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-RESEARCH ARTICLE-

NIFTY FIFTY DERIVATIVE TRADING STRATEGY: A HEURISTIC MODEL APPROACH

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─Abstract─

This study aims to present a heuristic model that can be utilised by small retail traders in derivative trading strategies. In addition, it is to evaluate the performance of the Nifty 50 index within the Indian stock market. The objective is to gain a deeper understanding of strategies for optimising profits and determine the key factors that impact profitability. The research methodology employed Zerodha as a platform for accessing secondary data sources. The researchers employed purposive sampling methodology, selecting participants based on specific criteria, during a designated one-year timeframe spanning from 2022 to 2023, in order to gather pertinent data. The findings of this research indicate that the financial services industry possesses substantial market capitalization in comparison to other industries, thereby implying its significance in the construction of investment portfolios. The study additionally emphasizes a notable augmentation in overall and mean profits across diverse sectors, notably in May 2022, suggesting potential prospects for profitability and expansion. Moreover, it is imperative to comprehend the ownership framework, given that a substantial proportion of the shares are held by entities distinct from investors. This highlights the importance of taking into account the potential effects of external ownership on the performance of stocks when making investment choices. The analysis of trends reveals that the return on investment (ROI) exhibited an upward trajectory in May 2022 and January 2023. Nevertheless, during the period spanning from June to December, the return on investment (ROI) failed to meet the predetermined expectations. This outcome

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highlights the significance of diligently monitoring the various factors that exert influence on ROI, thereby enabling informed decision-making in the realm of investments. An analysis of trade patterns associated with both successful and unsuccessful outcomes yields intriguing observations**.** The study displays a success rate of 79% in predicting data, suggesting a relatively high degree of precision. The tests conducted to assess independence indicate that specific variables, including the total number of trades, winning trades, and losing trades (both actual and forecasted), do not exhibit statistically significant relationships. In contrast, the assessment of investment success is underscored by the significant relationship between actual and forecasted ROI (Return on Investment). Based on the aforementioned findings, it is recommended that investors take into account the market capitalization of the Financial Service industry and closely monitor industry trends and financial indicators. This study enhances the comprehension of Nifty 50 derivative trading and offers valuable insights that can guide investment strategies and decisions for individual retail traders.

Keywords: Derivative trading, Heuristic Model, Performance Analysis, Trading Strategy, Indian Stock Market**.**

INTRODUCTION

Investing in stocks in the stock market can serve as a passive means of generating income. This can be achieved through receiving the payment of dividends or by engaging in intraday trading, both of which offer consistent streams of income. Nevertheless, acquiring the required expertise, experience, and dedication is imperative in order to grow into a professional trader within the stock market. Achieving financial sustenance solely through stock trading poses considerable difficulties, as a significant number of investors encounter persistent challenges in generating consistent and enduring profits. In order to pursue a career as a professional trader, it is imperative that one have a comprehensive comprehension of technical and fundamental analysis, alongside proficient skills in risk management and trading psychology. In order to thrive in the trading industry, traders must possess the capacity to effectively adjust their approach in response to dynamic market conditions. Additionally, it is imperative for traders to establish a clearly defined trading strategy that aligns with their individual characteristics and objectives. To minimize losses while trading equities, which involves significant risks, a clear strategy and risk management plan must be in place. It is recommended to initiate trading activities with a modest capital and progressively augment the magnitude of transactions as one acquires expertise and self-assurance.

In general, it can be argued that the stock market has the potential to generate passive income by means of trading activities. However, it is important to note that achieving success as a full-time trader necessitates a substantial level of expertise, practical knowledge, and unwavering commitment. The Indian stock market is characterized by

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rapid growth and offers a diverse array of investment prospects for both individual and institutional investors. In recent years, there has been a notable increase in growth, as evidenced by the Nifty 50 benchmark index achieving record levels. The Nifty 50 index and its derivatives are widely recognized as a prominent investment vehicle within the Indian stock market. Nifty 50 derivatives refer to financial agreements that grant investors the right to purchase or sell the Nifty 50 Index at a fixed rate within a specified timeframe. The objective of this project report is to conduct an analysis of the performance of the Nifty index within the Indian stock market. Additionally, it seeks to provide a robust trading strategy for engaging in Nifty 50 futures and options trading.

After conducting an extensive literature review in the field, it has been established that there is currently no comprehensive methodology available for trading the Nifty 50. The influx of investors in 2020 can be attributed to the stock market's V-shaped recovery observed in the preceding year of 2019. As a consequence of their limited understanding of derivatives trading, new participants in the stock market experienced financial losses upon commencing their trading activities. According to Nitin Khamat, the CEO of Zerodha, approximately 80% of open purchase option positions conclude each day with negative returns. A trading strategy has been developed for the Nifty 50 index through comprehensive research, which is designed to be user-friendly for investors and focused on achieving specific objectives. If an investor is actively monitoring the evolution of candlestick patterns, they may potentially employ this methodology as a trading strategy. Trading opportunities utilizing this technique are not of frequent occurrence, however, when they do arise, traders have the potential to capitalize on them through intraday trading.

