



A STUDY ON TECHNICAL ANALYSIS

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Abstract: Technical Analysis is a study of the stock market relating to factors affecting the supply and demand of stocks and also helps in understanding the intrinsic value of shares and to know whether the shares are undervalued or overvalued. The stock market indicators would help the investor to identify major market turning points. This is a significant technical analysis of selected companies which helps to understand the price behavior of the shares, the signals given by them and the major turning points of the market price. Any investor or trader must certainly consider technical analysis as a tool whether to buy the stock at a particular point of time though it is fundamentally strong. The objective of the study is the technical analysis on selected stocks of steel sector and interprets on whether to buy or sell them by using techniques. The study is purely based on secondary sources which includes the historical data available from the website. For the purpose of analysis, techniques like Candlestick Charts, Simple moving average, ROC and RSI is used for the analysis to know if the stock is technically strong.

Keywords: Stock, Market, Candle stick chart, Simple Moving Average

1. Introduction:

Technical Analysis can be defined as an art and science of forecasting future prices based on an examination of the past price movements. Technical analysis is not astrology for predicting prices. Technical analysis is based on analyzing current demand-supply of commodities, stocks, indices, futures or any tradable instrument. Technical analysis involve putting stock information like prices, volumes and open interest on a chart and applying various patterns and indicators to it in order to assess the future price movements. The time frame in which technical analysis is applied may range from intraday (5-minute, 10-minutes, 15-minutes, 30-minutes or hourly), daily, weekly or monthly price data to many years. There are essentially two methods of analyzing investment opportunities in the security market viz fundamental analysis and technical analysis. Fundamental information like financial and nonfinancial aspects of the company or technical information which ignores fundamentals and focuses on actual price movements a may be used. The technical analyst assumes that it is 90 percent psychological and 10 percent logical. Technical analysis is a method of evaluating securities by analyzing the statistics generated by market activity, such as past prices and volume. Technical analysts do not attempt to measure a securities intrinsic value, but instead use charts and other tools to identify patterns that can suggest future activity. The study on technical analysis of selected companies based on Stratified sampling technique is significant as it helps in understanding the intrinsic value of shares and to know whether the shares are undervalued or overvalued or correctly priced. Further it helps in understanding the price behavior of the shares, the signals given by them and the major turning points of the market price. The concept of analysis comes into picture when decision has to be made on choosing a particular company's shares for investment. Technical analysis is a security analysis technique that claims the ability to forecast the future direction of prices through the study of past market data primarily price and volume.

2. Review of Literature:

Deepali Gala, Bhaskar Vijayraopatil. (2022) "A Study of Key Technical Indicators for Effective and Profitable Strategy in Option Trading of Nifty." Research Gate. –The impact of technical analysis on the profitability of the share market, specifically with relation to TCS. The company's share is categorized here merely on its value for income and growth. An example of stock that consistently grows year over year and pays a high dividend yield. Indicators like EMA and Bollingerb and were implemented in this case to forecast future prices.

Richard, schabacker. (2021) “Technical Analysis and Stock Market Profits.” GoogleBooks. He states that understanding the fundamental position of stock is insufficient. We also need to follow their technological standing. For the typical learner, fundamental considerations are simple. Studying stock charts helps to turn technical aspects, that may not be ways simple or certain. We can have a better grasp of phenomena associated with the gradual but ongoing shift in supply and demand in the stock market via the use of stock charts.

Dr. Nityasundar Nanda, Dr. Shatrajit Goswami. (2021) “A Comparative Stock Price Analysis of Select Banking Shares Using Technical Analysis.” International Research Journal of Management and Commerce. -This study aims to find out the share value volatility of HDFC Bank and Axis Bank. Japanese Candlestick, RSI, and beta are the Study’s tools. The study used beta to analyse market volatility and correlation utilising closing prices, opening or starting prices and monthly average prices. The goals of this study are to examine those fluctuations in prices of stocks for some duration using the beta concept and to use the Japanese Candlestick method to understand stock price movement.

Dr. Leena Sharma, Mr. Pratik Patil, Siddhesh Choudhari, Devendra Sangle, Vpavan Kumarreddy.(2021) “Fundamental and Technical Analysis of Stock for Beginners.” International Journal of innovative Science and Research Technology. -The Local Public invests in Businesses and purchases shares at stock exchange. In this case, the research developed to assist beginners in stock prediction. Three key factors- technical, fundamental, and news- have been considered. This study explains about the utilization of the 44-moving average in technical analysis as it represents the average of the 44 days closing candle data. A beginner can organize his list of stocks that he intends to purchase using these three predictions.

Aman Bhatia. (2021) “Technical Analysis and Its use in the Stock Markets.” International Journal of Creative Research Thoughts.-The intention of this research is to determine whether traditional price patterns and Japanese candlestick share effective for small-and mid-cap company charts. The study examines the relationship between various charting patterns including both traditional price patterns and Japanese candlestick patterns.

Mandar Jam sandekar (2019) “Trading and Technical Analysis Course.” Google Books.- Technical analysis trading tactics are covered in this book together with their underlying logic so that beginner traders and investors may quickly grasp them and employ them with confidence. Throughout the book, we go over a few technical analysis concepts which will be applied to analyze charts for stocks, commodities, currencies and any other market with a healthy level of trading activity, or liquidity. This is basically a research that serves as a practical technical trading education.

3. Statement of problem:

If we begin stock market trading, we may look at a company’s share prices and purchase its shares in an attempt to reach a profit within a reasonable time frame using share price moments. Furthermore, during the short term, we may see any price moments that exhibit quick changes or fluctuations; in that case, we may obtain a concept of how we can engage in trading to obtain a profit; therefore, The Technical analysis is being utilized to address the issue.

4. Objectives of the study:

- To predict future patterns or trends and offer appropriate investment suggestions.
- To learn the numerous technical analysis indicators.
- To represent how the share price shifts on technical analysis charts from one side to the other.

5. Scope of the study:

- Assessing company's share in a constructive manner.
- This analysis assists in learning about how stock prices fluctuate in the financial market.
- This technique is applied to predict price fluctuations and to offer strategies for entering and leaving transactions.
- Every trader and investor in the world uses a technical analysis to forecast both short and long-term trades.

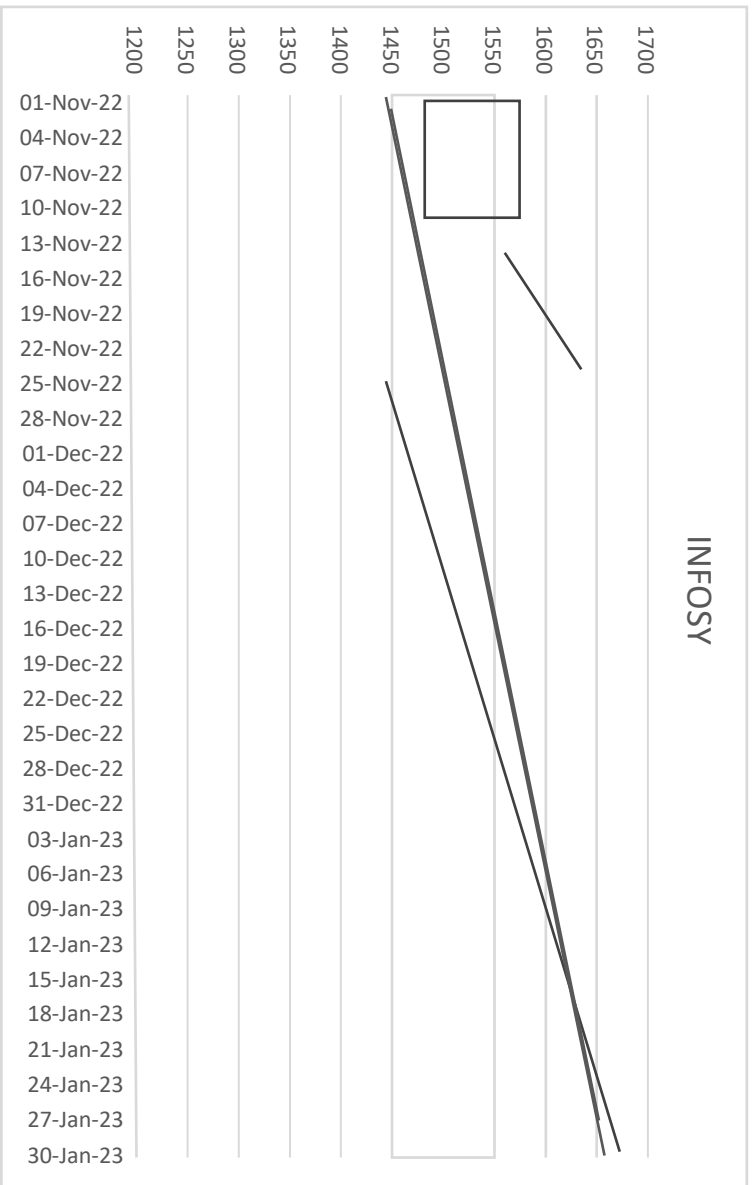
6. Research Methodology:

This is an analytical study based on secondary data. Secondary data-bseinda.com, money control.com and screener website.

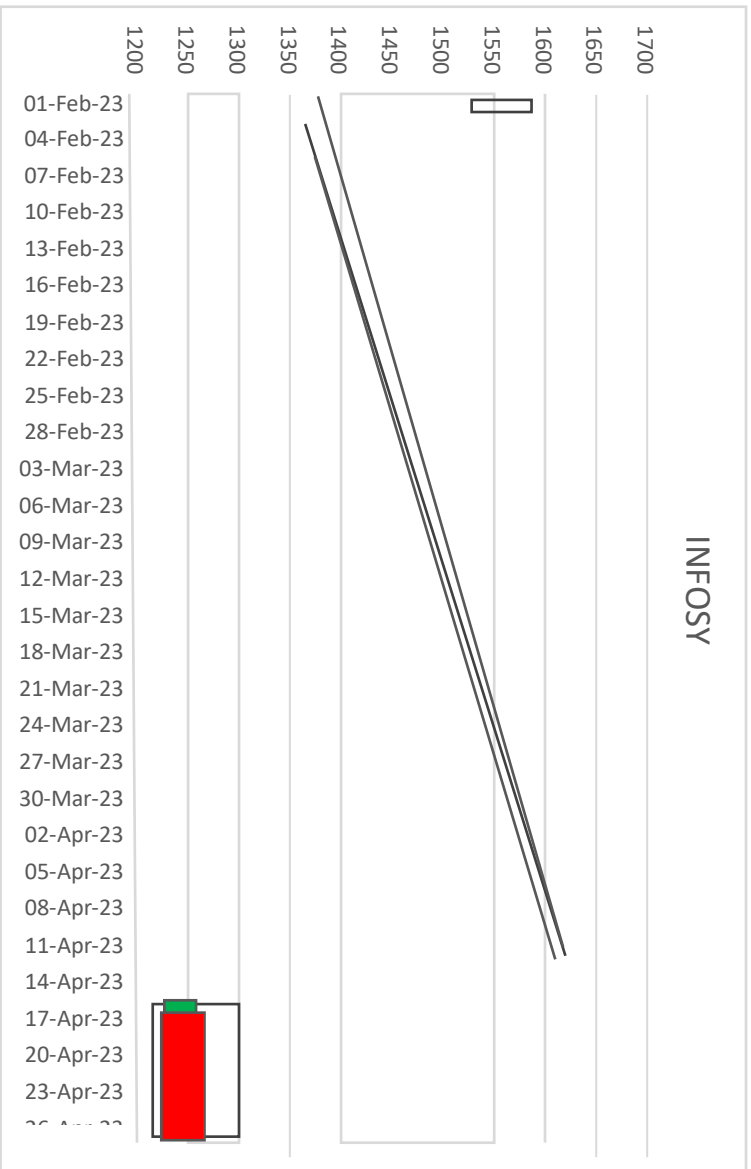
Tools used in the study: RSI (Relative Strength Index),
SMA (Simple Moving Average) and
Candle stick chart.

