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A Study On Influence Of Ai-Powered Financial Tools Towards Investment Choices In The It Sector: A Focus On Nse And Bse

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Abstract: This study examines the impact of AI-powered financial tools on investment decisions in the IT sector, focusing on the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE). By leveraging statistical analyses such as Descriptive statistics and ANOVA models the research explores how socioeconomic factors, financial literacy, and risk tolerance influence AI adoption among investors. Findings indicate that younger investors (18–25) are more likely to use AI tools, while factors like occupation and education show no significant impact. Additionally, financial literacy levels vary, highlighting the need for targeted investor education. The study also finds that AI usage does not significantly influence risk preferences, suggesting its potential in reducing investment biases. The research underscores the importance of improving AI accessibility and financial education to enhance investor decision-making. The findings provide valuable insights for financial institutions, policymakers, and AI developers to optimize AI-driven investment strategies in the evolving stock market landscape.

Key Words: Financial Literacy, AI-Powered financial tools, NSE, BSE, Risk tolerance, IT Sector.

1. Introduction

Financial tools are essential instruments that aid in evaluating and managing financial data, thereby facilitating informed decision-making for businesses and investors. Key financial tools include financial statement analysis, which involves scrutinizing a company's balance sheet, income statement, and cash flow statement to gauge its overall health and performance. Ratio analysis, another critical tool, employs various financial ratios such as liquidity, profitability, and solvency ratios to assess financial stability and operational efficiency.

Artificial intelligence (AI) has now emerged as a powerful tool, transforming various industries, including finance. In the realm of investment, AI-powered financial tools are revolutionizing the way investors analyze market data, make decisions, and manage their portfolios. By leveraging advanced algorithms and machine learning techniques, these tools offer a suite of capabilities that can significantly enhance investment outcomes. Features such as real-time market analysis, predictive modeling, and automated trading are not just augmenting traditional methods; they are fundamentally reshaping the investment landscape.

1.1 IT Sector

The Information Technology (IT) sector has emerged as a key driver of global economic growth, characterized by rapid innovation and technological advancements. This sector encompasses a wide range of industries, including software development, hardware manufacturing, telecommunications, and IT services. AI-powered financial tools have emerged as powerful instruments in this context, offering sophisticated data analysis, predictive modeling, and automated trading capabilities. These tools enable investors to process large datasets, uncovering valuable insights that facilitate better decision-making. For example, AI can analyze historical performance data, market sentiment, and economic indicators, allowing investors to identify trends and potential opportunities more efficiently.

1.2 BSE and NSE

The Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) are two of India's leading stock exchanges, playing a crucial role in the country's financial markets. Established in 1875, the BSE is the oldest stock exchange in Asia, while the NSE, founded in 1992, has grown to become one of the world's largest exchanges by trading volume.

This study delves into the impact of AI-powered tools on investment decisions in the IT sector, specifically focusing on the BSE and NSE. By examining the effectiveness of these tools in analyzing market trends, assessing risk, and identifying investment opportunities, this research aims to provide valuable insights into the evolving role of AI in the investment decision-making process within the Indian IT sector.

2. Review of Literature

Agarwal (2023) "AI in Investment Risk Management: A Focus on the IT Sector. Journal of Risk Management in Finance" investigated the role of AI-powered tools in risk prediction and management for investment portfolios in the Indian stock market, with a special focus on the IT sector. The authors concluded that AI was playing an increasingly important role in managing investment risks, especially in volatile sectors like IT.

Rathi (2023) "Artificial Intelligence and Investment Decisions in India's IT Sector. Journal of Investment Research" examined the role of artificial intelligence in reshaping investment strategies for the Indian IT sector, focusing on the NSE and BSE. They found that AI-powered tools provided real-time market analysis and automated trading strategies that allowed investors to react quickly to market shifts.

Sharma (2023) "The Impact of AI on Investment Strategies in India's IT Sector. Asian Journal of Financial Technologies" explored the increasing role of AI tools in shaping investment decisions in the Indian financial markets. Their study highlighted the IT sector as a key beneficiary of AI tools, especially in managing risk and optimizing returns. Sharma & Bansal concluded that AI had not only improved the efficiency of investment decisions but also democratized access to sophisticated financial strategies.

