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A Study on Technical Analysis of Selected Stocks from NIFTY 50

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ABSTRACT :

Technical analysis is a crucial tool for investors in financial markets, aiding in decision-making by analyzing historical price data, volume trends, and market patterns. This study focuses on selected stocks from the Nifty 50 index, representing large-cap stocks on the National Stock Exchange of India. By utilizing technical indicators such as Exponential Moving Averages (EMA), Relative Strength Index (RSI), and candlestick patterns, this research aims to identify potential trading opportunities. The methodology involves a systematic examination of these indicators to discern recurring signals that could predict future price movements. Additionally, the study evaluates the effectiveness and reliability of technical analysis within the volatile Nifty 50 market through rigorous statistical testing. The goal is to assess the predictive power of these indicators, providing valuable insights into their utility for traders and investors. Ultimately, this research contributes to the existing knowledge by offering empirical evidence on the application of technical analysis in the Nifty 50 context, helping market participants navigate the complexities of stock market investing more effectively.

Keywords: technical analysis, Nifty 50, Exponential Moving Averages (EMA), Relative Strength Index (RSI), candlestick patterns, trading opportunities, price movements, stock market investing.

1. INTRODUCTION :

The NIFTY 50 index, launched in April 1996, is a benchmark representing the performance of 50 large-cap companies listed on the National Stock Exchange (NSE) of India. Managed by the Indian Record Management and Project (IISL), a subsidiary of NSE Strategic Investment Ltd., it reflects the market capitalization and performance of various sectors in the Indian economy. The index has evolved to encompass diverse financial instruments, including exchange-traded funds, futures, and options. It plays a crucial role in providing transparency and efficiency in the Indian stock market. The NSE, established in 1992 and operational since 1994, facilitates seamless trading through its advanced, automated systems, significantly transforming the Indian equity market. Technical analysis, a key tool for investors, involves studying past and present price actions to predict future movements. This approach employs various chart types and indicators, focusing on price and volume rather than a company's financials, to identify high-probability trading opportunities. Understanding technical analysis helps investors and traders make informed decisions by analyzing market trends and investor behavior.

2.OBJECTIVES :

1. To identify the trend of selected stocks by using Technical Analysis.
2. To analyze price movements using Relative Strength Index & Exponential Moving Average.
3. To enhance the knowledge about technical analysis for Trading and Investment Decisions.

3. REVIEW OF LITERATURE :

Varun Nagar (2022) Technical stock analysis uses past price and trading volume or both to predict future price. A broad range of techniques such as chart analysis, moving average, and other filters and Oscillator can be used to identify predictable pattern in stock prices. These notes provide an overview of some common Analytical tools for identifying trading opportunity. This research paper aim to examine the stocks that give good opportunity to gain profits. The conventional wisdom is the stock price pattern emerge from systematic psychological behavior of market participants. This research provides an overview of some common analytical tools for identifying trending opportunities.

Michal Tlusty (2022) The paper deals with the issue of value screening and shares. For the selection of a company, value screening with specific criteria was used. From a total of 6 companies, the one with the most traded stocks was selected, namely the company Apple Inc. Subsequently, the analyses of trend and moving averages were performed for the 50- day, 100-day, and 200-day period, as well as the analysis using RSI indicators. Specific changes detected were graphically illustrated and described in detail in graphs. In the following chapter, Discussion of Results, specific indicators were explained,

which emerged within the analysis of the shares, and proposals of measures for a broker were made, which recommended the trader to buy or give up the position. The objective of the paper, which consisted in the performance of value screening using specific criteria, select a suitable company, analyze its time series, and propose a specific measure, was achieved.

Senthilmurugan Paramasivan (2021) 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 behaviour 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 41 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.

Mrs. B. Kishore (2020) Technical Analysis is that the prediction of future price movements through the past price movements. Technical analysis does not predict absolutely about the future about forecasting. "A Study on Technical analysis for Selected Companies of BSE" was done based on historical data regarding price of shares of selected companies of BSE SENSEX. The Secondary Data of daily closing price of the shares of three years is collected for selected companies from BSE SENSEX. For this study technical analysis is carried out using major tools and techniques. The important Tools and Techniques of this study are Candlestick Chart, Moving Average, Moving Average Convergence Divergence (MACD), Relative Strength Index (RSI).