7. Data Analysis & Interpretation:

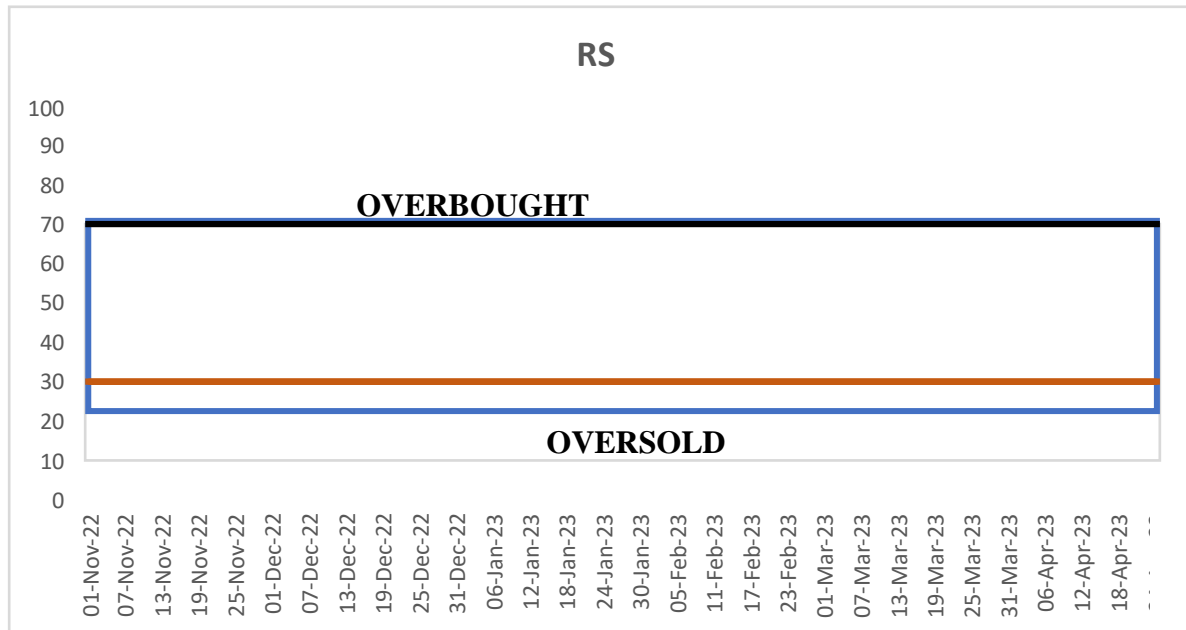
7.1.1 Graph Showing Candlestick Chart Pattern of INFOSYS From 01/11/2022 to 31/01/2023



7.1. Graph Showing Candlestick Chart Pattern of INFOSYS From 01/02/2023 to 28/04/2023



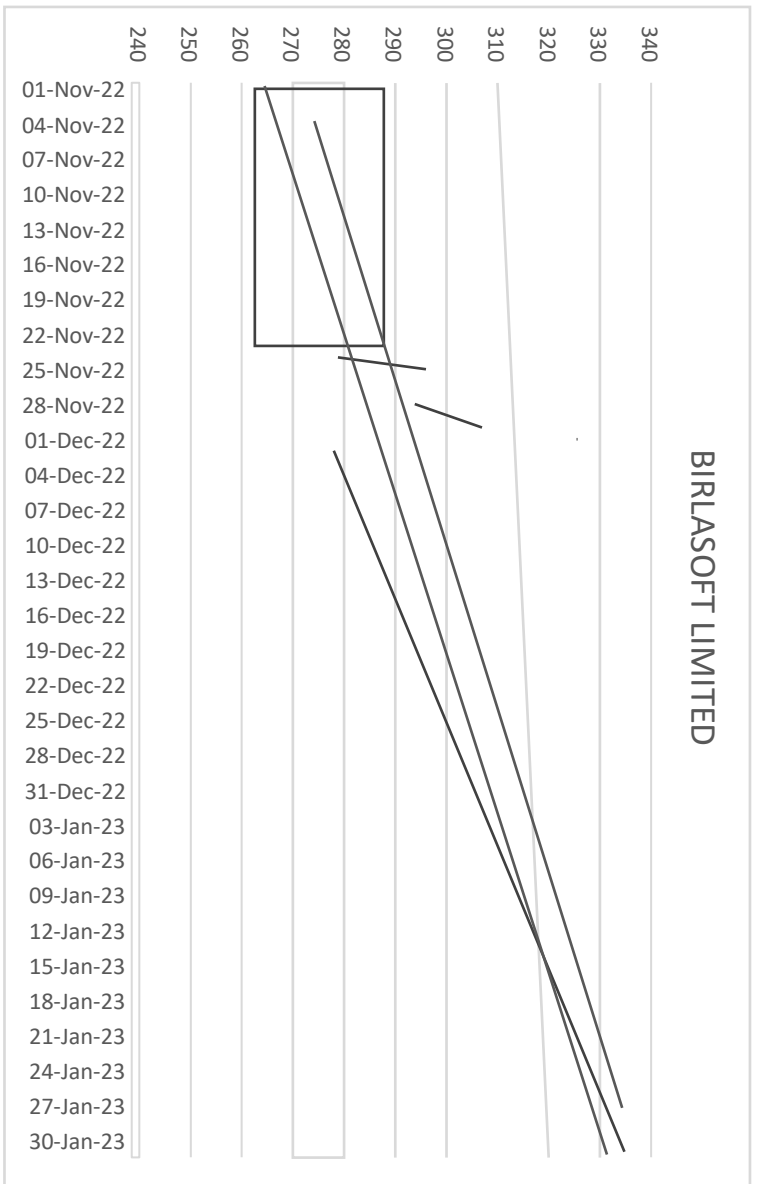
7.2 Graph Showing RSI of INFOSYS from 01/11/2022 to 28/04/2023



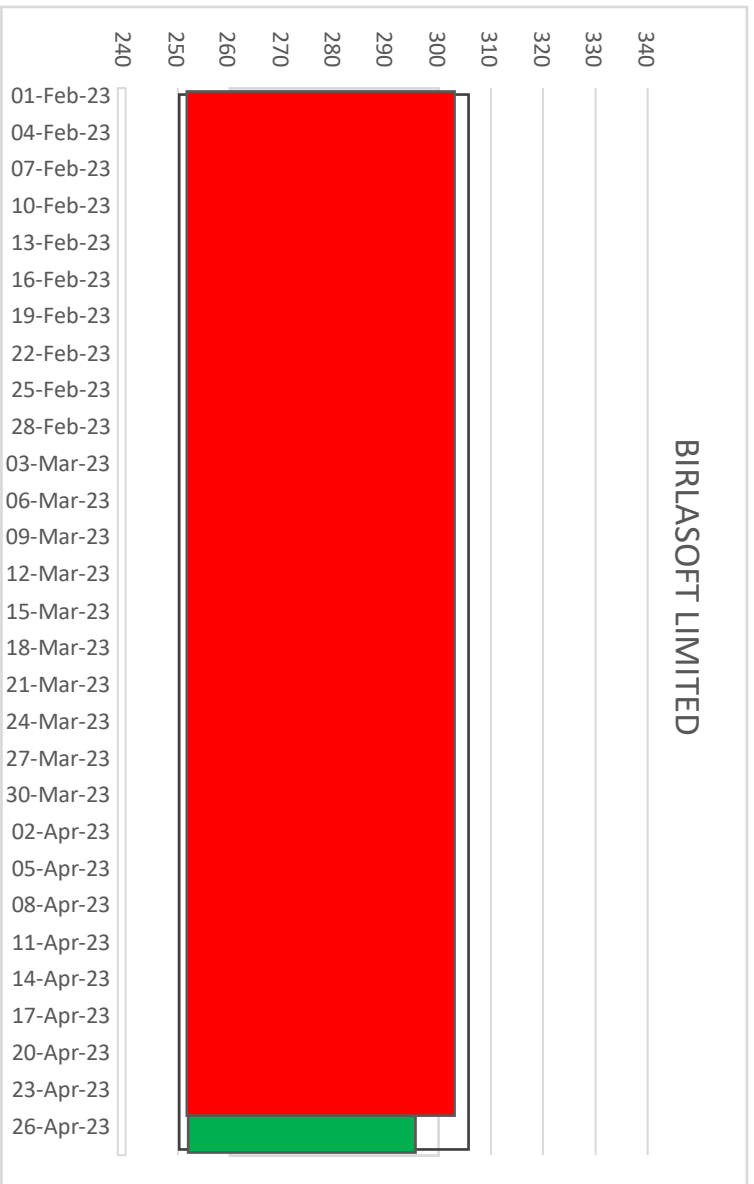
Interpretation:

- Infosys showing bullish in Initial and immediately reversed its previous bullish trend.
- On 1st December 2022, the RSI is still in the overbought zone 70, and Investors has to wait till that RSI line falls below the overbought line, and sell on 2nd December 2022, where the RSI is 64.68 and the price would be around 1638.55. which were bought on 19th May, 2022, for a price of 1427.20 and earns a profit of around 211.35. also, it is confirming with bearish candlestick in chart, which indicating short position.
- From December 2, 2022 to March 13, 2023, the RSI was still in between the overbought and oversold lines. Where investors have to hold their shares until the next signal.
- From 16th March 2023 to 24th March 2023, the RSI line falls below the Oversold zone, where it indicating that price of stocks may increase further and here investor should wait till that RSI line shows reverse trend and can buy the shares on 31st March 2023, at price of 1427.7. And hold till the next selling signal.
- We can notice that RSI indicator again fell down towards the Oversold Zone for a long time from 17th April 2023 to 27th April 2023, with RSI points of 24.6 and 30.08, respectively. Where investors can buy the shares or wait until that line starts to move upwards, or hold it until the next signal.

