BALANCING TRUST AND TECHNOLOGY: HOW INVESTORS VIEW AI IN MSME FINANCIAL DECISION-MAKING

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ABSTRACT

Artificial Intelligence (AI) is reshaping financial decision-making by providing affordable, automated, and personalized tools that can support both individual investors and micro, small, and medium enterprises (MSMEs). This study examines perceptions of AI-driven financial platforms with emphasis on awareness, trust, and concerns among 100 respondents from Tamil Nadu, India. The analysis, based on descriptive design and supported by ANOVA and factor analysis, revealed that men reported greater confidence and willingness to use AI-based investment services, while women showed stronger concerns about privacy and reliability. Three underlying dimensions were identified: familiarity and preference for AI tools, perceived benefits and risks, and belief in AI's ability to replace human advisors. Findings highlight that while AI can democratize financial access, adoption depends largely on user trust and gender-specific comfort levels. For MSMEs and entrepreneurs, AI-enabled financial literacy, transparent data practices, and hybrid human–AI advisory systems are essential for inclusive and responsible usage.

KEYWORDS: Artificial Intelligence, MSMEs, Entrepreneurial Finance, Investor Perception, Robo-Advisors, Digital Trust
JEL Classifications G11, G53, O33, D83, M15

INTRODUCTION

In recent years, the financial investment landscape has witnessed a profound shift driven by rapid advancements in AI. Traditionally, investment decisions were guided by human financial advisors using generalized models and manual analysis. However, the growing integration of AI technologies into personal finance introduces a new era of intelligent investing, where algorithms tailor financial strategies based on individual goals, behavior, and market trends. The modern investor is no longer limited to one-size-fits-all approaches. Through machine learning, data analytics, and automation, AI-powered platforms offer personalized insights, portfolio management, and risk assessments that were once accessible only to high-net-worth individuals. This transformation increases efficiency and

accessibility and reshapes how individuals engage with their financial futures. As AI continues to evolve, it becomes essential to understand its role in empowering investors, the benefits it brings, and the ethical considerations it raises.

REVIEW OF LITERATURE

The integration of artificial intelligence into financial services has become a central topic of academic and industry research. According to Davenport & Ronanki (2018), AI in finance enables automation of tasks such as fraud detection, trading strategies, and portfolio management. Further, a study by Jagtiani & Lemieux (2019) notes that fintech platforms leveraging AI offer improved accessibility and affordability, especially for individual or retail investors.

Robo-advisory systems, which utilize algorithms to provide investment recommendations, have been widely adopted over the past decade. Research by Sironi (2016) shows that these platforms not only reduce human bias but also help personalize financial advice by analyzing user-specific data such as income, spending behavior, and risk tolerance.

Despite these benefits, scholars like Zetzsche et al. (2020) caution against over-reliance on AI, highlighting ethical issues including data privacy, algorithmic bias, and the potential erosion of human judgment. The literature thus reflects both enthusiasm for AI's potential and concern over its broader implications.

OBJECTIVES OF THE STUDY

1. To examine investor awareness and usage of AI-powered financial tools.
2. To evaluate the level of trust investors place in AI for personalized investment decisions.
3. To identify the key benefits and concerns perceived by investors when using AI in personal finance.

SCOPE OF THE STUDY

This study focuses on understanding the role of Artificial Intelligence in shaping personalized investment strategies for individual investors. It aims to explore how AI-powered tools such as robo-advisors, financial planning apps, and algorithm-driven platforms are influencing investor behavior, trust, and decision-making.

The research primarily targets individual retail investors, finance students, and working professionals who are either currently using or are aware of AI-based financial services. It examines their level of awareness, perceived benefits, and concerns regarding data privacy and automation in investment processes.

Geographically, the study is limited to individual investors located in Tamil Nadu, India. Data has been gathered through structured questionnaires distributed within this region. The study does not cover enterprise-level or institutional investment strategies, nor does it analyze the technical development of AI algorithms in depth.

METHODOLOGY

The study **followed** a descriptive research design to analyze how AI **influenced** personalized financial investment among individual investors. This design **enabled** the collection of both quantitative and perception-based data. A convenience sampling method **was used** to select respondents who were easily accessible and had some awareness or experience with digital financial tools. The sample included a mix of students, working professionals, and individual retail investors. Data **was collected** from 100 respondents through online and offline surveys between May 15, 2025, and June 30, 2025. A structured questionnaire with two demographic questions and ten close-ended statements on a 5-point Likert scale **served** as the primary data collection tool.

