sell signal. The MACD indicator helps to assume the way of the swing and momentum of the stock. MACD above 0 indicates an uptrend and below 0 indicates a downtrend. On the day of 25/4/21 and 31/5/21 gave buy signals and 6/5/21 gave a sell signal.

**Analysis:**

MACD computation is given below:

\[ \text{MACD line} = 12\text{-day EMA} - 26\text{-day EMA} \text{ wherein EMA} = \left( \text{current close price} \times k \right) + \left( \text{yesterday’s EMA} \times (1 - k) \right) \]

\[ k = \frac{2}{\text{Number of days} + 1} \]

Signal line = Exponential moving average of MACD line

**Five-week chart of Dabur chart using RSI**

The above chart of Dabur is presented with RSI for period of one month. The chart of 5 period RSI shows the numerous falls and peaks. The upper blue line (80) represents overbought condition and lower blue line (20) is the oversold zone. The best time to buy the stock is when the RSI touches or is below 20. The best time to sell the stock is when the RSI touches or is above 70-80. One should cross check with the trend direction, volume, candlestick pattern and candlestick chart pattern and use other indicators in conjunction to make a perfect buy or sell decision. Buy signal: 11/5/21, 26/5/21 and 27/5/21. Sell signal: 28/4/21, 29/4/21, 50/4/21, 7/5/21 and 31/5/21.

**Interpretation:**

The RSI is computed using the formula below:

\[ \text{RSI} = \frac{\text{Average gain during the specific interval}}{\text{Average loss during the specific interval}} \times 100 \]

Now Relative Strength (R S) = Average gain of up interval during the specific interval / Average loss of down interval during the specific interval.

**The prices of Tata Consumer Products from 26/4/21 to 2/6/21 are mentioned below:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Open</th>
<th>High</th>
<th>Low</th>
<th>Close</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>26/04/21</td>
<td>665.35</td>
<td>674.80</td>
<td>662.25</td>
<td>669.80</td>
<td>4,24,19,307</td>
</tr>
<tr>
<td>30/04/21</td>
<td>671.90</td>
<td>678.25</td>
<td>664.95</td>
<td>671.80</td>
<td>8,51,38,785</td>
</tr>
<tr>
<td>3/05/21</td>
<td>661.00</td>
<td>682.20</td>
<td>661.00</td>
<td>677.10</td>
<td>9,96,01,719</td>
</tr>
<tr>
<td>4/05/21</td>
<td>682.80</td>
<td>686.25</td>
<td>642.00</td>
<td>644.95</td>
<td>42,43,21,143</td>
</tr>
<tr>
<td>5/05/21</td>
<td>654.90</td>
<td>656.65</td>
<td>640.10</td>
<td>649.40</td>
<td>7,63,44,714</td>
</tr>
<tr>
<td>6/05/21</td>
<td>654.90</td>
<td>655.00</td>
<td>638.15</td>
<td>653.40</td>
<td>24,23,03,524</td>
</tr>
<tr>
<td>7/05/21</td>
<td>635.00</td>
<td>641.90</td>
<td>614.25</td>
<td>629.00</td>
<td>64,80,21,081</td>
</tr>
<tr>
<td>10/05/21</td>
<td>629.70</td>
<td>636.70</td>
<td>621.00</td>
<td>633.10</td>
<td>31,19,39,809</td>
</tr>
<tr>
<td>11/05/21</td>
<td>629.50</td>
<td>649.90</td>
<td>626.30</td>
<td>641.85</td>
<td>10,96,71,876</td>
</tr>
<tr>
<td>14/05/21</td>
<td>647.55</td>
<td>649.25</td>
<td>638.20</td>
<td>645.05</td>
<td>8,92,78,301</td>
</tr>
<tr>
<td>17/05/21</td>
<td>649.00</td>
<td>660.00</td>
<td>641.00</td>
<td>653.70</td>
<td>10,98,38,389</td>
</tr>
<tr>
<td>18/05/21</td>
<td>655.80</td>
<td>659.00</td>
<td>648.20</td>
<td>652.90</td>
<td>16,10,63,333</td>
</tr>
<tr>
<td>19/05/21</td>
<td>653.20</td>
<td>660.80</td>
<td>650.00</td>
<td>654.40</td>
<td>25,08,42,684</td>
</tr>
<tr>
<td>20/05/21</td>
<td>659.00</td>
<td>659.00</td>
<td>640.15</td>
<td>644.55</td>
<td>17,41,91,517</td>
</tr>
<tr>
<td>21/05/21</td>
<td>643.00</td>
<td>652.25</td>
<td>643.00</td>
<td>649.25</td>
<td>4,81,27,960</td>
</tr>
<tr>
<td>24/05/21</td>
<td>651.40</td>
<td>654.60</td>
<td>634.15</td>
<td>639.75</td>
<td>32,15,16,237</td>
</tr>
<tr>
<td>25/05/21</td>
<td>642.00</td>
<td>652.45</td>
<td>642.00</td>
<td>650.15</td>
<td>5,11,99,366</td>
</tr>
<tr>
<td>26/05/21</td>
<td>652.00</td>
<td>655.00</td>
<td>640.65</td>
<td>641.70</td>
<td>10,60,48,269</td>
</tr>
<tr>
<td>27/05/21</td>
<td>644.00</td>
<td>651.70</td>
<td>641.50</td>
<td>649.05</td>
<td>4,95,87,532</td>
</tr>
<tr>
<td>28/05/21</td>
<td>651.80</td>
<td>657.50</td>
<td>646.25</td>
<td>654.80</td>
<td>12,42,86,608</td>
</tr>
<tr>
<td>31/05/21</td>
<td>658.05</td>
<td>664.85</td>
<td>650.50</td>
<td>663.70</td>
<td>7,48,84,407</td>
</tr>
<tr>
<td>1/6/21</td>
<td>664.95</td>
<td>667.00</td>
<td>657.00</td>
<td>665.55</td>
<td>6,20,64,922</td>
</tr>
<tr>
<td>2/6/21</td>
<td>666.00</td>
<td>674.55</td>
<td>660.50</td>
<td>673.30</td>
<td>9,39,71,490</td>
</tr>
</tbody>
</table>
Five-week chart using On balance volume for Tata Consumer Products