REVIEW OF LITERATURE

The study carried out in 2022 by Patil and Deepali (2022) has shown that investors and traders consistently show a desire to find profitable stock market trading strategies. In order to predict price fluctuations, analysts employ technical analysis tools specific to the Nifty index. In the context of making investment or trading decisions, practitioners commonly utilise lagging and leading technical indicators to attain a competitive edge**.** The application of trading rules is predicated on the identification of patterns through the analysis of historical market data. The efficacy and triumph of trading strategies for the Nifty 50 index are contingent upon the meticulous examination of pivotal technical indicators such as the Super Trend and Relative Strength Index (RSI). In their study, Kushal, Vikas, and Charithra (2022) employed macroeconomic factors and technical analysis indicators to predict the movement of the Nifty index both prior to and during the Covid epidemic.

This study concentrates on the Nifty 50 index, examining the impact of the virus on the Indian stock market. Investors who exclusively prioritize business analysis often

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demonstrate a lack of awareness regarding the importance of macroeconomic variables and technical analysis indicators. The authors of the study titled "The Impact of the COVID-19 Pandemic on the Indian Stock Exchange: Assessing Vulnerability and Resilience", (Shankar & Dubey, 2021) examine the repercussions of the COVID-19 pandemic on the Indian stock market, with a particular focus on the daily average returns and trade volume. This study underscores the financial difficulties encountered by both corporations and governmental entities as a consequence of diminished economic activity. According to the authors, it is proposed that a phenomenon known as an investment bubble could potentially emerge when individuals opt to augment their stock investments amidst extended periods of economic recession. In his study, Amuthan (2021) investigates the influence of NIFTY 50 index trends on the growth momentum of sector-based indices in the Indian economy following the COVID-19 crisis. The author accomplishes this by analyzing the performance of the NIFTY 50 in relation to sector-based indices. This study focuses its attention on NIFTY Bank, NIFTY Pharma, and NIFTY IT as exemplar sectors, with the aim of forecasting the trajectories of these indices in order to discern the most and least successful sectors. The results indicate that the performance of Nifty IT and Nifty Consumer Durables was notably influenced by fluctuations in the NIFTY 50 index.

In their study, Varma et al. (2021) examine the immediate effects of the COVID-19 pandemic on the Indian stock market. The objective of the authors is to gain insight into the impact of the pandemic on the NIFTY50, a prominent stock market index, as well as the different sectors that constitute the Indian stock market, within a limited duration. The research findings indicate that there were temporary disruptions observed across various industries, with the financial sector being particularly impacted to a significant extent. Moreover, it is evident that sectors such as pharmaceuticals, consumer goods, and information technology experienced either positive or slight advantages. In their recent study, Luhar, Shah, and Mistry (2021) sought to elucidate the crucial role played by investors' knowledge and abilities in determining the success of investment activities. The authors emphasized the significance of investing the appropriate amount, selecting the suitable investment type, and executing transactions at the opportune moment. Based on the findings of this study, it was observed that the average rates of return were comparatively higher for RMI and RSI indicators in the sample firms, as compared to other indicators. The evidence indicates that RSI and RMI exhibit greater effectiveness as indicators compared to alternative options. The study conducted by Raval and Mehta (2020) aimed to assess the performance of the Nifty 50 index within the financial services and pharmaceutical sectors during the period spanning from 2008 to 2018. The analysis employed simple correlation and an independent t-test to examine the relationship between the Nifty 50 index and the financial services and pharmaceutical industries. The results revealed a significant positive correlation between the Nifty 50 index and both industries. In the year 2020, Ananthi and Vijayakumar (2020) employed candlestick regression and trend forecasting

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methodologies for the purpose of analyzing the stock market. The k-NN regression model is utilised to predict market movements in this particular scenario. A prediction can be generated by analyzing technical indicators in conjunction with the stock prices of multiple companies. The accuracy exhibited a significant increase when compared to alternative machine learning techniques.

In the article titled "The Impact of Macroeconomic Determinants on the Performance of the Indian Stock Market" by Agrawal and Sangeetha (2019), the primary objective is to evaluate the trajectory of the Indian Stock Market and the consequences of the different macroeconomic factors considered in the study. This study examines ten variables, encompassing the price of gold, silver, and oil, interest rates, industrial production, exchange rates, inflation, money supply, foreign exchange reserves, and trade balance. The main focus of the article (Agrawal & Sangeetha, 2019) is to evaluate the trajectory of the Indian Stock Market and examine the consequences of different macroeconomic variables considered in the research. The present research seeks to analyze ten distinct factors, namely the prices of gold, silver, and oil, interest rates, industrial production, exchange rates, inflation, money supply, foreign exchange reserves, and trade balance. The objective of this study is to ascertain the impact of these factors on the performance of the Indian Stock Market. The research paper authored by Thomas and Thakur (2019) has been concluded. The primary aims of the study were to examine the relationships between various sectoral indexes and to assess the correlation between the NIFTY index and these sectoral indexes. The NIFTY, which is the benchmark index of the National Stock Exchange (NSE), along with nine other sectoral indices, were selected for analysis during the period from January 1 to December 31, 2018. Correlation analysis was used to examine the association between the chosen indices. The analysis reveals a positive correlation between the returns of the Nifty index and other sectoral indices, with values ranging from 7% to 88%.