3. Statement of Problem

The integration of AI-powered financial tools in the IT sector has revolutionized investment strategies, yet the influence of investors' socioeconomic backgrounds on the utilization of these tools remains underexplored. Moreover, while these tools can enhance decision-making and risk management, their actual impact on investment decisions and risk levels needs detailed examination. Additionally, the financial literacy of investors plays a significant role in how effectively they can leverage AI tools, with those more financially literate potentially benefiting more.

4. Significance of study

This study aimed to delve into the intersection of technology, finance, and human behavior by examining the impact of AI-powered financial tools on investment decisions in the IT sector, with a specific focus on the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). The study investigated how socioeconomic factors, such as income, education, and geographic location, influence the adoption and utilization of AI-powered financial tools among investors. By examining investors' risk tolerance levels, the study sheded light on how AI powered financial tools can help mitigate biases and improve decision-making. The focus on the IT sector allowed for a deep dive into a dynamic and rapidly evolving industry, where technological advancements and market volatility can significantly impact investment outcomes. By focusing on the BSE and NSE, ths study have provided valuable insights into the Indian context, where the adoption of AI-powered tools is still in its nascent stages.

5. Objective of the study

- To know the influence of AI powered financial tools in investment decisions towards IT sector.
- To find out investors risk level in stock market investment towards IT sector.

6. Research methodology

Employing a descriptive research design, this study investigated the complex relationship between investors' socioeconomic factors, their adoption of AI tools, and the subsequent impact on investment decisions, risk levels, and financial literacy. The primary objective of a descriptive research design is to accurately depict the characteristics or phenomena under study without altering any variables. This questionnaire, containing pre-designed questions, was distributed to a targeted group of respondents. The sample have been drawn from a population of investors who are actively engaged in the IT sector. The population for this study consists of 164 investors from the Coimbatore region who are actively engaged in the IT sector and use AI-powered financial tools in their investment decisions.

7. Data analysis

Descriptive statistics

Key areas examined include awareness of SEBI's Investor Education and Protection Fund (IEPF), knowledge of primary financial markets such as NSE and BSE, understanding of common financial instruments like stocks and bonds, familiarity with investment avenues, and comprehension of profit and loss statements.

SEBI's Investor Education and Protection Fund (IEPF) is a significant initiative promoting portfolio management awareness

Table 1

Financial awareness of investors	Frequency	Percent	Mean	Std. Deviation
Not at all aware	9	5.4	3.44	1.130
Less aware	13	7.8	3.15	0.987
Neutral	31	18.7	2.71	1.216
Somewhat aware	56	33.7	2.91	1.283
Strongly aware	55	33.1	2.98	1.063
Total	164	100		

Source: Primary data

Interpretation

The descriptive statistics for awareness levels of SEBI's IEPF initiative among 164 respondents show that 33.7% are somewhat aware, 33.1% are strongly aware, 18.7% are neutral, 7.8% are less aware, and 5.4% are not at all aware. The mean values range from 2.71 to 3.44, with standard deviations from 0.987 to 1.283 indicating varying degrees of variability, with the highest in the neutral and somewhat aware categories.

NSE and BSE are the primary financial markets in India.

Table 2

Financial awareness of investors	Frequency	Percent	Mean	Std. Deviation
Not at all aware	8	4.8	3.38	1.188
Less aware	9	5.4	2.78	.972
Neutral	39	23.5	2.97	1.203
Somewhat aware	68	41.0	2.63	1.158
Highly aware	40	24.1	3.40	1.057
Total	164	100		

Source: Primary data

Interpretation

The table for awareness levels of SEBI's IEPF initiative among 164 respondents show that 33.7% are somewhat aware with a mean of 2.91 and standard deviation (SD) of 1.283, 33.1% are strongly aware with a mean of 2.98 and SD of 1.063, 18.7% are neutral with a mean of 2.71 and SD of 1.216, 7.8% are less aware with a mean of 3.15 and SD of 0.987, and 5.4% are not at all aware with a mean of 3.44 and SD of 1.130. This suggests that SEBI's IEPF initiative has been moderately effective in raising awareness about portfolio management among the respondents.