![Graph showing On balance volume for Tata Consumer Products]

Data analysis and presentation:
The chart presented above of Tata Consumer Products is analyzed with the On balance Volume indicator. There is a small uptrend from 26/4/21 to 28/4/21 and from 28/4/21 to 3/5/21 there is a sideways trend which is suspected and from 3/5/21 to 7/5/21 there is a downtrend in the OBV and the stock price fell. From 7/5/21 to 19/5/21, the OBV is in uptrend. From 19/5/21 to 26/5/21, the trend of OBV travelled sideways which is suspected. From 26/5/21 to 2/6/21, the OBV as well as the price of the stock rose. Buy signal: 7/5/21, 26/5/21. Sell signal: 30/4/21, 3/5/21.

Interpretation:
• The computation if the present close price is higher than the preceding closed price:
  OBV = Preceding OBV + Current day’s volume
• The calculation if the ending price of the stock is same as the preceding closing price is:
  OBV = Preceding OBV (+0)
• The formula if the ending price of the stock is lower than the preceding closing price, then is:
  OBV = Preceding OBV - Current day’s volume.

Five-week chart using MACD for Tata Consumer Products

![Graph showing MACD for Tata Consumer Products]

Data analysis and presentation:
The above chart of Tata Consumer Products is presented with MACD. The black line is the M A C D line and the red is the signal line. The blue arrow indicates a buy signal and orange arrow indicates a sell signal. The point where the MACD line cross the signal line from the top is a buy signal and the point where the signal line crosses the M A C D line from the bottom intersect is a sell signal. The MACD indicator helps to assume the way of the swing and momentum of the stock. MACD above 0 indicates an uptrend and below 0 indicates a down trend. On the day of 14/5/21 gave buy signals and before 26/4/21 would have given a sell signal.

Interpretation:
The computation of M A C D is mentioned below:
M A C D line = 12-day EMA – 26-day EMA wherein E M A = (current close price x k) + (yesterday’s E M A x (1 – k))
here, k = 2 / Number of days + 1
Signal line = Exponential moving average of MACD line.