The study was authored by Patil and Jadhav (2019). The primary aims of this study were to assess the fluctuations in share prices of a selected group of FMCG firms listed on the NSE, determine the level of risk associated with these share prices, and provide recommendations regarding the inclusion of specific NSE-listed FMCG companies in investors' portfolios. The duration of the investigation will cover a period of five years, commencing in 2013 and concluding in 2018. Multiple methodologies were employed, encompassing correlation analysis, standard deviation calculation, beta estimation, and kurtosis assessment. Based on the findings of the report, Marico Ltd. Company has received a favourable rating in comparison to the selected FMCG companies included in the study. In their study, Pang et al. (2020) proposed innovative methodologies, specifically the deep LSTM with embedded layer (ELSTM) and the LSTM-NN network with automated encoder, in order to improve the precision of stock market forecasting. This was motivated

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by the recognition of potential inaccuracies inherent in conventional neural network (NN) algorithms. The study provides evidence that the Long Short-Term Memory Neural Network (LSTM-NN) incorporating an embedded layer exhibits superior accuracy, reaching a peak level of 57.2%. Chen et al. (2018) present a novel technical analysis approach aimed at forecasting stock market expansion and aiding investors in making well-informed judgements pertaining to the value and profitability of stocks.

The applied techniques encompass pattern-based organization, determination of pointers, and anticipating of signals within the securities exchange. In a study conducted by Naved and Srivastava (2015), the primary aim was to assess the profitability of oscillators that are frequently employed in technical analysis for financial markets. This study examines three commonly employed oscillators: the stochastic oscillator, the relative strength index (RSI), and the commodity channel index (CCI). The results indicate that the profitability of technical analysis is contingent upon the choice of indicator used and the duration of time considered in the calculation of the said indicator.

RESEARCH GAP

Despite the extensive body of literature pertaining to diverse facets of stock market analysis and trading strategies, a notable research void exists concerning the formulation and implementation of a heuristic model tailored specifically for derivative trading within the framework of the Nifty 50 Index. The research articles identified primarily center their attention on technical analysis tools, macroeconomic factors, sector-based indices, and specific oscillators for the purpose of analyzing the stock market. Nevertheless, there is a dearth of research that presents a heuristic framework specifically designed for small retail traders engaged in Nifty 50 derivative trading. The literature review indicates that previous research frequently utilizes a restricted range of technical methodologies, concentrates primarily on a singular index (specifically, the Nifty 50), relies on back-tested data generated by the researcher, and lacks a comprehensive assessment of profitability factors and predictions for the future. Therefore, the existing knowledge deficit pertains to the requirement for an investigation that presents a heuristic framework for derivative trading in Nifty 50. This study should encompass an examination of performance that extends beyond technical indicators, incorporates a comprehensive analysis of broader market trends and factors influencing profitability, and offers valuable insights and recommendations for optimizing profits in Nifty 50 trading. The primary objective of the research article (Panigrahi, Vachhani, & Sisodia, 2021) is to fill the existing research void by presenting a comprehensive and pragmatic framework tailored for small retail traders involved in Nifty 50 derivative trading.

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RESEARCH METHODOLOGY

1. Research Objectives

The objectives of this study are;

- to offer a heuristic model for a derivative trading strategy to small retail traders.
- to analyse the performance of Nifty 50 in the Indian stock market.
- to provide insights into the strategies that can be used to maximize profits in Nifty 50 trading.
- to identify the factors that affect the profitability of Nifty 50 derivative trading.

2. Research Method

The charting platform utilized for overseeing the advancement of the setup and performing backtesting was the trading brokerage Zerodha. Following that, the entirety of the data was compiled utilizing Microsoft Excel through a comprehensive review of all formations that transpired within the preceding biennial period. The calculations for all potential returns and earnings related to this strategy were performed utilizing Microsoft Excel. The F-test was then applied to assess the statistical significance of the data, with Microsoft Excel utilised for the computation of both the F-statistic and the corresponding P-value. The future returns and accuracy of the method were subsequently forecasted using exponential smoothing in Microsoft Excel. The study exclusively relied on secondary data. The data pertaining to NIFTY50 futures has been gathered from the index chart available on the Zerodha platform. Additional essential information is acquired by means of government publications, online platforms, scholarly literature, internal records, and other relevant sources.

3. Sample Design

The present research relies on the Nifty 50 Future Index Chart as the chosen sample for the design. The sampling technique utilized in this study is purposive sampling, which involves the deliberate selection of specific data points based on their relevance to the research objectives. The data collection period encompasses a duration of one year, commencing in 2022 and concluding in 2023. The study seeks to employ purposive sampling to collect specific and pertinent data from the Nifty 50 Future Index Chart within a designated timeframe. This approach will enable a thorough examination of the performance and profitability factors linked to Nifty 50 derivative trading.