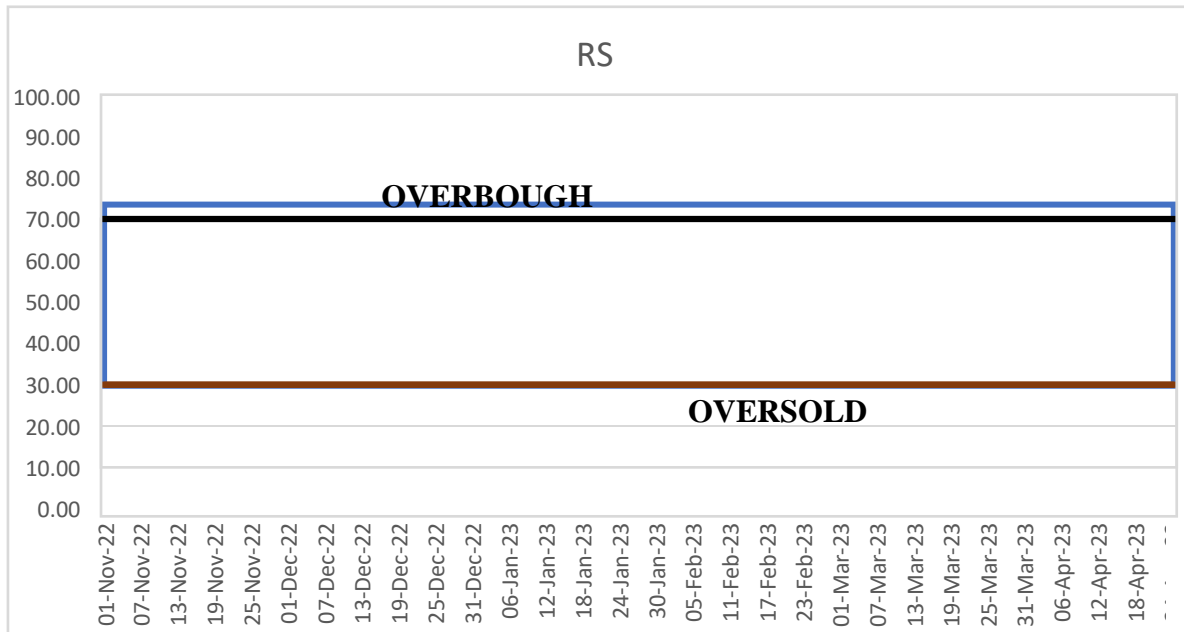
7.3.1 Graph Showing Candlestick Chart Pattern of BIRLASOFT Ltd from 01/11/2022 to 31/01/2023



7.3.2 Graph Showing Candlestick Chart Pattern of BIRLASOFT Ltd from 01/02/2023 to 28/04/2023



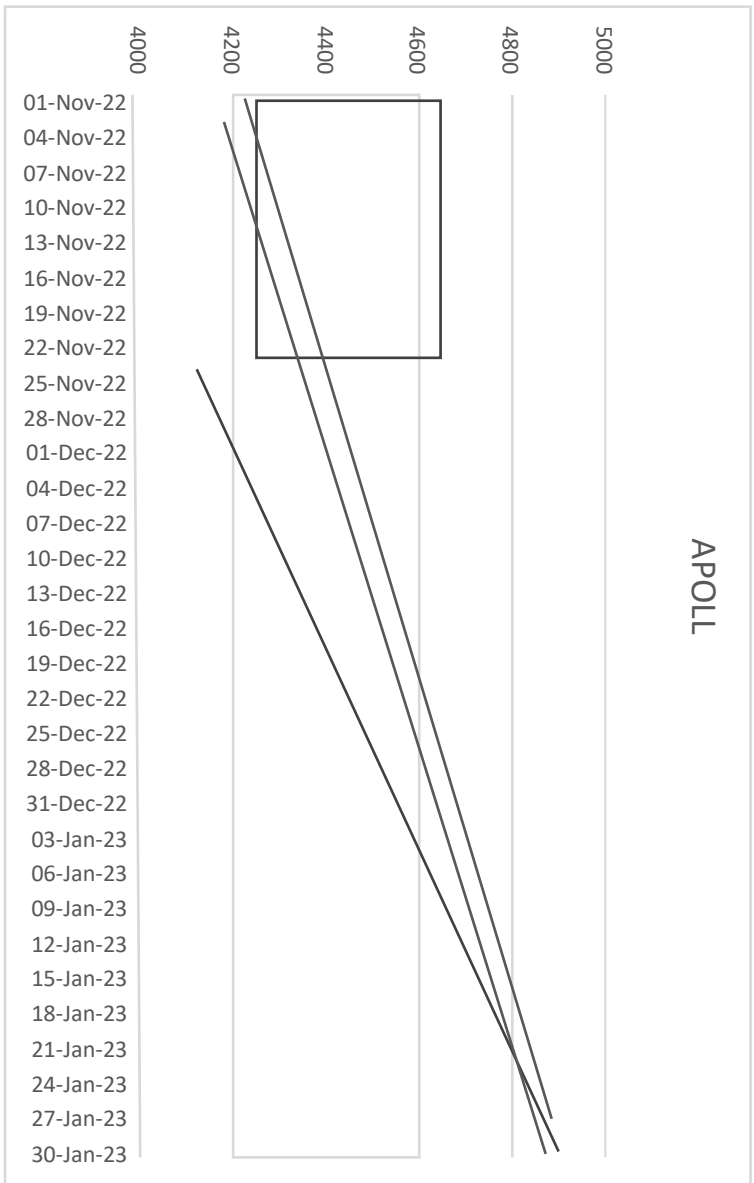
7.4 Graph Showing RSI of BIRLASOFT Ltd from 01/11/2022 to 28/04/2023



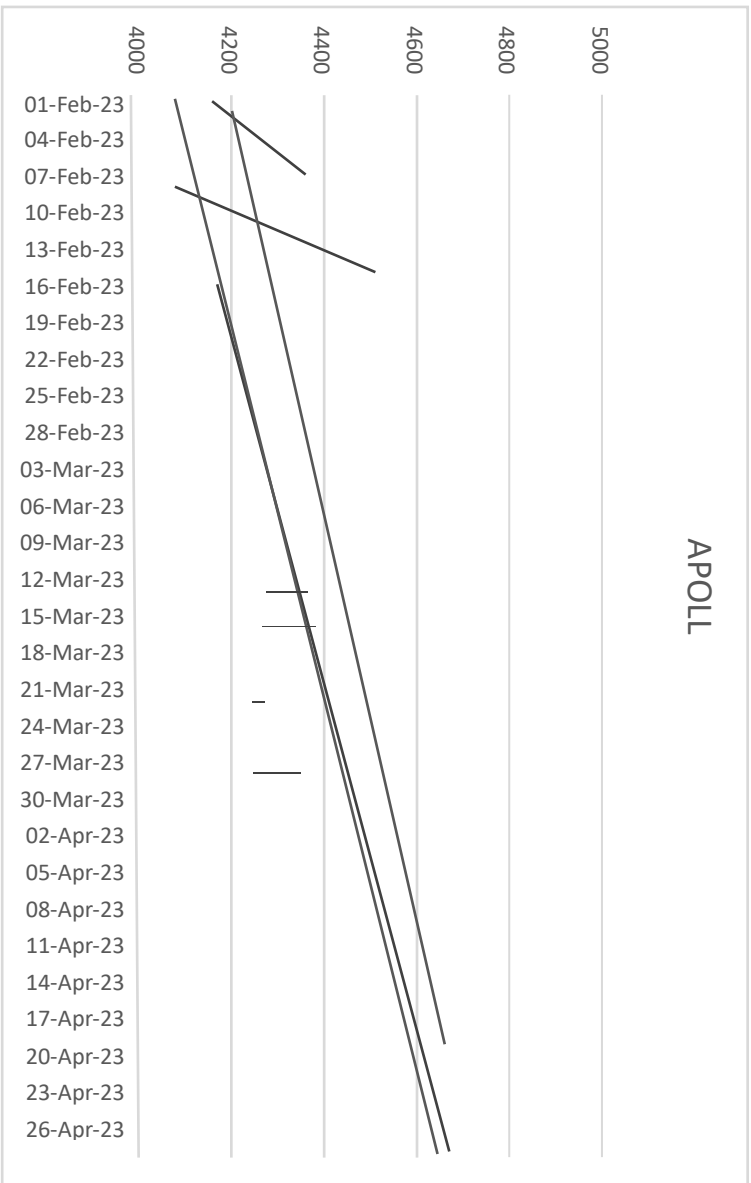
Interpretation:

- Take a buy entry on November 01, 2022, when Birlasoft Ltd stock exhibits bullish indications and RSI line is Moving upward from an oversold zone. For an amount of 278.2.
- The RSI went above the overbought line on December 2, 2022, with an RSI point of 73.45, indicating a sell position. Where there may be a possibility of price reverse. So, the Trader can sell stocks, for a price of 331.4 and earn a profit of 53.2. but Candle stick doesn't show bearish pattern to take a sell position. Hence trader can sell on December 5, 2022, with RSI point of 71.79. indicating a bearish candlestick for a price of 329.45 and earn a profit of 51.25.
- On March 28,2023 RSI line falls below the oversold zone which indicating the Buy position saying that asset has been traded lower price and has the possibility for a price bounce. And investors need to wait for the RSI line to take a reverse trend and take a long position on March 29, 2023 for a price of 255.55. and hold it till the next confirmation signal.
- Investors can hold the previously bought stock until the next signal arrives. As there is no possible buy or sell signal until April 28,2023, investors have to wait until the confirmation of next signal.

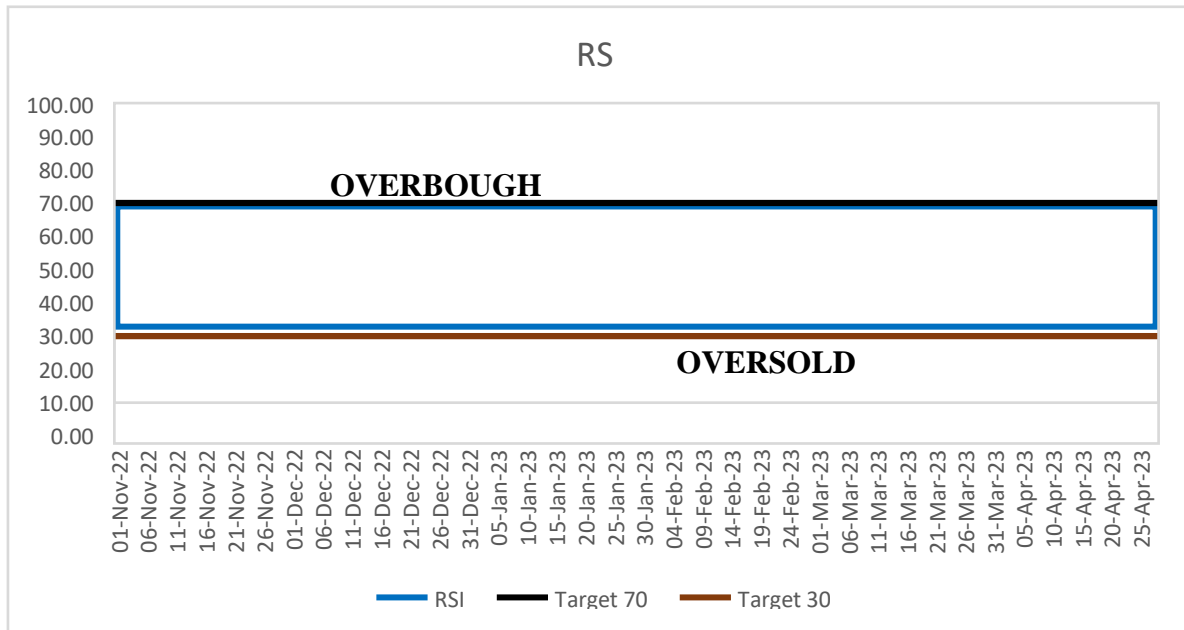
7.5.1 Graph Showing Candlestick Chart pattern of APOLLO HOSPITAL from 01/11/2022 to 31/01/2023