Five-week chart of using RSI for Tata Consumer Products

![Graph showing RSI for Tata Consumer Products]

Data analysis and presentation:
The above chart of Tata Consumer Products is presented with RSI for period of one month. The chart of 5 period RSI shows the numerous falls and peaks. The upper blue line (80) represents overbought condition and lower blue line (20) is the oversold zone. The best time to buy the stock is when the RSI touches or is below 20. The best time to sell the stock is when the RSI touches or is above 70-80. One should cross check with the trend direction, volume, candlestick pattern and candlestick chart pattern and use other indicators in conjunction to make a perfect buy or sell decision. Buy signal: 4/5/21, 7/5/21 and 27/5/21. Sell signal: 3/5/21, 2/6/21.

Interpretation:
The RSI is computed using the formula below:
RSI = 100 – (100 / (1 + R S))
Now Relative Strength (R S) = Average gain of up period during the specific period / Average loss of down period during the specific period.

The prices of Marico from 26/4/21 to 2/6/21 are mentioned below:

<table>
<thead>
<tr>
<th>Date</th>
<th>Open</th>
<th>High</th>
<th>Low</th>
<th>Close</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>26/04/21</td>
<td>414.00</td>
<td>414.10</td>
<td>405.00</td>
<td>406.45</td>
<td>1,56,41,434</td>
</tr>
<tr>
<td>27/04/21</td>
<td>411.00</td>
<td>411.00</td>
<td>402.40</td>
<td>407.50</td>
<td>1,95,68,659</td>
</tr>
<tr>
<td>28/04/21</td>
<td>407.55</td>
<td>414.05</td>
<td>407.55</td>
<td>411.25</td>
<td>1,86,05,792</td>
</tr>
<tr>
<td>29/04/21</td>
<td>418.00</td>
<td>418.00</td>
<td>407.80</td>
<td>409.95</td>
<td>1,13,46,629</td>
</tr>
<tr>
<td>30/04/21</td>
<td>412.00</td>
<td>422.15</td>
<td>402.00</td>
<td>411.65</td>
<td>12,01,06,978</td>
</tr>
<tr>
<td>3/05/21</td>
<td>419.80</td>
<td>452.80</td>
<td>416.25</td>
<td>445.40</td>
<td>60,62,30,807</td>
</tr>
<tr>
<td>4/05/21</td>
<td>451.00</td>
<td>463.85</td>
<td>444.00</td>
<td>460.50</td>
<td>20,06,94,721</td>
</tr>
<tr>
<td>5/05/21</td>
<td>465.00</td>
<td>467.60</td>
<td>451.90</td>
<td>455.20</td>
<td>14,28,05,459</td>
</tr>
<tr>
<td>6/05/21</td>
<td>455.50</td>
<td>478.40</td>
<td>455.50</td>
<td>475.65</td>
<td>13,90,77,300</td>
</tr>
<tr>
<td>7/05/21</td>
<td>481.10</td>
<td>487.40</td>
<td>468.50</td>
<td>472.80</td>
<td>7,71,25,592</td>
</tr>
<tr>
<td>10/05/21</td>
<td>474.00</td>
<td>474.00</td>
<td>468.10</td>
<td>470.65</td>
<td>3,43,80,289</td>
</tr>
<tr>
<td>11/05/21</td>
<td>470.00</td>
<td>487.40</td>
<td>468.00</td>
<td>479.35</td>
<td>13,60,10,513</td>
</tr>
<tr>
<td>12/05/21</td>
<td>479.90</td>
<td>488.00</td>
<td>466.40</td>
<td>468.75</td>
<td>5,26,89,699</td>
</tr>
<tr>
<td>14/05/21</td>
<td>470.00</td>
<td>479.00</td>
<td>467.80</td>
<td>467.80</td>
<td>4,38,48,228</td>
</tr>
</tbody>
</table>
A Study on Technical Analysis of Indian FMCG Sector

Data analysis and presentation:


Analysis:
- The computation if the ending price of the stock is greater than the former close price, then is: OBV = Preceding OBV + Current day’s volume
- The formula if the ending price of the stock is same as the previous close price is: OBV = Preceding OBV
- The computation if the end price of the stock is lesser than the previous ending price is: OBV = Preceding OBV - Current day’s volume.