4. RESEARCH METHODOLOGY :

The sample of the study comprises 5 stocks which are selected from Nifty 50. Because they have more weightage as compared to other Nifty stocks (Selected stocks are: Reliance Industries - 11.110%, Tata Consultancy Services - 8.441%, HDFC Bank - 6.173%, ICICI Bank - 4.208%, Bharti Airtel - 3.961%) are samples taken for the study. The sample period of study has been taken from 1st January 2021 to 2nd January 2024.

Sources Of Data:

- Journals
- Website (NSE official website)

5. DATA ANALYSIS :

Reliance Industries

INTERPRETATION:

The above image shows the candlestick chart of Reliance Industries Ltd.

From the above charts we can see that the stock prices showcase an upward trend. Thelength is 3 Years, and the candle is of 1-day candles. As shown in the figure above, the blue line is the 200 EMA line, and the purple line is RSI line. The 200 EMA indicator has indicated the buying or entering opportunities when the candle is crosses the blue line and selling or Exist opportunities when candle starts below the blue line and starts travelling downward. When the blue line is below the candles it indicates bullish trend and Support of market (July 2021 to December 2021) and when the blue line travels from above the candles it indicates the bearish trend and Resistance of market (January 2023 to June 2023). The RSI indicated to buy the share when it crosses the oversold line from below and moves upwards. The signal to sell given by RSI is given when the line crosses the overbought (70) line from above and moves downwards (January 2023 to June 2023). The signal to buy given by RSI is given when the line crosses the oversell line (30) from below and moves upwards

TATA CONSULTANCY SERVICES

INTERPRETATION:

The above image shows the candlestick chart of Tata consultancy services.

From the above charts we can see that the stock prices showcase an upward trend. Thelength is 3 Years, and the candle is of 1-day candles. As shown in the figure above, the blue line is the 200 EMA line, and the purple line is RSI line.

The 200 EMA indicator has indicated the buying or entering opportunities when the candle is crosses the blue line and selling or Exist opportunities when candle starts below the blue line and starts travelling downward. When the blue line is below the candles it indicates bullish trend and Support of market (August 2021 to September 2021) and when the blue line travels from above the candles it indicates the bearish trend and Resistance of market (April 2022 to November 2022). The RSI indicated to buy the share when it crosses the oversold line from below and moves upwards. The signal to sell given by RSI is given when the line crosses the overbought (70) line from above and moves downwards ((April 2022 to November 2022). The signal to buy given by RSI is given when the line crosses the oversell line (30) from below and moves upwards (August 2021 to September 2021). Both EMA and RSI Indicates the same buying and selling opportunity behaviour in market.

HDFC BANK

INTERPRETATION:

The above image shows the candlestick chart of HDFC bank.

From the above charts we can see that the stock prices showcase a sideway trend. The length is 3 Years, and the candle is of 1-day candles. As shown in the figure above, the blue line is the 200 EMA line, and the purple line is RSI line.

The 200 EMA indicator has indicated the buying or entering opportunities when the candle is crosses the blue line and selling or Exist opportunities when candle starts below the blue line and starts travelling downward. When the blue line is below the candles it indicates bullish trend and Support of market (April 2021 to October 2021) and when the blue line travels from above the candles it indicates the bearish trend and Resistance of market (January 2022 to September 2022). The RSI indicated to buy the share when it crosses the oversold line from below and moves upwards. The signal to sell given by RSI is given when the line crosses the overbought (70) line from above and moves downwards (January 2022 to September 2022). The signal to buy given by RSI is given when the line crosses the oversell line (30) from below and moves upwards (April 2021 to October 2021). Both EMA and RSI Indicates the same buying and selling opportunity behaviour in market.

ICICI BANK

INTERPRETATION

The above image shows the candlestick chart of ICICI bank.

From the above charts we can see that the stock prices showcase a sideway trend. The length is 3 Years, and the candle is of 1-day candles. As shown in the figure above, the blue line is the 200 EMA line, and the purple line is RSI line. The 200 EMA indicator has indicated the buying or entering opportunities when the candle is crosses the blue line and selling or Exist opportunities when candle starts below the blue line and starts travelling downward. When the blue line is below the candles it indicates bullish trend and Support of market (April 2021 to January 2022) and when the blue line travels from above the candles it indicates the bearish trend and Resistance of market (January 2022 to March 2022). The RSI indicated to buy the share when it crosses the oversold line from below and moves upwards. The signal to sell given by RSI is given when the line crosses the overbought (70) line from above and moves downwards (January 2022 to March 2022). The signal to buy given by RSI is given when the line crosses the oversell line (30) from below and moves upwards (April 2021 to January 2022). Both EMA and RSI Indicates the same buying and selling opportunity behaviour in market.