7.5.2 Graph Showing Candlestick Chart pattern of APOLLO HOSPITAL from 01/02/2023 to 28/04/2023



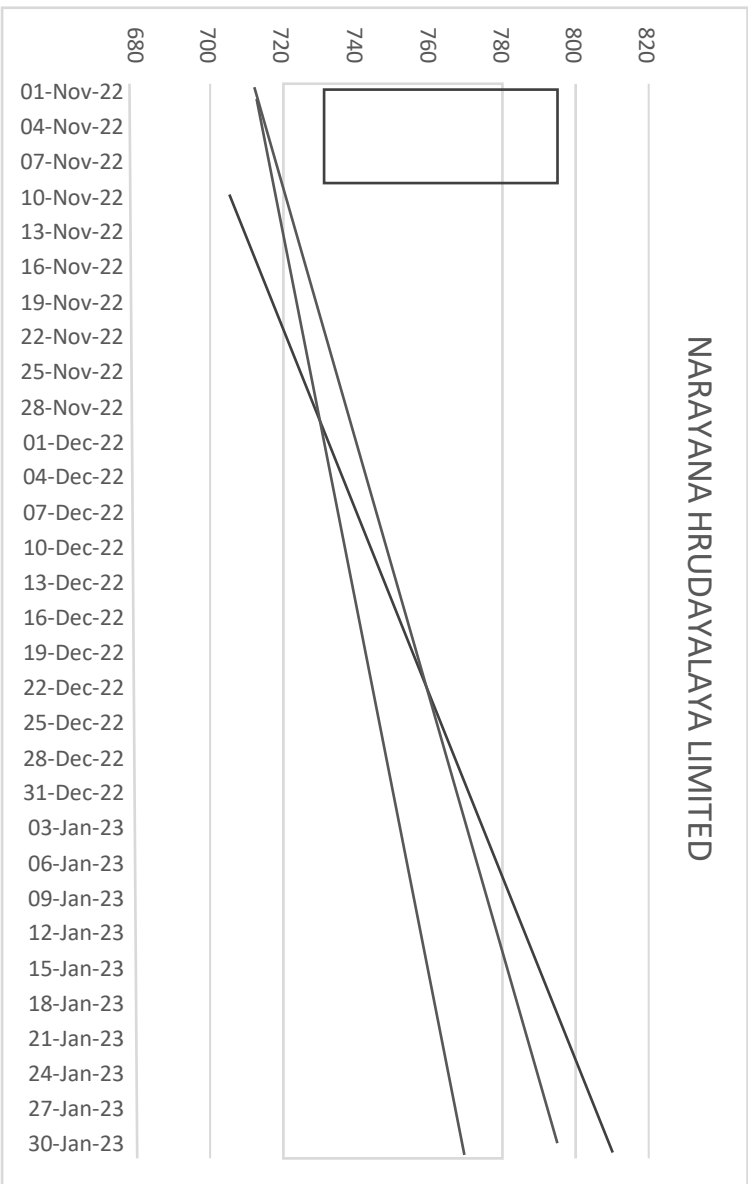
7.6 Graph Showing RSI of APOLLO HOSPITAL from 01/11/2022 to 28/04/2023



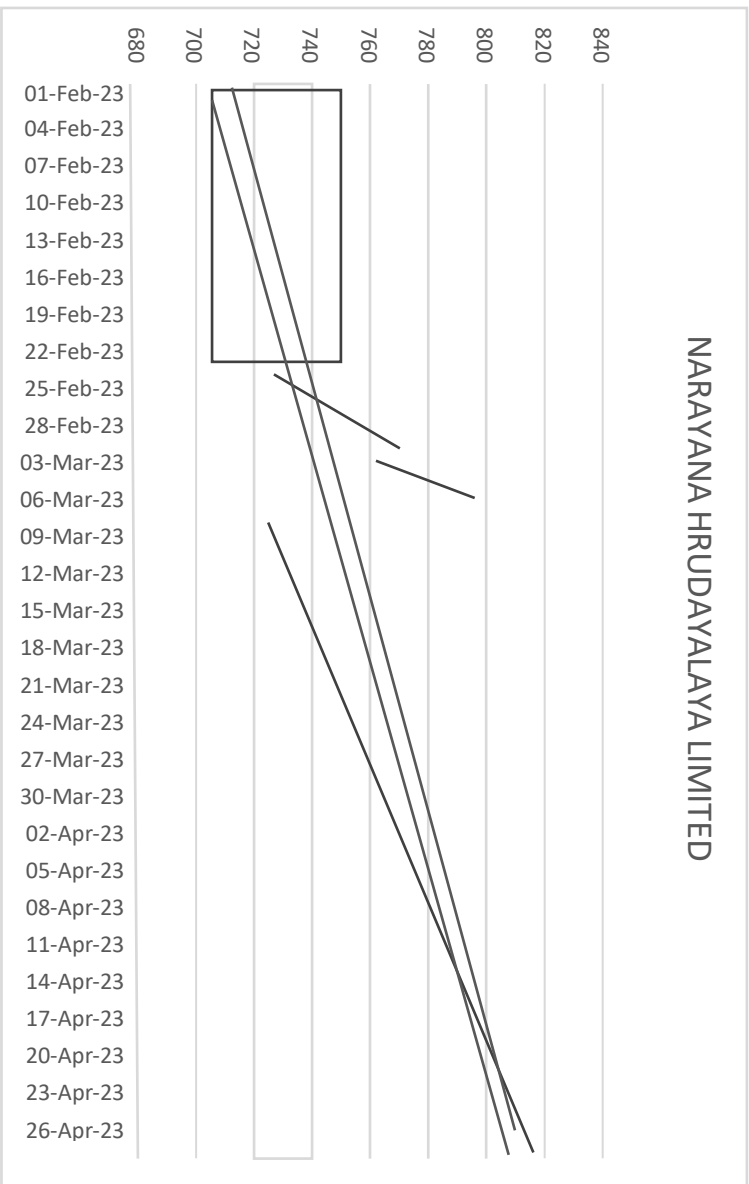
Interpretation:

- From November 24, 2022, to December 2, 2022, the RSI line was around 68.95 which was near to overbought zone 70, indicating a short position.
- As the RSI line didn't cross above the Overbought line for the confirmation. An investor cannot take any steps to buy and sell.
- Hence up to April 30, 2023, there is no clear signal to exit the trade with a good profit. So, investors have to hold the shares until the next signal.

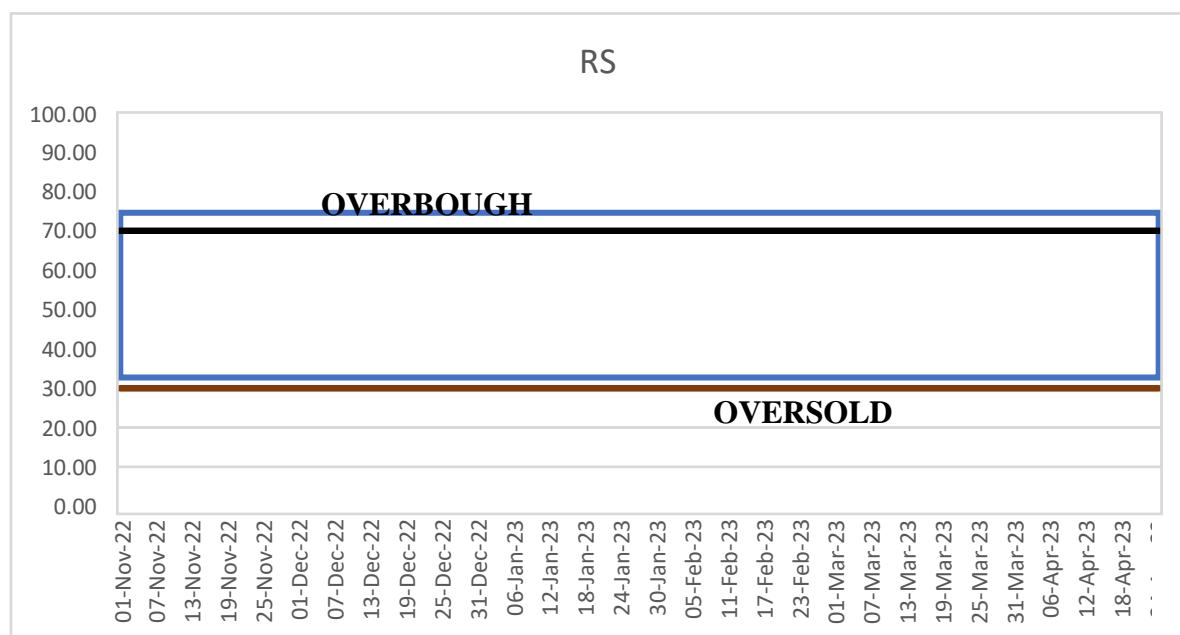
7.7.1 Graph Showing Candlestick Chart Pattern of NARAYANA HRUDAYALAYA from 01/11/2022 to 31/01/2023



7.7.2 Graph Showing Candlestick Chart Pattern of NARAYANA HRUDAYALAYA from 01/02/2023 to 28/04/2023



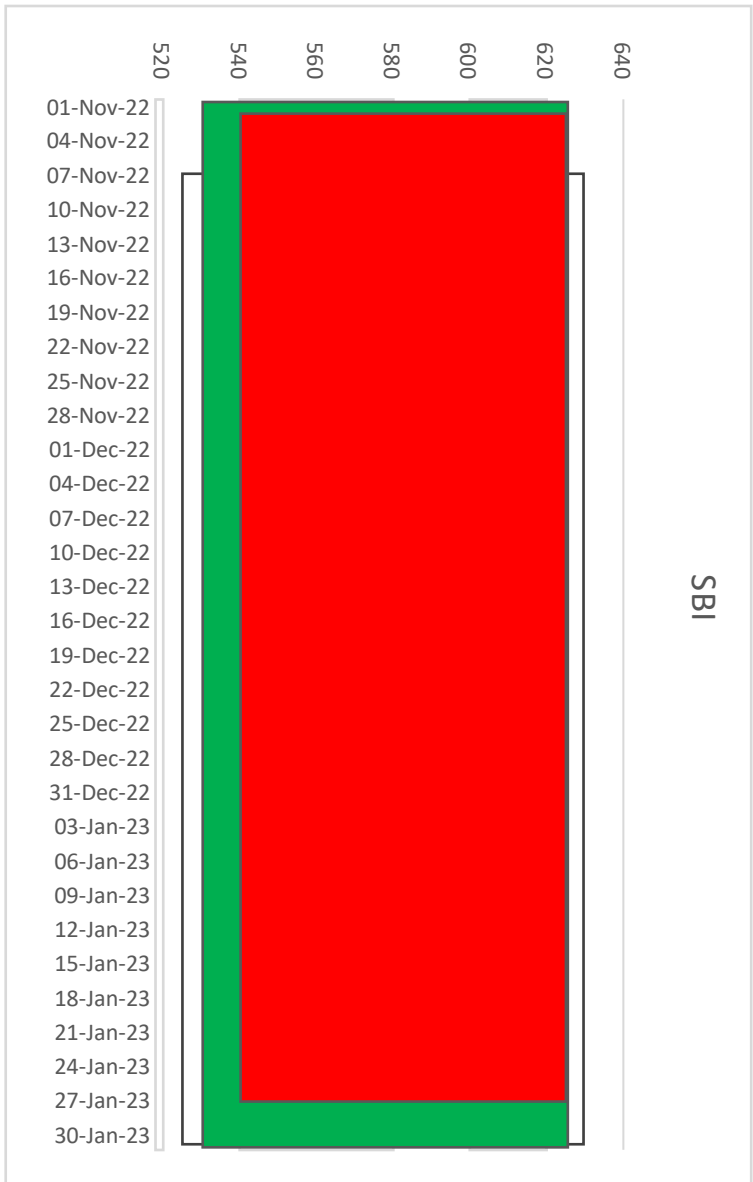
7.8 Graph Showing RSI of NARAYANA HRUDAYALAYA from 01/11/2022 to 28/04/2023



