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ETHICAL AWARENESS AND TRUST IN AI-DRIVEN INVESTMENT DECISIONS AMONG INVESTORS

Krishnamurthy R

Assistant Professor
Dept. of Commerce, Government First Grade College Ramanagara, Bangalore South District, Karnataka

ABSTRACT

Artificial Intelligence (AI) is quickly changing investment decision-making via tools like robo-advisors, predictive analytics, and algorithmic trading systems. Though these technologies enhance efficiency, speed, and data-driven choices, issues related to ethics, transparency, privacy, and trust are becoming more prominent. In this context, the current research explores the connection between ethical awareness and confidence in AI-based investment choices among investors.

The research utilized a descriptive design with primary data gathered via a structured questionnaire. A total of 150 investors were chosen using convenience sampling. Ethical awareness and confidence in AI were assessed with a five-point Likert scale. The analysis of data was performed utilizing descriptive statistics, Pearson correlation, regression analysis, and ANOVA. Reliability assessment demonstrated high internal consistency, indicated by Cronbach's Alpha scores of .912 for ethical awareness and .903 for trust in AI.

The results indicate that investors show moderate degrees of ethical awareness and confidence in AI-driven investment systems. Correlation analysis indicated a robust positive and statistically significant association between ethical awareness and confidence in AI ($r = 0.895$, $p < 0.01$). Regression analysis showed that ethical awareness has a significant impact on trust in AI ($\beta = 0.895$, $R^2 = 0.801$, $p < 0.01$), accounting for 80.1% of the variability in trust levels. ANOVA findings revealed no notable differences attributed to gender.

The research finds that ethical awareness is a crucial factor in building investor trust. Improving transparency, equity, accountability, and data privacy can boost trust and facilitate responsible AI use in financial decision-making

Keywords: Artificial Intelligence (AI); Ethical Awareness; Trust in AI; Investment Decisions; Investors; Algorithmic Bias; Data Privacy; Responsible AI; FinTech

INTRODUCTION

The banking industry has seen a substantial transformation thanks to artificial intelligence (AI), especially in the area of investment decision-making. Robo-advisors, machine learning models, algorithmic trading systems, and predictive analytics are examples of technologies that are frequently used to analyze vast amounts of financial data, spot market trends, and offer precise investment advice in a matter of seconds. In dynamic market conditions, these technologies enable data-driven decisions, enhance forecasting accuracy, and assist investors in managing abundant information (Jiang et al.). AI is becoming a crucial part of contemporary investment management for both institutional and individual investors as digital finance grows.

Despite these benefits, significant ethical and trust-related issues have been brought up by the increasing use of AI in financial decisions. Large datasets are used to train algorithms used by AI systems, which could add bias and result in biased recommendations. Furthermore,

investors find it challenging to comprehend how choices are made due to the "black box" aspect of many AI systems (Floridi et al., 2018). Trust becomes a critical factor influencing the adoption of AI-based products in financial scenarios involving monetary risk. According to research, views of justice, dependability, openness, and data protection are key components of trust (Glikson & Woolley, 2020; Raisch & Krakowski, 2021).

In conversations in academia and business, the idea of reliable and moral AI has grown in significance. Fairness, accountability, transparency, and privacy are important ethical concepts. While poorly managed systems may cause mistrust and resistance, ethical AI might boost investor confidence and encourage adoption in investment environments (Venkatesh et al., 2022). Few studies have looked at how ethical knowledge affects investor trust, despite earlier research on the effectiveness and use of AI in finance. The majority of research focuses on system performance rather than how investors view ethical protections. In developing countries where investor awareness varies, this leads to a research deficit (Brüggen et al., 2024; Trinh et al., 2025).

Thus, the current study attempts to investigate the connection between investor faith in AI-based investing judgments and ethical consciousness. The introduction, literature review, study methodology, data analysis and interpretation, and conclusion with implications and suggestions make up the five sections of the report.

REVIEW OF LITERATURE

Financial markets are changing as a result of artificial intelligence, which also improves the efficiency of investment decision-making. Additionally, it is changing trade through robo-advisors, which use rule-based computational computers to handle investments. These tools enhance decision quality, lessen human bias, and enable data-driven methods, claim Davenport and Ronanki (2018). However, research indicates that investors underestimate their own feelings and over-rely on AI suggestions (Bhatia et al., 2020). Concerns about accountability, transparency, and ethical use are also raised by the expanding use of AI (Floridi et al., 2018). Thus, it's critical to comprehend how AI affects investor behavior.