BHARATH AIRTEL

INTERPRETATION

The above image shows the candlestick chart of Bharti Airtel.

From the above charts we can see that the stock prices showcase an upward trend. The length is 3 Years, and the candle is of 1-day candles. As shown in the figure above, the blue line is the 200 EMA line, and the purple line is RSI line.

The 200 EMA indicator has indicated the buying or entering opportunities when the candle is crosses the blue line and selling or Exist opportunities when candle starts below the blue line and starts travelling downward. When the blue line is below the candles it indicates bullish trend and Support of market (July 2021 to November 2021) and when the blue line travels from above the candles it indicates the bearish trend and Resistance of market (April 2023 to July 2023). The RSI indicated to buy the share when it crosses the oversold line from below and moves upwards. The signal to sell given by RSI is given when the line crosses the overbought (70) line from above and moves downwards (April 2023 to July 2023).

The signal to buy given by RSI is given when the line crosses the oversell line (30) from below and moves upwards (July 2021 to November 2021). Both EMA and RSI Indicates the same buying and selling opportunity behaviour in market

6.FINDINGS :

Reliance Industries Ltd:

Table no.6.1: Reliance Industries Ltd.

Indicators	Buying Months (2021-2022)	Selling Months (2021-2022)	Buying Months (2022-2023)	Selling Months (2022-2023)	Buying Months (2023-2024)	Selling Months (2023-2024)
EMA	February, May, August	March, June, October	March, May, September	April, November, August	March, November	February,July
RSI	February, May, August	March, June, October	March, May, September	April, November, August	March, November	February,July

Tata Consultancy services:

Table no.6.2: Tata Consultancy Services.

Indicators	Buying Months (2021-2022)	Selling Months (2021-2022)	Buying Months (2022-2023)	Selling Months (2022-2023)	Buying Months (2023-2024)	Selling Months (2023-2024)
EMA	March, August	February, April, September	March, September	February, August, November	March, November	February, July, September
RSI	March, August	February, April, September	March, September	February, August, November	March, November	February, July, September

HDFC Bank:

Table no.6.3: HDFC Bank.

Indicators	Buying Months (2021-2022)	Selling Months (2021-2022)	Buying Months(2022-2023)	Selling Months (2022-2023)	Buying Months (2023-2024)	Selling Months (2023-2024)
EMA	April, August, December	February, July, October	March, June, October	January, April, September	March, June, November	February, May, July
RSI	April, August, December	February, July, October	March, June, October	January, April, September	March, June, November	February, May, July

ICICI Bank:

Table no.6.4: HDFC Bank.

Indicators	Buying Months (2021-2022)	Selling Months (2021-2022)	Buying Months (2022-2023)	Selling Months (2022-2023)	Buying Months (2023-2024)	Selling Months (2023-2024)
EMA	April, October	February, August, November	March, June	January, April, September	February, November	June, December
RSI	April, October	February, August, November	March, June	January, April, September	February, November	June, December

Bharti Airtel:

Table no.6.5: Bharti Airtel.

Indicators	Buying Months(2021-2022)	Selling Months (2021-2022)	Buying Months(2022-2023)	Selling Months (2022-2023)	Buying Months (2023-2024)	Selling Months (2023-2024)
EMA	July	February, December	March ,July	January, April, November	March, September	July, October, December
RSI	July	February, December	March ,July	January, April, November	March, September	July, October, December

CONCLUSION :

Technical analysis is a method used to forecast future share prices of selected companies, aiding investors in making informed stock market decisions. Utilizing technical indicators allows investors to predict market trends and identify optimal investment opportunities. Accurate stock price predictions through technical analysis can enhance investment decisions by providing insights into future trends. For instance, analyzing the stock prices of companies like Reliance Industries Ltd, Tata Consultancy Services, HDFC Bank, ICICI Bank, and Bharti Airtel with technical tools reveals patterns that can inform future trends. Technical analysis is crucial for predicting short- and medium-term price movements, helping investors choose profitable stocks. Additionally, a fundamental understanding of the market is essential to complement technical analysis, ensuring well-rounded investment decisions. Both technical and fundamental analyses are invaluable for predicting trends and guiding investors in their stock market investments.

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