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ANALYSIS AND DISCUSSION

1. Percentage Analysis

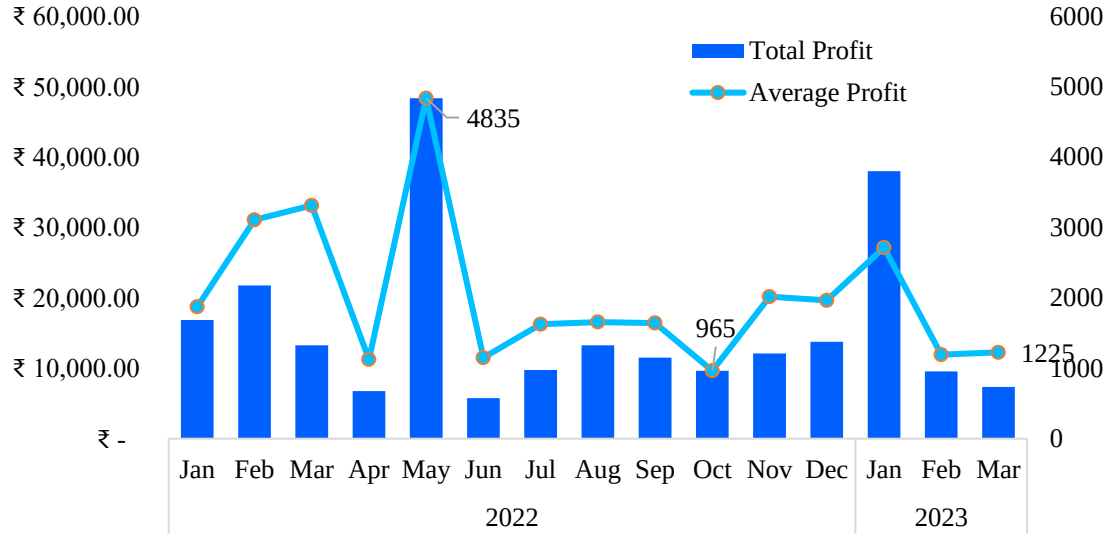

Chart No. 1: Classification of Profit on each month

The given chart illustrates a significant increase in both total and average profit across various industries in May 2022, with the figures rising from Rs: 6750 to Rs: 48,350. Similarly, in January 2023, the total and average profit of industries experienced a substantial growth of approximately Rs: 38,000, reaching Rs: 13,000 from the forecasted period.

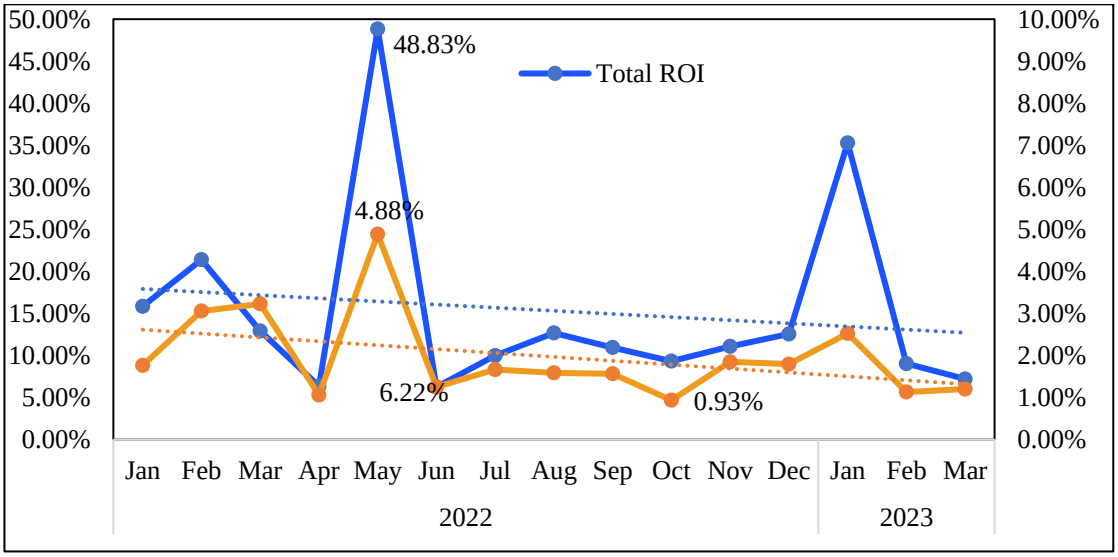

Chart No. 2: Trend Analysis of ROI on each month

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The presented chart displays the Total and Average Return on Investment (ROI) for the period spanning from January 2022 to March 2023. It is evident from the data that the ROI experienced an increase in May 2022 and again in January 2023. However, the trend line indicates that the ROI from June to December did not meet the anticipated levels.