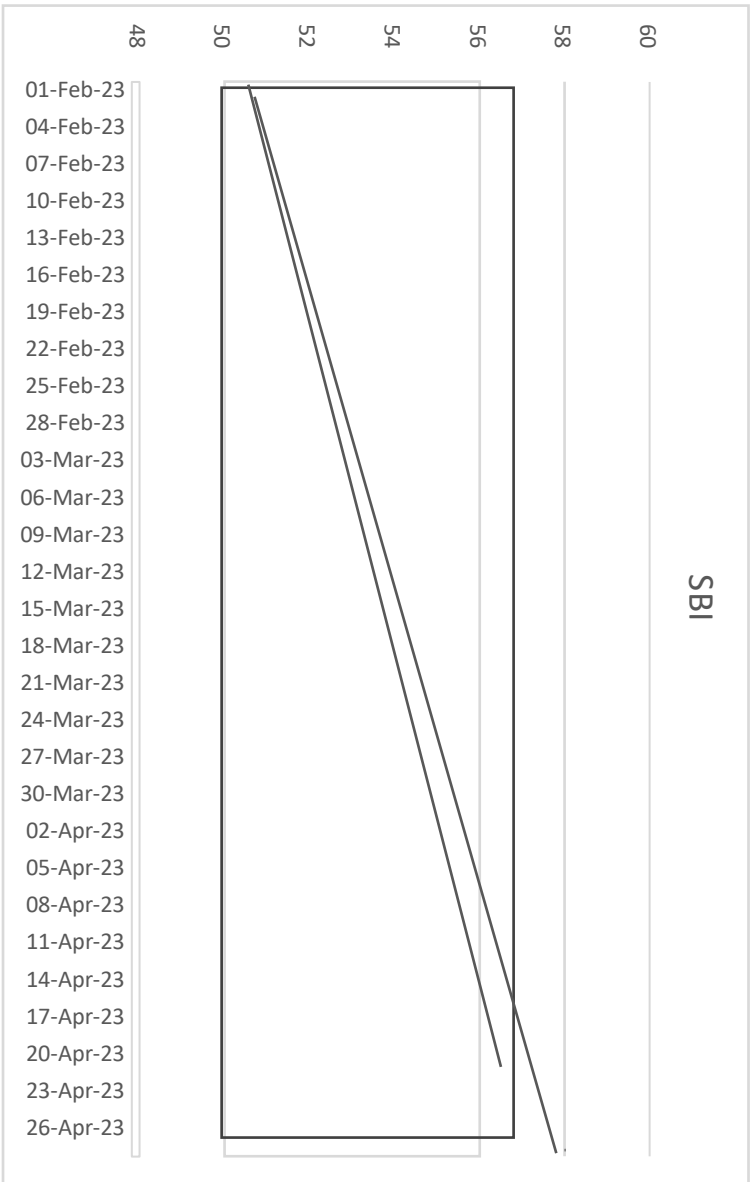
Interpretation:

- On November 1, 2022, Narayana Hrudayalaya Stock shows negative indications, and the RSI is also moving downward from the overbought zone, indicating a sell entry.
- Up to 2nd March there is no clear indication of oversold zone.
- March 3rd, March 6th and March 10th, showed RSI of 70.89, 74.51, and 70.10 respectively. Where it indicates an overbought zone and advises an exit position, for a price of 777.55, 790.25 and 789.2 respectively, and wait for another indication.
- From March 15, 2023, to March 17, 2023, the RSI line reached up to the overbought line, with the 17th March confirming with the shooting star candle which gave price drop confirmation. So, the trader could sell any long positions for a price of 807.7.
- Up to April 28th, there is no clear indication of bullishness: RSI has not yet met the oversold zone.

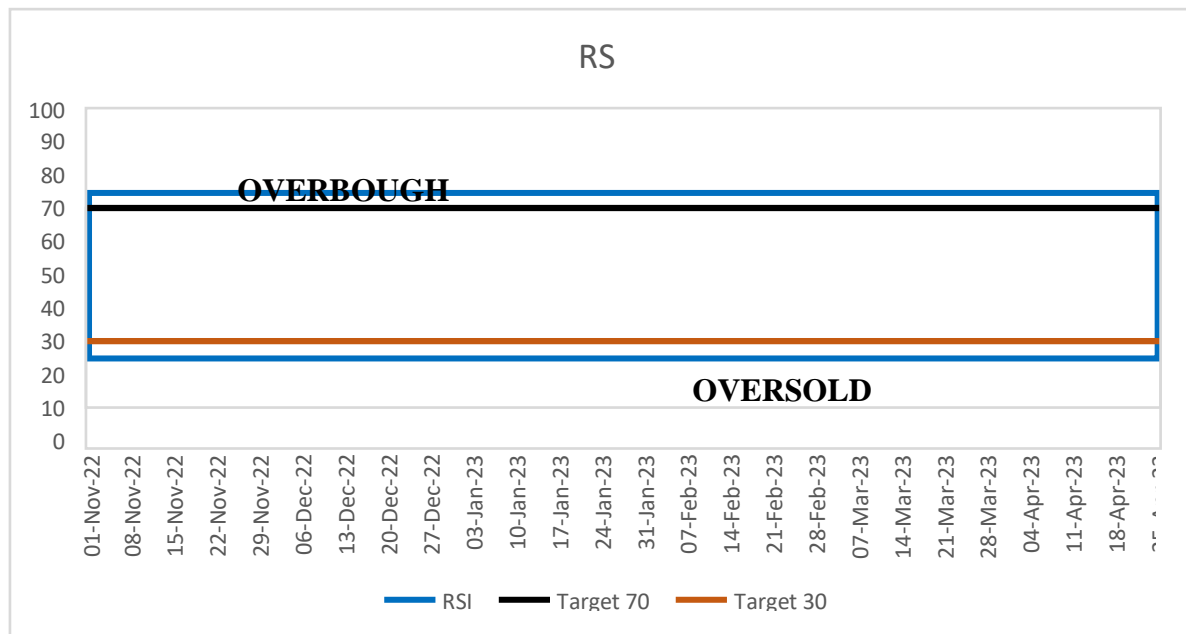
7.9.1 Graph Showing Candlestick Chart Pattern of STATE BANK OF INDIA from 01/11/2022 to 31/01/2023



7.9.2 Graph Showing Candlestick Chart Pattern of STATE BANK OF INDIA from 01/02/2023 to 28/04/2023



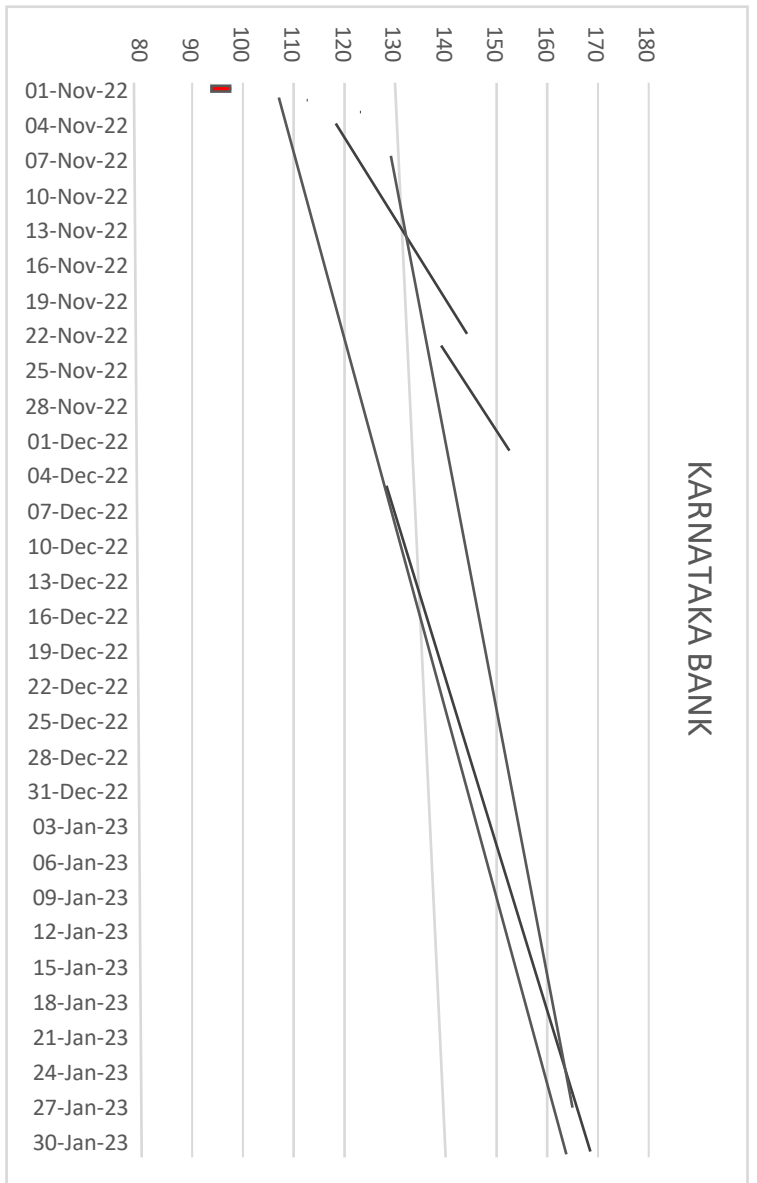
7.10 Graph Showing RSI of STATE BANK OF INDIA from 01/11/2022 to 28/04/2023