Common Financial instruments include: Stocks, Bonds, Mutual Funds, ETFs, Derivatives

Table 3

Financial awareness of investors	Frequency	Percent	Mean	Std. Deviation
Not at all aware	7	4.2	3.43	1.134
Less aware	6	3.6	3.33	1.211
Neutral	50	30.1	2.52	1.182
Somewhat aware	51	30.7	3.04	1.095
Highly aware	50	30.1	3.16	1.149
Total	164	100		

Source: Primary data

Interpretation:

The descriptive statistics for awareness levels of SEBI's IEPF initiative among 164 respondents show that 33.7% are somewhat aware with a mean of 2.91 and a standard deviation (SD) of 1.283, 33.1% are strongly aware with a mean of 2.98 and SD of 1.063, 18.7% are neutral with a mean of 2.71 and SD of 1.216, 7.8% are less aware with a mean of 3.15 and SD of 0.987, and 5.4% are not at all aware with a mean of 3.44 and SD of 1.130.

Common investment avenues in India are Equity Investments, Debt Investments, Real Estate.

Table 4

Financial awareness of investors	Frequency	Percent	Mean	Std. Deviation
Not at all aware	7	4.2	4.00	.000
Less aware	21	12.7	3.05	1.117
Neutral	41	24.7	2.66	1.217
Somewhat aware	52	31.3	2.71	1.194
Highly aware	43	25.9	3.28	1.054
Total	164	100		

Source: Primary data

Interpretation

The descriptive statistics for awareness levels of common investment avenues in India, as shown in the table, indicate that out of 164 respondents, 31.3% are somewhat aware (mean: 2.71, standard deviation: 1.194), 25.9% are highly aware (mean: 3.28, SD: 1.054), 24.7% are neutral (mean: 2.66, SD: 1.217), 12.7% are less aware (mean: 3.05, SD: 1.117), and 4.2% are not at all aware (mean: 4.00, SD: 0.000). These values suggest varying levels of awareness among respondents, with the highest percentage being somewhat aware and the least percentage being not at all aware.

ANOVA

The risk tolerance levels of investors and their impact on stock market investment behavior in the IT sector using ANOVA. Three risk categories—high risk-high return, low risk-low return, and standard risk-standard return—are analyzed to determine whether risk preferences significantly influence investment decisions.

Risk Vs. Investment Experience

Null Hypothesis (H_0): There is no significant variance in investment decisions among investors with different risk tolerance levels (high risk, low risk, standard risk).

Alternative Hypothesis (H_1): There is a significant variance in investment decisions among investors with different risk tolerance levels.

Table 6

Variables	Risk	No. of items	Mean	Std. Deviation	F	P Value
Investment Experience	**High risk high return**	44	3.00	1.201	.727	.485
	Low risk low return	15	2.60	1.121		
	Standard risk standard return	105	2.97	1.164		
	Total	164				

Source: Primary data

Interpretation

The ANOVA test indicates no statistically significant difference between the risk levels and investment decisions ($p = 0.485 > 0.05$). While the mean scores suggest that investors in the high-risk category are slightly more inclined toward riskier investments, the differences are not significant enough to conclude that

risk tolerance strongly affects their decisions in the IT sector. At the significance level of 0.05 (5%) the null hypothesis is accepted.

Risk Vs. Annual Income

Null Hypothesis (H_0): There is no significant variance in risk preferences (high risk-high return, low risk-low return, standard risk-standard return) based on annual income.

Alternative Hypothesis (H_1): There is a significant variance in risk preferences (high risk-high return, low risk-low return, standard risk-standard return) based on annual income.

Table 7

Variables	Risk	No. of items	Mean	Std. Deviation	F	P Value
Annual Income	High risk high return	44	3.00	1.201	.727	.485
	Low risk low return	15	2.60	1.121		
	Standard risk standard return	105	2.97	1.164		
	Total	164				

Source: Primary data

Interpretation

The ANOVA test result shows an F-value of 0.727 and a significance level (p-value) of 0.485. Since the p-value is greater than the standard significance threshold of 0.05, we fail to reject the null hypothesis. This indicates that there is no statistically significant difference in risk preferences (high risk-high return, low risk-low return, standard risk-standard return) across different annual income groups. At the significance level of 0.05 (5%) the null hypothesis is accepted.