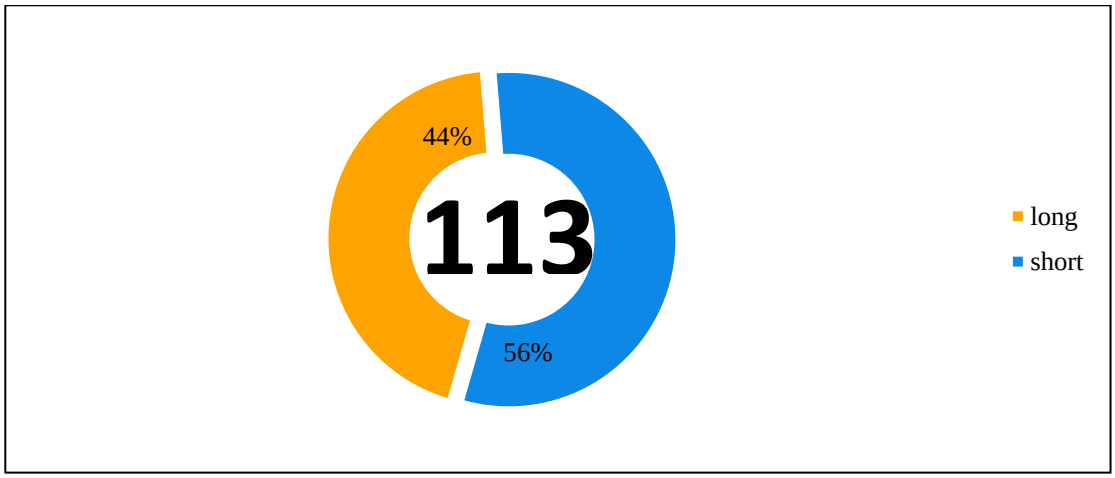

Chart No. 3: Stock Position

The chart indicates the allocation of investor stock positions, distinguishing between long positions, which indicate stocks purchased and owned by the investor, and short positions, which pertain to stocks borrowed by the investor from another party, but not owned by the investor in the company. Approximately 56% of the stock is attributed to a party other than the investor, while the remaining 44% of the stock is possessed by the investor.

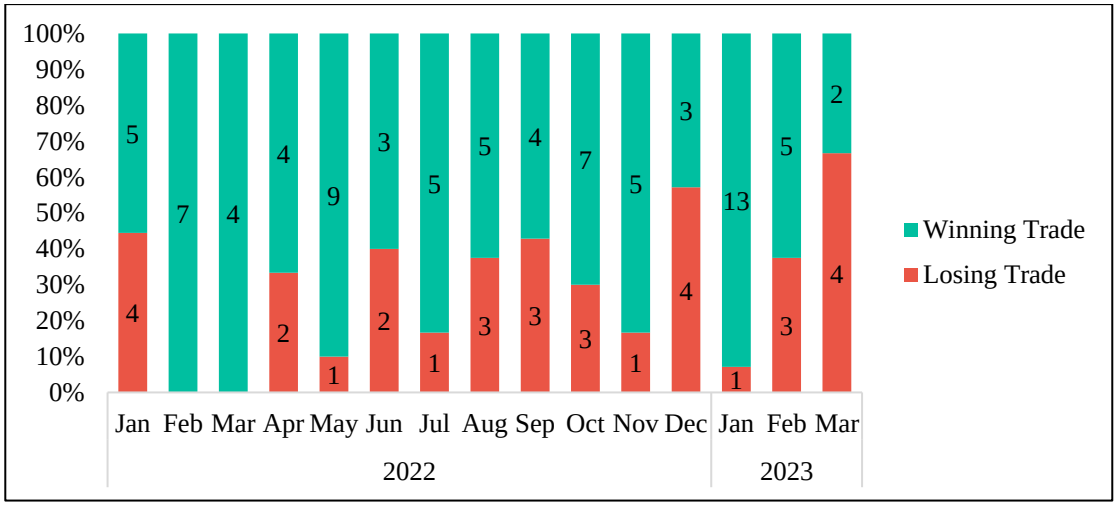

Chart No. 4: Loosing and Winning Trade

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The given chart illustrates the performance of investment trades in various industries. It is evident that during the months of February and March in 2022, all trades resulted in gains. Furthermore, the winning trade reached its peak in January 2023, with approximately 13 successful trades. However, it is worth noting that only one trade was recorded as a loss during that month. Conversely, in March, the number of winning trades decreased to 2, while the number of losing trades exceeded the forecasted value, reaching four.

Table 1: Actual Data

ACTUAL DATA												
PARTICULARS	**Jan-22**	**Feb-22**	**Mar-22**	**Apr-22**	**May-22**	**Jun-22**	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**
Total no. of trades	9	7	4	6	10	5	6	8	7	10	6	7
Winning trades	7	6	4	3	9	3	5	5	5	7	6	6
Losing trades	2	1	0	3	1	2	1	3	2	3	0	1
Winning accuracy (%)	78%	86%	100%	50%	90%	60%	83%	63%	71%	70%	100%	86%
Losing accuracy (%)	22%	14%	0%	50%	10%	40%	17%	38%	29%	30%	0%	14%
ROI (%)	16%	21%	13%	6%	49%	6%	10%	13%	11%	9%	11%	13%

Table 2: Forecasted Data

FORECASTED DATA												
PARTICULARS	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**May-23**	**Jun-23**	**Jul-23**	**Aug-23**	**Sep-23**	**Oct-23**	**Nov-23**	**Dec-23**
Total no. of trades	7	7	7	7	8	8	8	8	8	8	8	8
Winning trades	6	6	6	6	6	6	6	6	6	6	6	6
Losing trades	1	2	1	2	1	2	1	2	1	2	1	2
Winning accuracy (%)	92%	71%	94%	73%	95%	74%	97%	75%	98%	77%	100%	78%
Losing accuracy (%)	8%	29%	6%	27%	5%	26%	3%	25%	2%	23%	0%	22%
ROI (%)	6%	29%	5%	4%	3%	2%	2%	1%	0%	-1%	-2%	-2%

The data from one year of the Nifty index is analysed and utilised to compute both the actual and projected values. The data for the total number of trades, winning trades, losing trades, winning accuracy, and losing accuracy for the year 2022 is computed for each month, both in actual and forecasted values. Additionally, the predicted information for each month of the year 2023 is also included. According to the calculations conducted, it has been determined that the rate of success stands at 60%.