Five-week chart of Marico using MACD

Data analysis and presentation:

The above chart of Marico is presented with MACD. The black line is the MACD line and the red is the signal line. The blue arrow indicates a buy signal and orange arrow indicates a sell sign. The point where the MACD line crosses the signal line from the top is a buy signal and the point where the signal line crosses the MACD line from the bottom intersect is a sell sign. The MACD indicator helps to assume the way of the swing and momentum of the stock. MACD above 0 indicates an uptrend and below 0 indicates a down trend. On the day of 30/4/21 and 29/5/21 gave buy signals and before 26/4/21 and 4/5/21 gave a sell signal.

Analysis:
- The calculation of M A C D is mentioned below:
  M A C D line = 12-day EMA – 26-day EMA wherein E M A = (current close price x k) + (yesterday’s E M A x (1 – k)) here, k = 2 / Number of days + 1
- Signal line = Exponential moving average of MACD line

Five-week chart of Marico using RSI

Data analysis and presentation:

The above chart of Marico is presented with RSI for period of one month. The chart of 5 period RSI shows the numerous falls and peaks. The upper blue line (80) represents overbought condition and lower blue line (20) is the oversold zone. The best time to buy the stock is when the RSI touches or is below 20. The best time to sell the stock is when the RSI touches or is above 70-80. One should cross check with the trend direction, volume, candlestick pattern and candlestick chart pattern and use other indicators in conjunction to make a perfect buy or sell decision. Buy signal: 26/4/21, 27/4/21, 30/4/21 and 26/5/21. Sell signal: 3/5/21, 4/5/21, 6/5/21, and 2/6/21.

Interpretation:
- The RSI is calculated using the formula below:
  R S I = 100. – 100. / (1. + R S)
Where Relative Strength (R S) = Average gain of up period during the specific period / Average loss of down period during the specific period

The prices of Godrej Consumer Products from 26/4/21 to 2/6/21 mentioned below:

<table>
<thead>
<tr>
<th>Date</th>
<th>Open</th>
<th>High</th>
<th>Low</th>
<th>Close</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>26/04/21</td>
<td>700.00</td>
<td>705.05</td>
<td>694.30</td>
<td>695.25</td>
<td>1,25,44,021</td>
</tr>
<tr>
<td>27/04/21</td>
<td>695.10</td>
<td>703.20</td>
<td>692.70</td>
<td>702.30</td>
<td>6,04,19,613</td>
</tr>
<tr>
<td>28/04/21</td>
<td>708.00</td>
<td>714.15</td>
<td>701.00</td>
<td>711.10</td>
<td>2,38,89,206</td>
</tr>
<tr>
<td>29/04/21</td>
<td>719.00</td>
<td>723.70</td>
<td>700.95</td>
<td>702.70</td>
<td>1,85,62,425</td>
</tr>
<tr>
<td>30/04/21</td>
<td>704.00</td>
<td>710.50</td>
<td>687.75</td>
<td>693.80</td>
<td>2,71,76,453</td>
</tr>
</tbody>
</table>
Five-week chart of Godrej Consumer Products using Moving Average Convergence and Divergence

Data analysis and presentation:

The above chart of Tata Consumer Products is presented with MACD. The black line is the MACD line and the red is the signal line. The blue arrow indicates a buy signal and orange arrow indicates a sell sign. The point where the MACD line crosses the signal line from the top is a buy signal and the point where the signal line crosses the MACD line from the bottom is a sell signal. The MACD indicator helps to assume the way of the trend and momentum of the stock. MACD above 0 indicates an uptrend and below 0 indicates a down trend. On the day of 11/5/21 gave a buy signal and on 20/5/21 gave a sell signal.

Interpretation:

The calculation of MACD is mentioned below:

\[ \text{MACD} = \text{12-day EMA} - \text{26-day EMA} \]

Wherein EMA = (current close price x k) + (yesterday’s EMA x (1 – k))

Here, k = 2 / Number of days + 1

Signal line = Exponential moving average of MACD line

Five-week chart of Godrej Consumer Products using Relative Strength Index

Data analysis and presentation:

The above chart of Godrej Consumer Products is presented with RSI for period of one month. The chart of 5 period RSI shows the numerous falls and peaks. The upper blue line (80) represents overbought condition and lower blue line (20) is the oversold zone. The best time to buy the stock is when the RSI touches or is below 20. The best time to sell the stock is when the RSI touches or is above 70-80. One should cross check with the trend direction, volume, candlestick pattern and candlestick chart pattern and use other indicators in conjunction to make a perfect buy or sell decision. Buy signal: 30/4/21. Sell signal: 12/5/21 and 14/5/21.