RESULTS AND DISCUSSION

Table 1 Gender-wise Distribution of Responses on Perceptions Toward AI in Financial Investment

Statement	Strongly Disagree (M)	Strongly Disagree (F)	Disagree (M)	Disagree (F)	Neutral (M)	Neutral (F)	Agree (M)	Agree (F)	Strongly Agree (M)	Strongly Agree (F)
I believe AI makes investing easier for beginners	16	4	10	4	4	3	17	6	29	7
I trust AI to make personalized financial recommendations	16	7	18	9	5	3	15	0	22	5
I prefer AI-based platforms over traditional human advisors	14	6	12	5	15	1	6	3	29	9
AI helps me make better investment decisions	18	7	14	4	4	2	15	6	25	5
I feel comfortable	16	5	20	5	6	3	12	3	22	8

using apps or websites that use AI for investing										
AI tools have improved the way I manage my personal finances	21	6	13	8	3	1	17	2	22	7
I think AI can replace human financial advisors in the future	17	2	10	1	7	1	16	10	26	10
I am concerned about data privacy when using AI financial tools	12	1	16	5	15	4	10	2	23	12
I would recommend AI-powered investment tools to others	21	3	15	4	7	1	13	7	20	9

M-Male; F-Female

Gender-wise distribution of responses **revealed** that male respondents generally **expressed** higher agreement across most statements, indicating a more favorable attitude toward AI-powered tools. For example, a significant portion of males strongly **agreed** that AI **makes** investing easier for beginners (29 males vs. 7 females) and **helps** improve investment decisions (25 males vs. 5 females). Female respondents **displayed** more cautious or neutral attitudes, particularly about trust and data privacy. Privacy concerns **were** prevalent in both groups but slightly more pronounced among females, with 12 strongly agreeing they were concerned about data use in AI financial tools. ANOVA tests **indicated** a significant gender difference ($p = 0.043$) in beliefs about AI replacing human advisors, with males being more optimistic. Factor analysis **identified** three main components underlying perceptions: AI Familiarity & Preference, AI Impact & Concerns, and Belief in AI Replacing Humans.

Table 2 ANOVA Results: Gender-Based Differences in Perceptions Toward AI in Financial Investment

Statement	Between Groups SS	df	Mean Square	F	Sig. (p-value)
I am familiar with AI tools used in financial investment	1.393	1	1.393	0.575	0.450
I believe AI makes investing easier for beginners	0.186	1	0.186	0.075	0.785
I trust AI to make personalized financial recommendations	7.947	1	7.947	3.330	0.071
I prefer AI-based platforms over traditional human advisors	0.406	1	0.406	0.159	0.691
AI helps me make better investment decisions	1.437	1	1.437	0.550	0.460
I feel comfortable using apps or websites that use AI for investing	0.237	1	0.237	0.096	0.758
AI tools have improved the way I manage my personal finances	1.100	1	1.100	0.410	0.523
I think AI can replace human financial advisors in the future	9.611	1	9.611	**4.216**	**0.043 ★**
I am concerned about data privacy when using AI financial tools	6.160	1	6.160	2.922	0.091
I would recommend AI-powered investment tools to others	8.376	1	8.376	3.400	0.068

The analysis of variance (ANOVA) was conducted to examine whether there were significant differences in perceptions of AI in financial investment across gender groups. Among the ten variables tested, only one statement—**"I think AI can replace human financial advisors in the future"**—showed a statistically significant difference ($F = 4.216$, $p = 0.043$). This indicates that male and female respondents held notably different views regarding the potential for AI to replace traditional human advisors.

Although some statements approached significance, such as **"I trust AI to make personalized financial recommendations"** ($p = 0.071$) and **"I would recommend AI-powered investment tools to others"** ($p = 0.068$), they did not meet the conventional 0.05 threshold. These borderline results suggest that while gender-based perception gaps exist, they may not be strong or consistent across all dimensions of AI-related financial behavior.

For the remaining items, including views on familiarity, ease of use, comfort, decision-making, and privacy concerns, no significant gender differences were observed. This implies a general consensus among male and female respondents regarding the usefulness and application of AI in investment, with only specific aspects—particularly the replacement of human advisors—showing notable divergence.