Risk Vs. Occupation

Null Hypothesis (H_0): There is no significant variance in risk preferences (high risk-high return, low risk-low return, standard risk-standard return) based on occupation.

Alternative Hypothesis (H_1): There is a significant variance in risk preferences (high risk-high return, low risk-low return, standard risk-standard return) based on occupation.

Table 8

Variables	Risk	No. of items	Mean	Std. Deviation	F	P Value
Occupation	High risk high return	44	3.75	1.630	1.532	.219
	Low risk low return	15	3.20	1.320		
	Standard risk standard return	105	3.30	1.468		
	Total	164				

Source: Primary data

Interpretation

The F-value is 1.532, and the significance (Sig.) value is 0.219. Since the significance value (0.219) is greater than the commonly used threshold of 0.05, this concludes that there is no statistically significant difference in risk preferences based on occupation. Therefore, this fails to reject the null hypothesis (H_0), suggesting that occupation does not significantly influence individuals' risk preferences in terms of high risk-high return, low risk-low return, and standard risk-standard return. At the significance level of 0.05 (5%) the null hypothesis is accepted.

8. Findings

- 33.1% of investors are highly aware, while 33.7% are somewhat aware. 41.0% of investors are somewhat aware, while 24.1% are highly aware.
- 30.7% of investors are somewhat aware, and 30.1% are highly aware. 31.3% of investors are somewhat aware, while 25.9% are highly aware.
- 31.9% of investors are highly aware, while 28.3% are somewhat aware. Investors with different risk tolerances do not show significant differences in investment decisions.
- Risk preferences do not vary significantly across income groups. High-risk, low-risk, and standard-risk investors are evenly distributed.

9. Suggestions

- Suggest more investor education programs focusing on SEBI's initiatives. Conduct investor education campaigns emphasizing the role of these financial markets. Create simplified financial guides for new investors.
- Encourage investors to diversify their portfolios using AI-powered recommendations. Offer online courses on financial statement analysis. Provide AI-assisted risk analysis tools tailored to different investor profiles.
- Develop risk-adjusted investment models accessible to all income groups. Provide occupation-specific investment risk assessment tools.

10. Conclusion

This study analyzed the impact of AI-powered financial tools on investment decisions in the IT sector, focusing on NSE and BSE markets. Findings indicate that younger investors (18–25) show the highest AI adoption, while occupation, education, and experience have no significant influence. Income levels have a moderate impact, with higher-income groups engaging more with AI tools. Financial literacy levels are moderate, yet awareness does not significantly influence AI adoption, suggesting that trust, usability, and perceived effectiveness play a larger role. Risk assessment findings reveal no significant variation in risk-taking behavior based on experience or income. Bridging the gap between technology and investor engagement requires collaborative efforts to drive data-driven investment strategies in the evolving market landscape.

Reference

Sharma, R., & Bansal, K. (2023). AI Tools and Their Impact on Investment Decisions in India's IT Sector. Journal of Financial Markets, 35(2), 74-89.

Rathi, A., Gupta, S., & Kumar, R. (2023). Artificial Intelligence and Investment Decisions in India's IT Sector. Journal of Investment Research, 28(2), 91-104.

Yadav, S., & Kapoor, R. (2023). Artificial Intelligence and Investment Strategies in the Indian IT Sector. Journal of Financial Innovation, 32(3), 78-92.

Singh, S., & Agarwal, P. (2023). AI in Investment Risk Management: A Focus on the IT Sector. Journal of Risk Management in Finance, 14(2), 52-67.

Smith, J. (2014). The Impact of AI on Financial Tools: Predictive Power in Emerging Markets. Journal of Finance and Technology, 25(3), 45-56.

Kumar, R., & Mehta, S. (2015). The Role of AI in Financial Market Decision Making. Indian Journal of Finance, 9(4), 32-45.

Singh, P., Sharma, R., & Bansal, A. (2016). Machine Learning for Stock Market Predictions: Enhancing Decision Making. International Journal of Financial Studies, 11(2), 59-72.

Gupta, M., & Sharma, S. (2017). Artificial Intelligence in Financial Markets: Case Study of India's Stock Markets. Financial Analysis Journal, 19(6), 112-125.