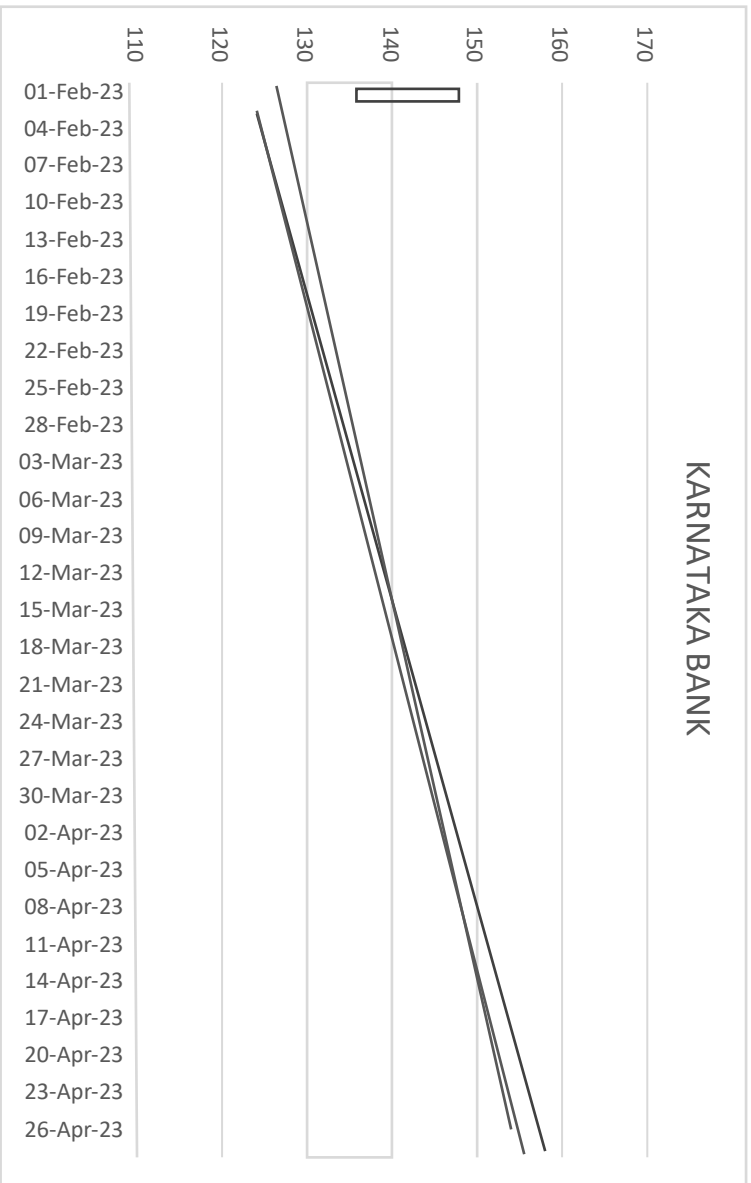
Interpretation:

- From November 1, 2022 to November 9, 2022, the RSI was in an overbought zone, which indicates short position. But on November 1, and November 7 the candlestick was not confirming, then on November 9, the candlestick showed the confirmation with red candle to sell the shares that an investor owns. So, investor can take a short position at the price of 615.55.
- and on January 27 and January 30, 2023, the RSI line was in oversold zone, and candle was giving confirmation with green or bullish entry on 30th January at the price of 538.35. so, trader can take a buy entry. And hold till next signal
- we also can notice that on February 1, 2023 and February 2, 2023 the RSI line again crosses the oversold zone, with RSI point of 27.84 and 28.36 respectively. Where it indicating the investors to take a long position, so the trader can buy the shares or hold till next signal.
- On February 22nd the RSI line touches the oversold zone and suddenly takes a reversal entry and starts to move upward.
- On April 28, 2023 the RSI line crossed Overbought zone, with the RSI point of 72.43. and candlestick showing green candle with the price of 578.05. if the investor takes up the short position on that particular day, they might have been earning a profit of around 39.7. or wait till the confirmation from candlestick.

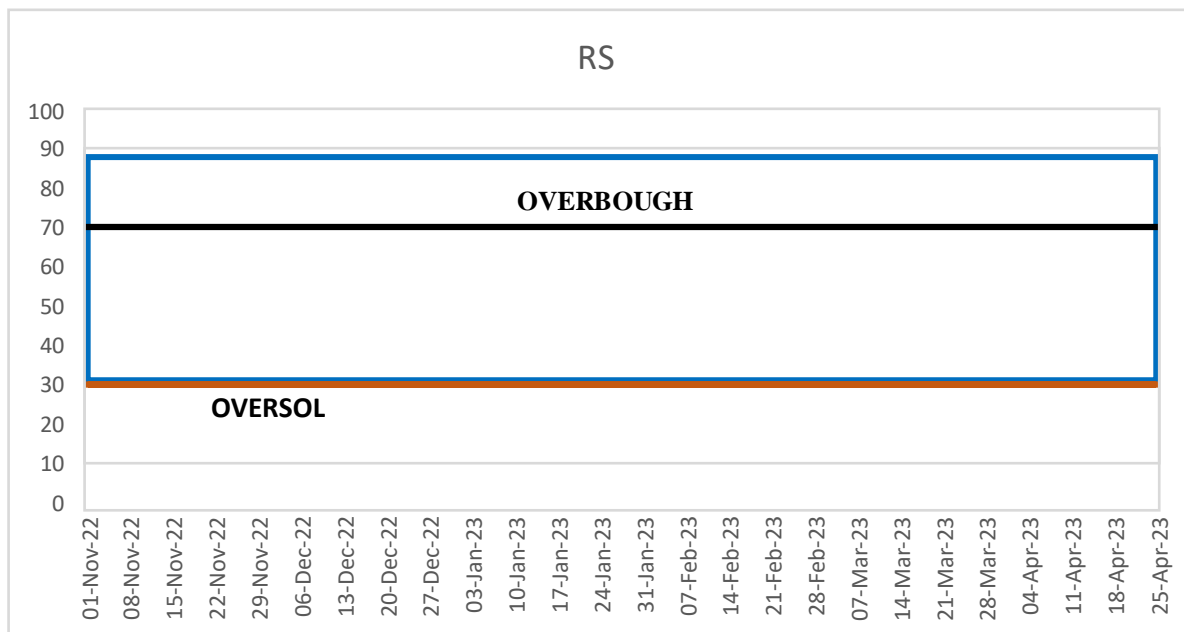
4711.1 Graph Showing Candlestick Chart Patten of KARNATAKA BANK from



7.11. Graph Showing Candlestick Chart Patten of KARNATAKA BANK from 01/02/2023 to 28/04/2023



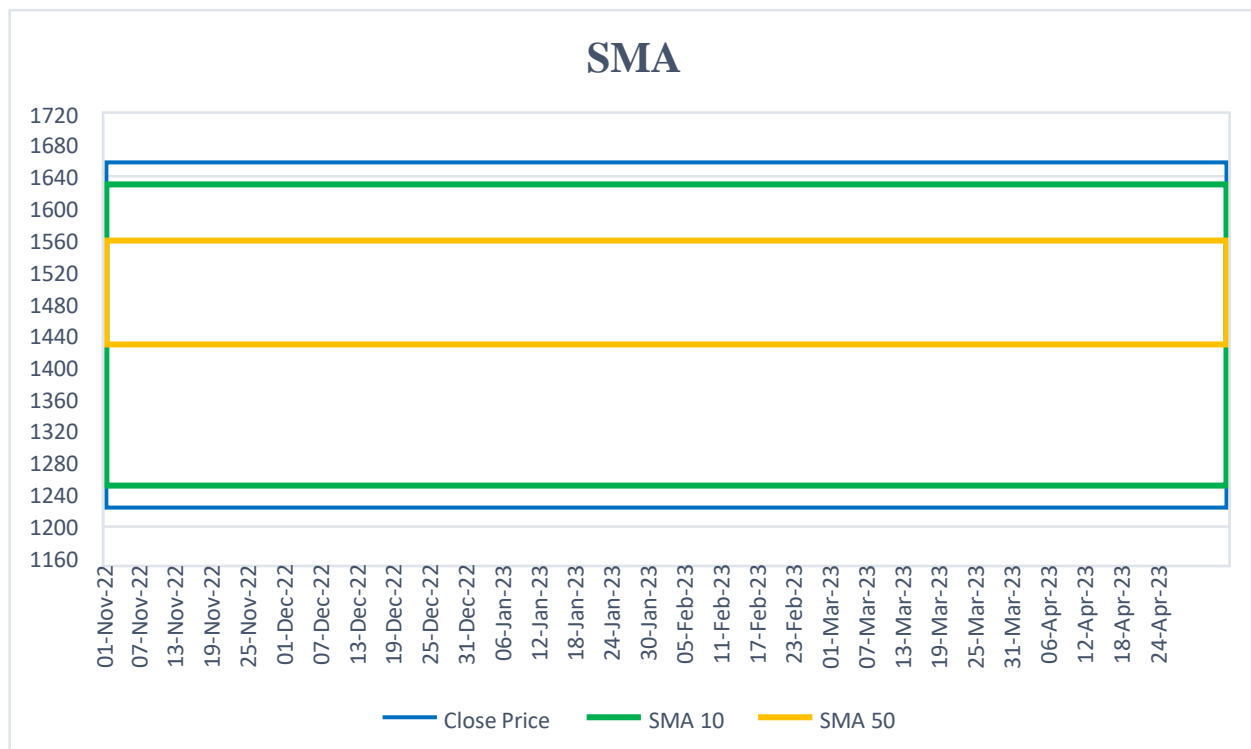
7.12 Graph Showing RSI of KARNATAKA BANK from 01/11/2022 to 28/04/2023



Interpretation:

- From November 1, 2022 to December 15, 2022, Karnataka Bank stock shows the RSI in overbought zone. Which indicating to go for a short position.
- Up to April 28, 2023, clear indication of oversold zone was not showing.
- In RSI from the period December 16th to April 28th, no divergence found.

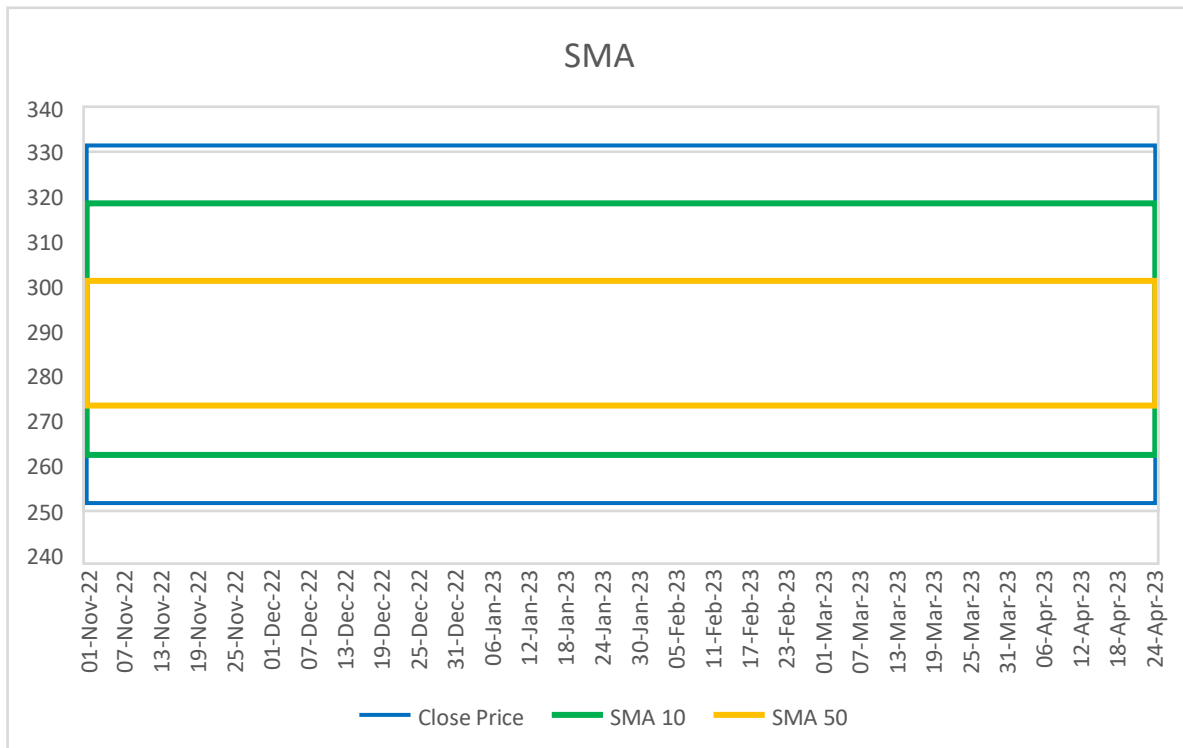
7.13 Graph Showing SMA 10 and SMA 50 of INFOSYS