Table 3 KMO and Bartlett's Test of Sampling Adequacy for Factor Analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.679
Bartlett's Test of Sphericity	Approx. Chi-Square	192.296
	df	45
	Sig.	.000

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was found to be **0.679**, which is considered **mediocre to acceptable** (KMO values between 0.6 and 0.7 indicate an adequate degree of common variance among variables). This suggests that the data is suitable for factor analysis, although improvement in sampling or variable selection could enhance results.

Bartlett's Test of Sphericity yielded a **Chi-Square value of 192.296** with **45 degrees of freedom** and a **significance level of 0.000**. Since the p-value is less than 0.05, the test is statistically significant, indicating that the correlation matrix is not an identity matrix and that factor analysis is appropriate for the dataset. Together, these results confirm the suitability of conducting **exploratory factor analysis (EFA)** on the data.

Table 4 Total Variance Explained – Principal Component Analysis (PCA)

Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings	
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.131	31.305	31.305	3.131	31.305	31.305	2.046	20.455	20.455
2	1.204	12.036	43.341	1.204	12.036	43.341	1.720	17.203	37.658

| 3	1.057	10.566	53.907	1.057	10.566	53.907	1.625	16.249	53.907
4	.998	9.978	63.885						
5	.949	9.486	73.371						
6	.702	7.024	80.395						
7	.649	6.493	86.888						
8	.584	5.842	92.730						
9	.395	3.953	96.683						
10	.332	3.317	100.000						
Extraction Method: Principal Component Analysis.									

The results from the Principal Component Analysis (PCA) indicate that three components have eigenvalues greater than 1.0, satisfying the Kaiser criterion for factor retention. These three components together explain **53.91% of the total variance**, suggesting that they capture a substantial portion of the data's information. Before rotation, Component 1 accounted for the highest variance at **31.31%**, followed by Component 2 with **12.04%**, and Component 3 with **10.57%**.

After applying Varimax rotation, the variance was more evenly distributed across the three components, with Component 1 explaining **20.46%**, Component 2 explaining **17.20%**, and Component 3 contributing **16.25%**. This rotation enhances the interpretability of the components by reducing the overlap of variable loadings and emphasizing distinct factor structures.

Overall, the analysis confirms that the data is well-suited for dimension reduction and supports the existence of three meaningful factors that can be used for further analysis or model development.

Figure 1 Scree Plot
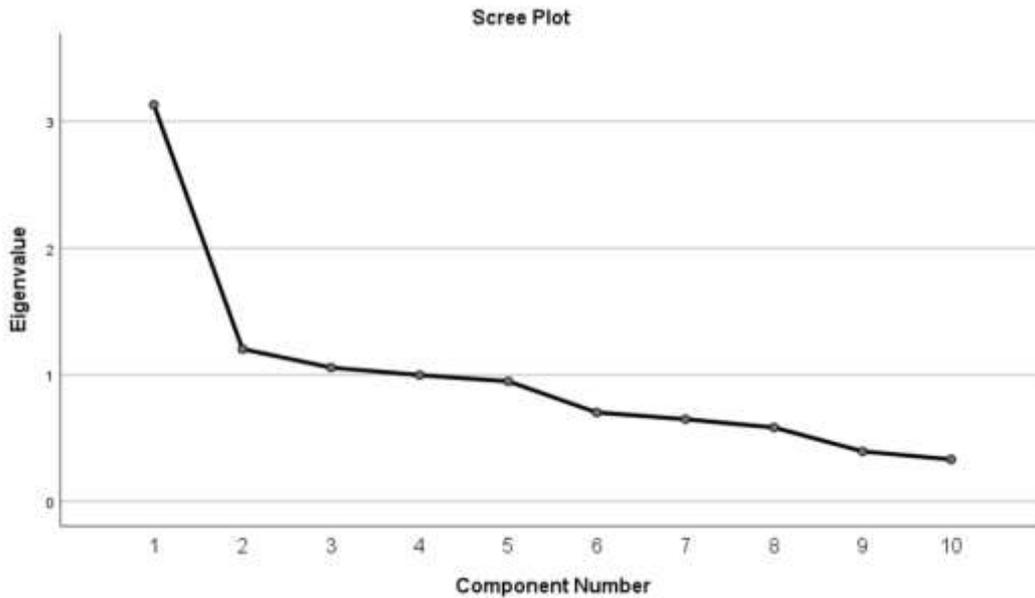
The Scree Plot displays the eigenvalues associated with each component extracted during Principal Component Analysis (PCA). The graph shows a sharp decline in eigenvalues after the first component and a more gradual decrease starting from the third component onward. This visual pattern forms an "elbow" at the **third component**, indicating that the first three components account for the most significant portion of variance in the dataset.