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Based on the projected data for each month over the course of one year, it is observed that the accuracy of winning predictions is 73%, while the accuracy of losing predictions is 22%. This suggests a potential decrease in the success rate of approximately 21%. Additionally, the return on investment (ROI) is found to be lower compared to the corresponding quarters of the previous year. The observations made in this study are deemed to be of considerable importance.

Ho = *There is no significant relationship between actual and forecasted data of the selected variable.*

H1= *there is a significant relationship between actual and forecasted data of selected variables.*

Table 3: Data Summary of ANOVA Test for Total No. Of Trades Actual and Forecasted

Groups	Count	Sum	Average	Variance
TOTAL NO. OF TRADES (ACTUAL)	12	85	7.0833	3.537879
TOTAL NO. OF TRADES (FORECASTED)	12	90.95273	7.5794	0.026834

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1.47646	1	1.4765	0.828375	0.37261	4.3009
Within Groups	39.2118	22	1.7824			
Total	40.6883	23				

The one way, the results of the ANOVA test indicate that the p-value supports the acceptance of the null hypothesis (Ho) and the rejection of the alternative hypothesis (H1). Specifically, the calculated p-value of 0.37261 exceeds the predetermined significance level of 0.05. Therefore, these findings suggest that there is no statistically significant relationship between the total number of trades.

Table 4: Data Summary of ANOVA Test for Winning Trades Actual and Forecasted

Groups	Count	Sum	Average	Variance
WINNING TRADES (ACTUAL)	12	66	5.5	3
WINNING TRADES (FORECASTED)	12	72.77748	6.0648	0.01105

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1.91393	1	1.9139	1.271269	0.27168	4.3009
Within Groups	33.1216	22	1.5055			
Total	35.0355	23				

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The one way,the analysis of variance (ANOVA) test indicates that the p-value supports the acceptance of the null hypothesis (Ho) and the rejection of the alternative hypothesis (H1). Specifically, the calculated p-value for the ANOVA is 0.27168, which exceeds the predetermined significance level of 0.05. Consequently, this suggests that there is no statistically significant association between winning trades.

Table 5: Data Summary of ANOVA Test for Losing Trades Actual and Forecasted

Groups	Count	Sum	Average	Variance
LOSING TRADES (ACTUAL)	12	19	1.5833	1.174242
LOSING TRADES (FORECASTED)	12	14.97171	1.2476	0.225507

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.67613	1	0.6761	0.966075	0.33635	4.3009
Within Groups	15.3972	22	0.6999			
Total	16.0734	23				

The one way, the results of the ANOVA test indicate that the p-value supports the acceptance of the null hypothesis (Ho) while rejecting the alternative hypothesis (H1). Specifically, the calculated p-value of 0.33635 exceeds the predetermined significance level of 0.05. Consequently, these findings suggest that there is no statistically significant relationship between losing trades.

Table 6: Data Summary of ANOVA Test for Winning Accuracy Actual and Forecasted

Groups	Count	Sum	Average	Variance
WINNING ACCURACY (%) (ACTUAL)	12	9.364683	0.7804	0.024681
WINNING ACCURACY (%) (FORECASTED)	12	10.23751	0.8531	0.013099

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.03174	1	0.0317	1.680426	0.2083	4.3009
Within Groups	0.41558	22	0.0189			
Total	0.44732	23				

The one way, the results of the ANOVA test indicate that the p-value supports the acceptance of the null hypothesis (Ho) while rejecting the alternative hypothesis (H1). Specifically, the calculated p-value from the ANOVA test is 0.2083, which exceeds the predetermined significance level of 0.05. This suggests that there is no statistically significant relationship observed between winning accuracy.

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Table 7: Data Summary of ANOVA Test for Losing Accuracy Actual and Forecasted

Groups	Count	Sum	Average	Variance
LOSING ACCURACY (%) (ACTUAL)	12	2.63532	0.2196098	0.024681
LOSING ACCURACY (%) (FORECASTED)	12	1.76249	0.1468739	0.013099

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.03174	1	0.0317431	1.680426	0.2083	4.30095
Within Groups	0.41558	22	0.0188899			

The one way, the analysis of variance (ANOVA) test indicates that the p-value supports the acceptance of the null hypothesis (Ho) while rejecting the alternative hypothesis (H1). This inference is based on the ANOVA-calculated p-value of 0.2083, which exceeds the established significance level of 0.05. Therefore, it can be derived that there is no statistically significant relatonship between the loss of accuracy.

Table 8: Data Summary of ANOVA Test for ROI Actual and Forecasted

Groups	Count	Sum	Average	Variance
ROI (%) (ACTUAL)	12	1.7789	0.1482	0.0131
ROI (%) (FORECASTED)	12	0.4691	0.0391	0.0069

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.07147963	1	0.0715	7.1493	0.0139	4.30095
Within Groups	0.21995775	22	0.01			
Total	0.29143739	23				

The one way, the ANOVA test indicates that the obtained p-value is 0.0139, which is lower than the established significance level of 0.05. Consequently, the null hypothesis (Ho) is rejected, and the alternative hypothesis (H1) is accepted. This implies that there exists a statistically significant relationship between the return on investment (ROI) variables.