Interpretation:

- On November 1, 2022, the price was 1572.75, indicating a bullish trend since SMA10 was upside of the SMA 50, which means the trader was in long position.
- On December 6, 2022, when the red Candle comes below the SMA 10 Line and beats price action of reversal trend, it indicates the exit of trade at the price of 1612.85, or continue the trade up to the further break of SMA10 and SMA 50.
- On December 21, 2022, the SMA 50 line crossed the SMA 10 line and indicating the trader to take a sell position.
- On February 2, 2023, the SMA 10 crossed the SMA 50 line which indicates a bullish signal and trader can buy the shares at the price of 1583.3.
- Or On January 16th, the investor can buy the shares at 1525.25, which is lesser than the share which is bought on February 2nd. because here the Price of stock moves up from the SMA 10 line.
- On 2nd March, SMA 10 breakouts SMA 50, it indicates bearish signal and traders can sell their shares at 1472.1.
- If the Trader sell the shares on February 22, 2023, where the red candle is below the SMA 10 line. Then they would have sold the share at 1562.55. which is much better than the shares bought on last transaction day. And end up earning a profit.

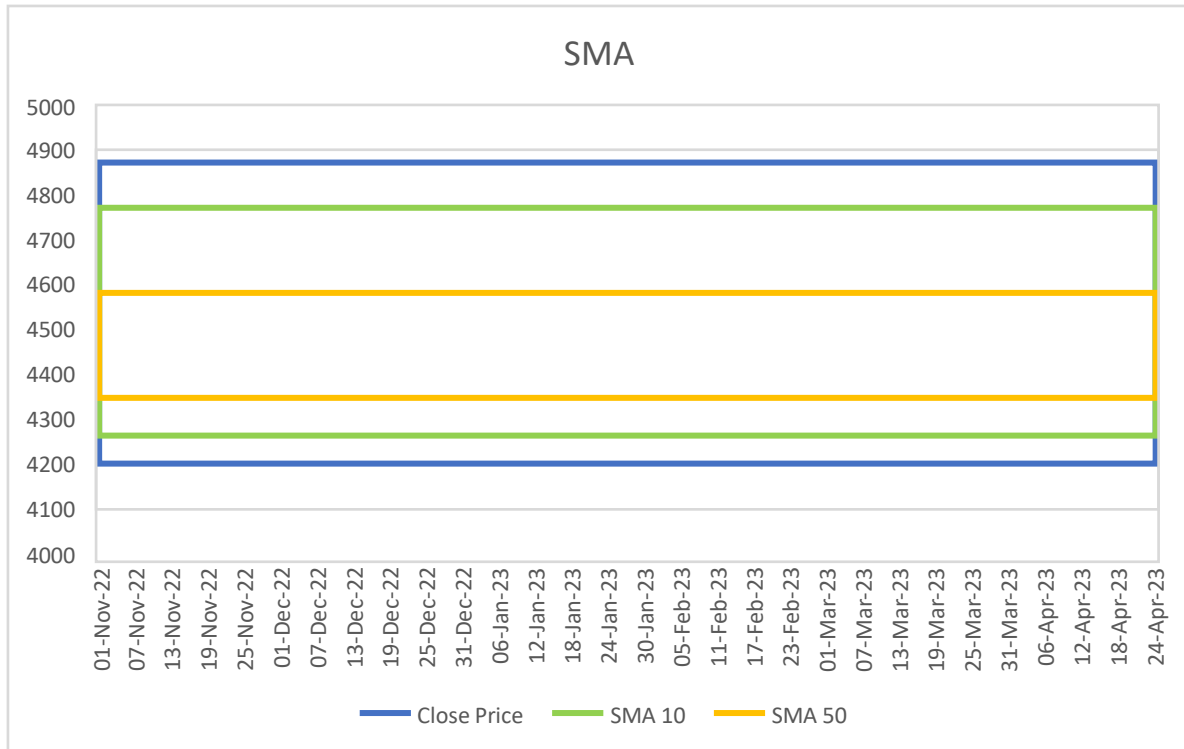
7.14 Graph Showing SMA 10 and SMA 50 of BIRLASOFT



Interpretation:

- On November 28, 2022, the SMA 10 breaks out the SMA 50. With that, it indicates the buy signal for traders. Where candle also confirms with the red candle at a price of 299.80.
- But as on November 11th, the candle indicating the bullish sign, was above the SMA 10 line, if the investor will buy on that day. He will buy at less than the price of share which the SMA 10 Breakout showing on chart.
- On January 10, 2023, the SMA 50 Crossed the SMA 10 line, which showing a short position. With the price of 290.55. here investor can sell the share which they have bought on 11th November. If They would have sold the shares which were bought on November 28th, then they end up incurring a loss of 9.25.
- On December 12th the bearish candle was below the SMA 10 line (shorter time period), if the investor sells the share on this day, they probably would've sold at higher price than the shares bought on last time.
- On April 26th, the Price showing the bullish entry of 267.6. which is above the SAM 10 line. Hence investor can take a long position or hold till the next breakout of SMA 10 and SAM 50.

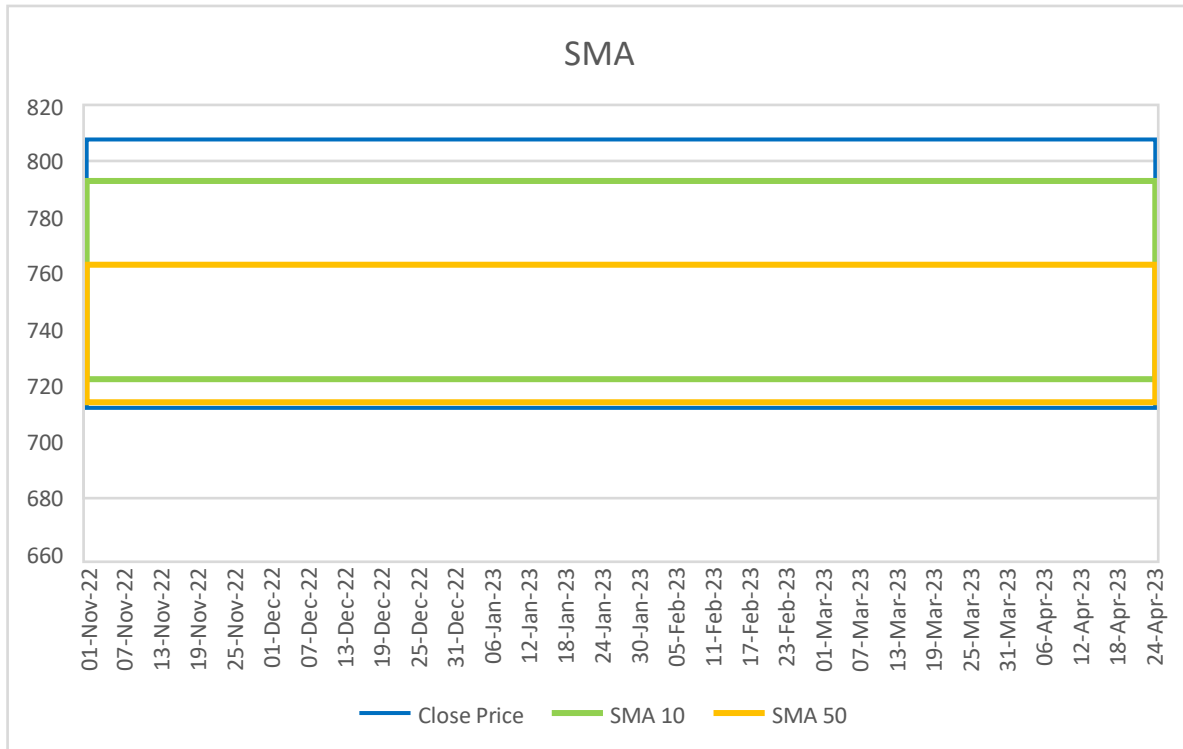
7.15 Graph Showing SMA 10 and SMA 50 of Apollo



Interpretation:

- On January 4th, Chart Pattern. Indicates bearish trend where the short term SMA is below the long term SMA. And sell the Shares with price of 4432.8.
- If the investor sells the shares on December 14th, they would have sold at 4665.6. which is higher than the price on 4th January. Because the price line or candlestick was below the SMA 10 line. Which indicating trader to take a short position. also, it is confirming with a bearish trend in candlestick price chart.
- On February 20, 2023, the SMA 10 crossed the SMA 50, which indicating a buy signal for trader. At the price of 4612.55.
- And if investor buy the shares on February 8th, because the price candle is above the SMA 10 line, which is confirming with the bullish pattern. At a price of 4386.95. which is less than the price showing on 20th February.
- On 16th March, the SMA 10 Falls below the SMA 50 line, which signalling the trader to exit the trade. At a price of 4320.65. here if investor sells the share, they will end up incurring loss.
- On 25th April, the short period SMA (SMA 10) crossed the long period SMA (SMA 50). Which indicating the investors for a buy signal with the price of 4418.7.