Bias, privacy, and transparency are only a few of the ethical issues raised by the development of financial AI. Incomplete or unbalanced data might result in algorithmic bias, which can produce unjust results (O'Neil, 2016). AI systems also depend on substantial amounts of financial and personal data, which raises privacy concerns (Zuboff, 2019). Investors find it challenging to comprehend how judgments are made because many AI models function as "black boxes" (Floridi et al., 2018). To guarantee justice and accountability in AI-driven finance, these problems must be resolved.

The use of AI in financial decision-making depends heavily on trust. When investors believe AI systems are accurate, transparent, and trustworthy, they are more likely to rely on them (Glikson & Woolley, 2020). Fairness, explainability, and system effectiveness are some of the variables that affect trust (Lee & See, 2004). AI-based recommendations are more likely to be accepted when there is greater trust, however ethical issues and ignorance can undermine trust (Gefen et al., 2003; Floridi et al., 2018). Therefore, developing reliable AI systems is crucial for broader deployment.

There are still a lot of unanswered questions despite the growing body of research on AI in finance. The majority of research concentrates on system effectiveness rather than the ethical consciousness of investors (Brüggen et al., 2024). According to Trinh et al. (2025), trust is frequently analyzed as a technical component without connecting it to moral concerns like justice and openness. In order to comprehend reactions to AI-driven financial advice,

additional investor-centric research is required (Verma et al., 2025). This emphasizes the necessity of empirical research incorporating trust and ethical consciousness in AI-based investing choices.

CONCEPTUAL FRAMEWORK

This study investigates the connection between investors' trust in AI-driven financial judgments and their ethical awareness. The dependent variable is trust in AI, whereas the independent variable is ethical consciousness. Investors' comprehension of topics like algorithmic bias, data privacy, transparency, and fairness is referred to as ethical awareness. Perceptions of dependability, security, and the efficacy of AI-based investing advice are reflected in trust. The Technology Acceptance Model (TAM) and Trust Theory provide support for the concept. According to TAM, perceived utility and usability are key factors in technology adoption (Venkatesh et al., 2022). Investors' assessments of AI systems can be influenced by ethical consciousness. According to Trust Theory, using technology in difficult situations, such as financial decision-making, requires trust (Glikson & Woolley, 2020).

According to the model, trust in AI-driven financial judgments increases with ethical awareness. While adoption may be hampered by ethical concerns, awareness of protections like data privacy and fairness can boost confidence. By increasing comprehension of AI systems, ethical awareness also lowers perceived danger (Raisch & Krakowski, 2021). As a result, the paradigm creates a strong connection between ethical consciousness and confidence in AI, serving as the foundation for empirical research on investor behavior in AI-driven financial environments.

RESEARCH OBJECTIVES

1. To examine the level of ethical awareness among investors regarding AI-driven investment systems.
2. To analyze the level of trust in AI-based investment decision-making among investors.
3. To investigate the relationship between ethical awareness and trust in AI-driven investment decisions.

HYPOTHESES

H0: There is no relationship between ethical awareness and trust in AI-driven investment decisions.

H1: There is a relationship between ethical awareness and trust in AI-driven investment decisions.

H0: Ethical awareness does not influence trust in AI-driven investment decisions.

H1: Ethical awareness influences trust in AI-driven investment decisions.

H0: There is no difference in ethical awareness and trust based on demographic factors. **H1:** There is a difference in ethical awareness and trust based on demographic factors.

RESEARCH METHODOLOGY

Research Design

In order to investigate investors' ethical awareness and confidence in AI-driven investing decisions, this study uses a descriptive research design. It is appropriate for examining respondents' beliefs, attitudes, and actions without changing any of the variables. To gather data in an organized way, the study used a survey method.

Data Type

The study's foundation is primary data. A systematic questionnaire is used to immediately obtain the necessary information from investors.

Sample and sampling method

Investors make up the study's sample. For the purpose of gathering data, 150 responders in total. Convenience sampling is used to choose the responders.