Table 9: Summary of F-Statistical Value and P-Value

Particulars	F - statistical value	P - value
Total no. Of trades	0.82837	0.3726
Winning trades	1.27127	0.2717
Losing trades	0.96608	0.3363
Winning accuracy (%)	1.68043	0.2083
Losing accuracy (%)	1.68043	0.2083
ROI (%)	7.14934	0.0139

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- A one-way ANOVA test of independence showed that there was no significant relationship between the **Total No. of Trades** (actual and forecasted) as **p > 0.05.**
- A one-way ANOVA test of independence showed that there was no significant relationship between **Winning Trades** (actual and forecasted) as **p >0.05**.
- A one-way ANOVA test of independence showed that there was no significant relationship between **Losing Trades** (actual and forecasted) as **p > 0.05**.
- A one-way ANOVA test of independence showed that there was no significant association between **Winning Accuracy** (actual and forecasted) as **p > 0.05**.
- A one-way ANOVA test of independence showed that there was no significant relationship between **Losing Accuracy** (actual and forecasted) as **p > 0.05**.
- A one-way ANOVA test of independence showed that there was a significant relationship between **ROI (**actual and forecasted) as **p < 0.05**.

FINDINGS, SUGGESTION AND CONCLUSIONS

Findings

Based on the analysis and graphical representation, it can be observed that the Financial service industry exhibits a market capitalization of 38.44% in the month of May 2022. This percentage surpasses the investments made in other industries during the same period. Furthermore, the total and average profits of various industries have experienced a significant increase, rising from Rs: 6750 to Rs: 48,350 in the year 2022. It is worth noting that 56% of the stock is attributed to a party other than the investor, while the remaining 44% is owned by the investor. The analysis of trends revealed that the Return on Investment (ROI) exhibited an increase during May 2022 and January 2023. However, subsequent months from June to December demonstrated a deviation from the anticipated ROI trajectory. In addition to the aforementioned, it is evident from the representation that the industries' investments have yielded both losing and winning trades. For instance, during the months of February and March in 2022, the trades were entirely successful. Furthermore, the winning trade was observed to be significantly higher in January 2023, reaching approximately 13. In the observed month, it was determined that there was only one trade that resulted in a loss. According to the calculations conducted, it has been determined that the success rate stands at 79%. Upon analysing the projected data for the subsequent five quarters, it has been determined that the anticipated success rate stands at 79%. The observed level of inaccuracy in the results is determined to be 21%, indicating a potential decrease in the success rate by approximately 21%. Additionally, the return on investment (ROI) is observed to be lower in comparison to the corresponding quarters of the previous year. The test of independence indicates that there is no statistically significant association between the Total Number of Trades (both actual and forecasted) and the variables being examined, as the p-value is greater than 0.05. Similarly, there is no significant relationship found

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between Winning Trades (actual and forecasted) and the variables being examined, as the p-value is also greater than 0.05. Additionally, the test reveals no significant association between Losing Trades (actual and forecasted) and the variables being examined, as the p-value exceeds 0.05. Additionally, it was deduced that there was no statistically significant correlation between Winning Accuracy (both actual and forecasted) as indicated by a p-value greater than 0.05. Similarly, there was no significant association between Losing Accuracy (both actual and forecasted) as the p-value exceeded 0.05. However, a significant relationship was observed between ROI (both actual and forecasted) as the p-value was less than 0.05.

Suggestions

considering the elevated market capitalization of the Financial Service sector and the notable surge in overall and mean profits observed across various industries, it would be prudent for investors to undertake a comprehensive analysis and diligent monitoring of the performance exhibited by the Financial Service industry. Remaining knowledgeable about industry trends and financial indicators that have the potential to influence profitability is of utmost significance. The significance of recognizing the ownership structure and its potential impact on investment performance is underscored by the observation that 56% of the stock is held by entities other than the investor. It is advisable for investors to conduct a more comprehensive analysis of the intricacies associated with stock ownership and carefully evaluate its potential impact on market dynamics. The review of trends reveals that the return on investment (ROI) exhibited an upward trajectory in May 2022 and January 2023. However, during the period from June to December, the ROI failed to meet the anticipated outcomes. It is imperative for investors to diligently observe and analyze the various factors that exert influence on return on investment (ROI) in order to make well-informed investment choices. Examining the trade patterns of successful and unsuccessful transactions across various months can yield valuable insights. Investors are advised to undertake an examination of the various factors that have contributed to successful trades during the months of February and March 2022, as well as January 2023. Furthermore, it is recommended that they endeavor to identify any potential risks or challenges that may be associated with the sole trade that resulted in a loss during January 2023. The success rate of 79% obtained through calculations indicates a relatively elevated degree of precision in predicting data. Nevertheless, it is crucial to consider the diminished return on investment (ROI) in relation to previous quarters when evaluating forthcoming investment choices. It is recommended that investors persist in the process of refining their forecasting models and strategies in order to optimise their overall performance. The findings from the tests of independence suggest that there is not a statistically significant association between specific variables, including the total number of trades, winning trades, and losing trades (both actual and forecasted). This implies that these variables may function autonomously and should be assessed individually when

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examining investment performance. The observed correlation between actual and projected return on investment (ROI) suggests that ROI plays a crucial role in evaluating the effectiveness of investments. Investors ought to prioritise strategies that are geared towards enhancing return on investment (ROI) and meticulously assess the projected ROI in order to make well-informed investment choices.