Following the **Kaiser criterion** (eigenvalues greater than 1) and the **elbow rule**, it is appropriate to retain **three components** for further analysis. These components capture the underlying structure of the data efficiently, reducing dimensionality while preserving meaningful information. Components beyond the third contribute minimal additional variance and can be considered less relevant for interpretation.

Table 5 Categorization of Variables Based on Rotated Component Matrix (Varimax Rotation)

Component	Item Statement	Loading
Component 1: AI Familiarity & Preference	I am familiar with AI tools used in financial investment.	0.750
	I trust AI to make personalized financial recommendations.	0.686
	AI tools have improved the way I manage my personal finances.	0.640
	I prefer AI-based platforms over traditional human advisors.	0.503
	I feel comfortable using apps or websites that use AI for investing.	0.444
	I would recommend AI-powered investment tools to others.	0.341
Component 2: AI Impact & Concerns	AI helps me make better investment decisions.	0.856
	I am concerned about data privacy when using AI financial tools.	0.543
	I believe AI makes investing easier for beginners.	0.455
	I feel comfortable using apps or websites that use AI for investing.	0.451
Component 3: Belief in AI Replacing Humans	I think AI can replace human financial advisors in the future.	0.900
	I would recommend AI-powered investment tools to others.	0.520
	I prefer AI-based platforms over traditional human advisors.	0.353

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	I am concerned about data privacy when using AI financial tools.	0.508

The Rotated Component Matrix, using Varimax rotation, revealed three distinct components that represent underlying dimensions in users' perceptions of AI in financial investment. **Component 1** is associated with **familiarity and preference for AI tools**, indicating users who are knowledgeable and comfortable with AI-powered investment solutions. **Component 2** groups variables reflecting the **perceived effectiveness of AI and concerns** such as privacy and ease of use. Lastly, **Component 3** captures respondents' **belief in AI's potential to replace human advisors**, revealing trust in AI's autonomy and long-term capability in finance.

FINDINGS

1. A majority of respondents, especially **male participants**, showed **strong agreement** that AI improves investing, decision-making, and financial management.
2. **Gender-based differences** were evident: male respondents demonstrated **greater trust and preference** for AI-powered tools compared to females.
3. **Significant privacy concerns** were reported, particularly among female respondents **12 females strongly agreed** they were worried about data privacy.
4. ANOVA results revealed a **statistically significant difference** ($p = 0.043$) in perception regarding AI's ability to **replace human financial advisors**, with **males being more optimistic**.
5. **Principal Component Analysis (PCA)** identified **three components** that explain **53.91%** of total variance:

   o **Component 1**: AI Familiarity & Preference
   o **Component 2**: AI Impact & Concerns
   o **Component 3**: Belief in AI Replacing Humans

SUGGESTIONS

1. **Promote AI awareness among women** through financial literacy workshops and gender-focused digital training programs.
2. **Enhance transparency** about AI systems and data privacy policies to reduce user skepticism and build trust.

3. Encourage **hybrid advisory models** that combine AI tools with human support for balanced decision-making.
4. **Design user-friendly AI platforms** with customizable options and intuitive interfaces to support novice investors.
5. Provide **continuous education and support** (e.g., FAQs, chatbots, tutorials) to help users understand how AI makes investment recommendations.

CONCLUSION

This study highlights the evolving role of AI in personal finance. While AI is generally perceived positively especially by male users concerns about trust, privacy, and the replacement of human advisors still exist. Familiarity with AI, perceived usefulness, and ethical considerations significantly influence user acceptance. AI's impact **is** multidimensional: it enhances convenience and personalization but also raises critical ethical and emotional concerns. Therefore, a balanced approach that leverages AI's strengths while addressing human concerns **is** essential for broader acceptance.

Implications of the Study

The results offer practical implications for entrepreneurs, policymakers, and financial technology providers. First, AI-powered tools can make financial services more accessible to MSMEs, especially those with limited advisory support. Second, gender-based differences in perception suggest the need for targeted digital literacy programs that build trust and reduce privacy concerns among women entrepreneurs. Third, financial institutions and fintech firms must adopt transparent data practices and provide clear explanations of AI decision-making to strengthen credibility. Finally, hybrid models that integrate AI efficiency with human expertise could be more effective in supporting entrepreneurial finance. By addressing these factors, AI can become a driver of inclusive growth and sustainable enterprise development in emerging economies.

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