Five-week chart of Godrej Consumer Products using On Balance Volume

Data analysis and presentation:


Interpretation:

- The computation if the close price of the stock is higher than the previous close price is:
  OBV = Preceding OBV + Current day’s volume

- The calculation if the close price of the stock is same as the former close price is:
  OBV = Preceding OBV (+0)

- The formula if the ending price of the stock is lower than the previous closing price is:
  OBV = Preceding OBV - Current day’s volume

<table>
<thead>
<tr>
<th>Date</th>
<th>OBV</th>
<th>Date</th>
<th>OBV</th>
<th>Date</th>
<th>OBV</th>
<th>Date</th>
<th>OBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/05/21</td>
<td>685.00</td>
<td>4/05/21</td>
<td>712.00</td>
<td>5/05/21</td>
<td>699.70</td>
<td>6/05/21</td>
<td>712.50</td>
</tr>
<tr>
<td>6/05/21</td>
<td>713.00</td>
<td>7/05/21</td>
<td>710.25</td>
<td>10/05/21</td>
<td>703.00</td>
<td>11/05/21</td>
<td>709.90</td>
</tr>
<tr>
<td>12/05/21</td>
<td>750.15</td>
<td>14/05/21</td>
<td>864.00</td>
<td>17/05/21</td>
<td>859.30</td>
<td>18/05/21</td>
<td>838.80</td>
</tr>
<tr>
<td>19/05/21</td>
<td>824.80</td>
<td>20/05/21</td>
<td>828.00</td>
<td>21/05/21</td>
<td>816.25</td>
<td>22/05/21</td>
<td>828.65</td>
</tr>
<tr>
<td>23/05/21</td>
<td>821.80</td>
<td>24/05/21</td>
<td>818.00</td>
<td>25/05/21</td>
<td>819.30</td>
<td>26/05/21</td>
<td>807.00</td>
</tr>
<tr>
<td>27/05/21</td>
<td>828.65</td>
<td>28/05/21</td>
<td>839.90</td>
<td>29/05/21</td>
<td>844.00</td>
<td>30/05/21</td>
<td>848.90</td>
</tr>
<tr>
<td>1/06/21</td>
<td>852.90</td>
<td>2/06/21</td>
<td>845.15</td>
<td>3/06/21</td>
<td>855.35</td>
<td>4/06/21</td>
<td>852.90</td>
</tr>
</tbody>
</table>

DOI: 10.54105/jef.A2541053123
Retrieval Number: 100.1/ijef.A2541053123
Published By: Lattice Science Publication (LSP)
© Copyright: All rights reserved.
A Study on Technical Analysis of Indian FMCG Sector

Interpretation:
With the calculation below, the RSI is computed:
\[ R S I = \frac{100 - \text{Average loss of down interval}}{\text{Average gain of up interval} + 1} \]
Here Relative Strength (R S) = Average profit of up interval during the specific interval / Average loss of down interval during the specific interval.

ABBREVIATIONS AND ACRONYMS
FMCG: Fast moving consumer goods
OBV: On Balance Volume
MACD: Moving average Convergence and Divergence
RSI: Relative Strength Index
BSE: Bombay Stock Exchange
NSE: National Stock Exchange

V. FINDINGS AND RECOMMENDATIONS

Findings
- The best stocks to trade in the five-week duration is Marico, Tata Consumer Products, Godrej Consumer Products as it showed huge upside potential and had a good volume turnover.
- Dabur and ITC are in sideways trend whereas, Marico, Tata consumer Products and Godrej Consumer Products are in uptrend.
- Most of the stocks including Dabur, Tata Consumer Products, Marico and Godrej Consumer Products of the FMCG sector has an increasing compounded annual growth rate but ITC is swinging sideways and it is stable during the crisis.
- The technical tools are very efficient while making short term and medium-term trading and investing decision.
- Stocks move in sector’s direction.
- A failed buy signal is a sell signal and a failed sell signal is a buy signal.
- A trader shouldn’t risk more than 3 to 4 percent of your capital on a single trade.
- Oscillators should not be used at the start of a trend. They are very useful at the end of the market moves, when near their maturity.
- A wrong buy signal is a sell signal and a wrong sell signal is a buy signal.
- Losses should not be average because they compound the losses.
- Long term traders can benefit from trend following and momentum indicators whereas short term traders can benefit with mean-reversion strategies.