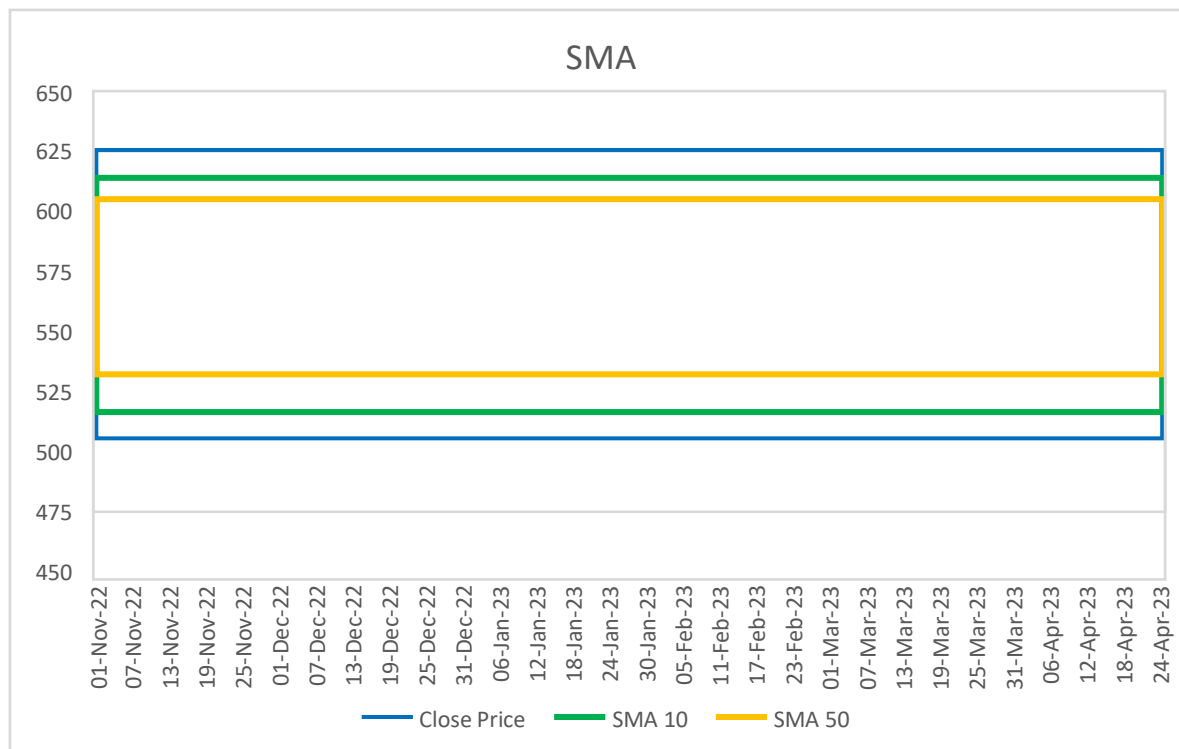
7.16 Graph Showing SMA 10 and SMA 50 of NARAYANA HRUDAYALAYA



Interpretation:

- Till January 1, 2023, the investor was in buying situation.
- Since at January 2, 2023, the SMA 50 Crossed the SMA 10 which is giving a trader to exit the trade, & sells the stock for a price of 749.15.
- On February 27th, as SMA 10 Breakouts the SMA 50, It was signalling the trader to buy the stock at a price of 750.25.
- On February 21st, the green price candle was above the SMA 10 line which confirming to purchase shares at a price of 738.35. which is less than the share price of 27th of February.
- On April 28, 2023, the long period SMA (SMA 50) crossed the short period SMA (SMA 10), which indicates the trader to take a short position. And sell of that share for a price of 761.3, which were purchased on 27th February and earn the profit of around 11.5.

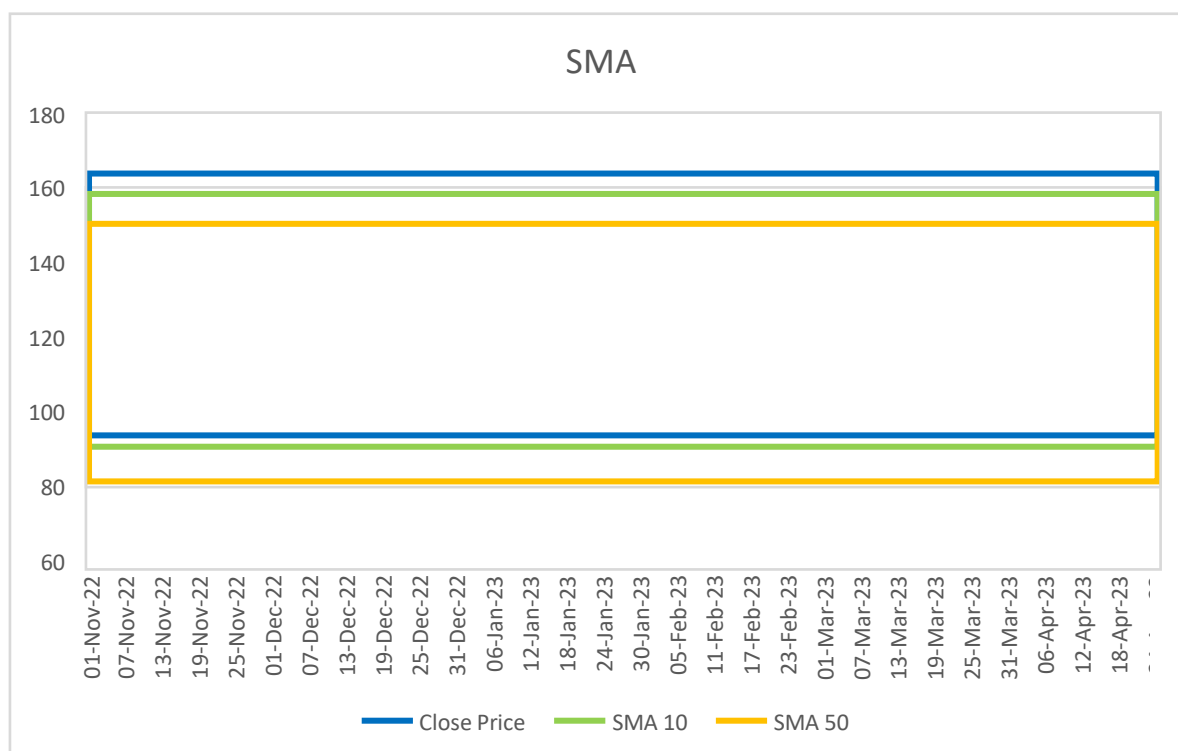
7.17 Graph Showing SMA 10 and SMA 50 of STATE BANK OF INDIA



Interpretation:

- On November 1, 2022, as SMA 10 is above the SMA 50, it was indicating that the trader was in long position.
- On January 12th, the long period SMA crossed the short period SMA, with that candle was indicating with bearish trend. So, investor can sell the share at a price of 595.
- As we can see on chart that, on 19th December, the price candle was below the short period SMA (SMA 10). Where if investor sell the security on this day, they will be selling at a price of 604.95.
- On April 20, 2023, the SMA 10 Breaks out the SMA 50, which indicating to take a buy position, At a price of 544.7.
- On March 31st, the price candlestick was above the SMA 10 (short period), which indicates a buy position at a price of 523.7.

7.18 Graph Showing SMA 10 and SMA 50 of KARNATAKA BANK



Interpretation:

- On January 24, 2022, SMA 50 crossed the SMA 10, which is indicating a negative trend and investors have to exit a trade at a price of 145.9.
- On 10th March, 2023, SMA 10 Crosses SMA 50, yet the price candle was not giving any confirmation to buy that stock or shares.
- On the 20th of March, the SMA 50 line again breaks the SMA 10 line, where it is showing the short position signal for traders.
- Prior to April 28, it continues to display a bearish trend, and neither the SMA 10 nor the SMA 50 are showing any signs of turning the trend reverse.

8. Findings, Suggestions and Conclusion:

Findings:

INFOSYS

- According to Relative Strength index indicator, overbought zones are found at the beginning of the period, and traders can place short selling positions. oversold zones are found at the end.
- SMA 10 and SMA 50 calculations provide information on the market's overall trend, and provides three trading chances from a chosen time frame.

BIRLASOFT

- With respect to the Relative Strength Index indicator, it helps traders identify, over bought zones in early stages and enable them to enter short selling position.
- In accordance with SMA 10 and SMA 50 Calculation, it allows one to understand the market's overall trend because it shows two trading possibilities. Though the indicators showed buy & sell signal. But the signals were not giving good return.

APOLLO

- As per Relative strength index, it didn't give any strong signals to buy or to sell.

And the investors ended up with no gain no loss situation.

- As per, SMA 10 & SMA 50, Calculation assists in locating, the trading opportunity in mid of the period, and it started to show the selling position and buying position. till the end of period, it was giving few buy & sell signals, but it was giving a falls signal for traders.

NARAYANA HRUDAYALAYA

- As per Relative Strength Index, it showed no signs to trade at beginning, but by the end of the duration, it gave some signals to sell off the shares by investors.
- As per, SMA 10 and SMA 50, it has helped find time to trade the shares, means by indicating three trading opportunities from selected duration.

STATE BANK OF INDIA

- Based on Relative Strength Indicator, it was giving some signals from starting till ending. And let to earn some profit.
- SMA 10 and SMA 50 calculation helped, to learn about trend of the market. By that helped the trader to take a short position in mid of the period and buy position in end of the period.

KARNATAKA BANK

- According to Relative strength Index, it gave only selling signals at the starting period, further there isn't any signals to trade.
- SMA 10 and SMA 50 calculation helped to find short position at mid of the period, and further there is no clarification to buy or sell the shares as there are no signals to trade.

Suggestions:

INFOSYS

- ❖ In this sector, it is suggested to the investors not only use RSI as indicator to make decision. But also use both RSI and SMA indicators for taking better decision regarding investments.
- ❖ Infosys stocks have bullish trend in the beginning, but still wait for SMA 10 and SMA 50 breakouts and RSI overbought or oversold zone.
- ❖ Only trade top performing stocks in IT sectors, because it gives better trading opportunities.

BIRLASOFT

- ❖ In this sector, it is suggested to the investors not only use one indicator, instead use two or more indicators to track a market performance and trading opportunities.
- ❖ Here trader can make a profit using RSI indicator over the SMA indicator.

APOLLO

- ❖ In this sector it is suggested to the investors to not to follow any of the indicators, because it not leading the investors to gain any profit.
- ❖ As per the current situation, it is suggested for the investors to hold their shares or withdraw their investments as neither the indicators generating strong buy or sell signals.

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- ❖ In this situation, it is suggested to the investor to follow SMA indicator over RSI indicator because it giving at least small amount of earnings.
- ❖ It is suggested to the investors to hold or withdraw their investments as both the indicators gave the selling opportunity at the end of their signals.

STATE BANK OF INDIA

- ❖ In this stock suggestion is that, use RSI indicator for better return. Comparing to the other indicator such as SMA. because RSI generating at least some return comparing to the SMA indicator.
 - ❖ Always suggested to use High beta stocks like SBI for intraday trading.
- KARNATAKA BANK
- ❖ It is suggested to the investors to use other indicators for confirmation of buy or signals, as both the indicators giving rare buy or sell signals. So, it is suggested to use other indicators to cross check the trading opportunities.
 - ❖ Until the clear signals it is advised to hold the stocks.
 - ❖ It is suggested to the investors to hold or withdraw their investments as both the indicators didn't give any profit generating signals.

Conclusion:

I Studied a lot here, starting from the beginning of the stock market principles, to a method of analysis employing technical indicators to locate stocks to enter, exit, and make money.

In this context, stocks have been chosen Based on large-cap, mid -cap and small-cap company from distinct division, so in case of large-cap and mid-cap companies, it is easy for traders to open and withdraw any trade.

Depending on the preceding analysis, we can recommend that investors can purchase stocks within the field of information technology, which was providing profitable trading signals. This sector is comprised of two companies in this study: one Large-cap company and one small-cap company. Large-cap firms are more stable and risk-free than small-cap companies. Small-cap enterprises may be riskier, but if they succeed, they can generate huge profits.

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