The Nifty 50 approach encourages the active participation of small retail traders in trading by emphasizing the importance of engaging in substantial volumes of Nifty 50 futures. By delaying the acceptance of input until the establishment of the setup has been verified. Prior to initiating a trade, it is imperative to ascertain the unequivocal implementation of a stop-loss mechanism within the trade.

It is advisable for novice traders to commence paper trading as a means of comprehending various techniques prior to engaging in live market activities. It is advisable to refrain from engaging in trading activities or implementing tight stop-loss strategies on days marked by significant events, such as RBI announcements, government press releases, surveillance policy announcements, GDP data announcements, government budget announcements, and similar occurrences. This recommendation is based on the observation that these events tend to induce heightened market volatility. The profitability of trading using this strategy cannot be guaranteed in all applications. Engaging in trading activities utilizing this particular approach may incur significant costs for traders lacking a comprehensive understanding of its mechanics or strategy. The decision of a trader to engage in a trading activity should be predicated upon a comprehensive comprehension of strategy and trading techniques.

Conclusion

In a nutshell, the research results illuminate multiple facets of the investment terrain and offer valuable perspectives for investors. The examination of market capitalization demonstrates that the Financial Service sector possesses a substantial portion in relation to other industries, underscoring the significance of incorporating this sector into the construction of an investment portfolio. Furthermore, the notable surge in overall and mean profits across diverse sectors during the month of May in the year 2022 underscores the prospects for profitability and expansion within the market. However, it is imperative to take into account the distribution of ownership, as a significant proportion of the stock is held by entities other than the investor. Gaining a comprehensive understanding of the ramifications of external ownership on the performance of stocks is imperative in order to make well-informed investment choices. The results of this study also indicate the necessity of conducting more rigorous monitoring of the factors that impact return on investment (ROI) and conducting more comprehensive analyses to identify any potential risks or challenges that may arise during those specific months. The examination of successful and unsuccessful trades uncovers noteworthy trends, including the prominence

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of profitable trades during the months of February and March 2022, as well as the peak occurrence of winning trades in January 2023. A thorough analysis of these patterns can yield valuable insights into the dynamics of the market and facilitate the identification of potential opportunities or risks. The success rate of 79% obtained through data analysis indicates a relatively high degree of accuracy in forecasting. Nevertheless, it is imperative to take into account the diminished return on investment (ROI) in relation to the preceding quarters, which underscores the necessity for ongoing enhancements in forecasting models and strategies. The tests of independence yield significant insights into the interrelationships among various variables. Although certain variables, such as the overall number of trades, successful trades, and unsuccessful trades, do not exhibit a statistically significant correlation, the noteworthy association between return on investment (both actual and projected) underscores the pivotal role of ROI as a crucial determinant of investment achievement.

In addition to their inherent uncertainty, derivatives play a crucial role in enabling investors to effectively manage and mitigate risk within an unpredictable market environment. A comprehensive understanding of derivatives is essential for effectively engaging in low-risk, high-profit investments within the derivatives market. Derivatives are financial instruments that possess leverage and exhibit the potential for both profit and loss. Consequently, engaging in comprehensive research and acquiring expertise in the market becomes imperative. The empirical evidence indicates that industrial investors, particularly those operating within the financial services sector, exhibit a higher level of engagement in derivative trading as compared to stock trading. Investors commonly exhibit interest in engaging in options trading, as these financial instruments possess certain appealing characteristics such as reduced margin requirements and a notably low cost associated with purchasing options. This study presents a straightforward trading methodology that is easily comprehensible and implementable, particularly for retail traders seeking to engage in derivative trading. There is no single technique that can provide a guarantee of achieving accuracy at a rate of 95% consistently. Therefore, it is crucial to exercise caution when evaluating assertions of accuracy. The risk-to-reward ratio is currently receiving increased attention in the decision-making process of major traders. Regardless of the level of precision in an individual's investment strategy, if the risk-to-reward ratio is imbalanced, financial losses are inevitable due to the inherent unpredictability associated with trading. Investors, regardless of their specific background, are expected to adhere to appropriate conduct by adhering to fundamental procedures, physiological principles, trading limitations, and maintaining discipline.

LIMITATIONS OF THE STUDY

It is important to consider certain limitations when interpreting the research findings and recommendations presented in this study. The analysis is dependent on a restricted

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range of technical instruments, potentially failing to encompass the entirety of the intricate market dynamics. Furthermore, the research primarily concentrates on the Nifty 50 Index, thereby constraining the applicability of the results to alternative indices or individual stocks. Furthermore, the data utilized in the study is solely back-tested by the researcher, thereby introducing potential biases or errors. It is imperative to recognize that market conditions and dynamics are subject to change, necessitating potential adjustments to the proposed strategy or rendering it ineffective in subsequent periods. Notwithstanding these limitations, the findings emphasize the significance of monitoring industry trends, comprehending ownership structures, analyzing patterns of return on investment, and consistently refining forecasting models. It is recommended that investors engage in additional research, seek guidance from financial experts, and customise their investment choices based on their individual objectives and risk tolerance thresholds.

DECLARATION

Availability of data and material: The study employed primary data within its conceptual framework, which is documented in the references.

Author's contribution: The current study represents a sincere endeavor by the authors mentioned in the manuscript, who actively collaborated throughout every step of the research.

Conflict of Interest: The present work does not exhibit any conflict of interest.

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