Recommendations
- Investors and traders should analyze a security both fundamentally and technically to efficiently determine the price of a security.
- Traders and Speculators can take the advantage of volatility in the market.
- Investors should take long term positions to enjoy the compounding of the security.
- Weekly signals are used to trace the market’s direction and daily signals for deciding buy and sell points.
- Traders should predefine their entry and exit points, risk reward ratio before getting into a trade.
- Two or three different time frames should be used to interpret the market’s direction effectively.
- Not only the indicators, the volumes, that charts, the chart patterns, and trends are important aspects of technical analysis.
- Trade only the leading stocks.
- Patience is virtue in for the right entry, but also staying in trades that are working in your favor.
- The expensive lessons are your losses, learn from them.

VI. CONCLUSION

Investing and trading in securities is subject to market risk and while participating in the market people should take calculated decisions in order to avoid serious losses. There is a bull run and a bear run daily in the market unless the market crashes. Investors should use both fundamental analysis and technical analysis which taking a buy or sell decision and take limited risk. The Indian stock market and the FMCG sector had undergone numerous changes since the past decade. And FMCG sector has a compounded annual growth rate of 21.5% annually. Short term investment in securities is favorable if one follows technical analysis and charting techniques and long-term investment can be favorable at all times. Though using technical analysis in short term can afford positive returns.

ACKNOWLEDGMENT

Mr. Rithvik Kammlie thanks his internal guide Assistant Professor Abhilash G and PES University for providing an opportunity to learn and explore the subject.

DECLARATION

<table>
<thead>
<tr>
<th>Funding/ Grants/ Financial Support</th>
<th>No, I did not receive.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflicts of Interest/ Competing Interests</td>
<td>No conflicts of interest to the best of our knowledge.</td>
</tr>
<tr>
<td>Ethical Approval and Consent to Participate</td>
<td>Yes, Consent is obtained to publish the information/images in online open access publication.</td>
</tr>
<tr>
<td>Availability of Data and Material/ Data Access Statement</td>
<td>Yes, The subject data is collected from Wikipedia, Google Scholar and Book named &quot;How To Make Money Trading With Charts&quot; by Ashwani Gujral. The charting data is collected from Zerodha’s Kite charting platform. The prices, fluctuations and its time period is extracted from NSE/BSE official website.</td>
</tr>
<tr>
<td>Authors Contributions</td>
<td>I am only the sole author of the article.</td>
</tr>
</tbody>
</table>
REFERENCES


2. Technical Analysis on Selected Stocks of Energy Sector, R. Chitra, JIBMS VOL. 1, ISSUE 1, MARCH 2011.

3. Dr. N. Vijaya Jyothi, A STUDY ON SHARE PRICE MOVEMENTS OF SELECTED BLUE-CHIP COMPANIES USING TECHNICAL ANALYSIS, Sambodhi (UGC Care Journal), Vol-43, No.-03 (IX) July-September (2020)


6. Dr. S. Umagraha, M. Malavika, A STUDY ON TECHNICAL ANALYSIS OF STOCKS LISTED IN NSE WITH REFERENCE TO PHARMACEUTICAL INDUSTRIES, International Journal of Management (IJM), ISSN 0976 – 6502(Print), ISSN 0976 - 6510(Online), Volume 6, Issue 1, January (2015), pp. 79-86 © IAEEM.


AUTHORS PROFILE

Rithvik Kammili had completed his Bachelors of Business Administration in Finance from PES University, Bangalore, India, in 2021 and now looking forward to do his Masters in Management from one of the prestigious business schools in Europe. He worked as a Logistics Analyst with a US based logistics company for a year. His areas of interests are Finance, International Finance, Financial Markets, Financial Risk Management, Derivatives, Financial Modelling, FinTech and Innovation, Economics, Portfolio and Asset Management, Real Estate Finance. Apart from research activities, he is interested in serving the public and his country. He promotes equality and works on removing economic and social inequalities.

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of the Lattice Science Publication (LSP)/ journal and/or the editor(s). The Lattice Science Publication (LSP)/ journal and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.