Data collection

A standardized questionnaire with a 5-point Likert scale (strongly disagree to strongly agree) is used to determine beliefs about ethical awareness and trust toward investment decisions made using AI technology.

Tools Used for Analysis

Statistical methods including correlation, regression, ANOVA, Chi-square test, and descriptive statistics are used to examine the acquired data. These instruments are used to assess the degree of trust and ethical awareness, explore correlations between variables, and pinpoint variations among demographic parameters.

Reliability Test

Reliability analysis was conducted using Cronbach's Alpha. The independent variable with five items showed excellent reliability ($\alpha = .912$). The dependent variable with five items also showed excellent reliability ($\alpha = .903$). Since both values exceed the recommended threshold of 0.70, the scales are reliable and suitable for further analysis.

ANALYSIS AND INTERPRETATION

Descriptive Statistics

Investors' ethical awareness and confidence in AI-based investing decisions were evaluated using descriptive statistics, which were displayed as mean and standard deviation values. A moderate level of ethical awareness was indicated by the mean score of 3.52. Among the dimensions, awareness was lowest for AI in investment decision-making (3.48) and highest for ethical issues in AI (3.57).

Similarly, there was a modest amount of faith in AI, ranging from 3.39 to 3.53. AI transparency had the greatest mean (3.53), while investor caution was indicated by the lowest mean (3.39) for trust in AI products.

Differences in perceptions are indicated by the moderate variability shown by the standard deviation values (1.21–1.35). In general, investors have a moderate degree of trust in AI-driven investing judgments and a moderate level of ethical awareness.

Hypothesis 1: Relationship between Ethical Awareness and Trust in AI

Pearson correlation analysis was conducted to examine the relationship between ethical awareness and trust in AI-driven investment decisions.

Table 1: Correlation between Ethical Awareness and Trust in AI

Variables

Ethical Awareness

Trust in AI

Ethical Awareness (EA_Total)

1

0.895**

Trust in AI (TR_Total)

0.895**

1

Note: ** Correlation is significant at the 0.01 level (2-tailed); N = 150

The results indicate a strong positive and statistically significant relationship between ethical awareness and trust in AI ($r = 0.895$, $p < 0.01$). This suggests that higher levels of ethical awareness among investors are associated with higher levels of trust in AI-based investment systems.

Since the p-value is less than 0.01, the null hypothesis is rejected. Therefore, it is concluded that there is a significant relationship between ethical awareness and trust in AI-driven investment decisions.

Hypothesis 2: Influence of Ethical Awareness on Trust in AI

Simple linear regression analysis was conducted to examine the impact of ethical awareness on trust in AI-driven investment decisions.

Table 2: Regression Results

Variable

Beta

t-value

Sig.

R^2

Ethical Awareness (EA_Total)

0.895

24.414

0.000**

0.801

Note: ** Significant at the 0.01 level

Interpretation

The results indicate that ethical awareness has a strong positive and statistically significant influence on trust in AI ($\beta = 0.895$, $p < 0.01$). This shows that as ethical awareness increases, trust in AI-based investment systems also increases. The R^2 value of 0.801 indicates that 80.1% of the variation in trust in AI is explained by ethical awareness, highlighting its strong impact.

Since the p-value is less than 0.01, the null hypothesis is rejected. Therefore, it is concluded that ethical awareness has a significant influence on trust in AI-driven investment decisions.

Hypothesis 3: Differences in Ethical Awareness and Trust based on Gender

One-way ANOVA was conducted to examine whether ethical awareness and trust in AI-driven investment decisions differ across gender groups.

Table 3: Results of the ANOVA for Gender Differences

Variables	**F-value**	**Sig. (p-value)**
Ethical Awareness (EA_Total)	0.620	0.539
Trust in AI (TR_Total)	0.775	0.463

Note: N = 150

The results indicate that there is no statistically significant difference in ethical awareness across gender groups ($F = 0.620$, $p = 0.539$). Similarly, there is no significant difference in trust in AI across gender groups ($F = 0.775$, $p = 0.463$). This suggests that gender does not influence the level of ethical awareness and trust in AI-driven investment decisions among investors.

Since the p-values are greater than 0.05, the null hypothesis is accepted. Therefore, it is concluded that there is no significant difference in ethical awareness and trust in AI-driven investment decisions based on gender.

RESULTS & DISCUSSION

The findings provide key insights into the relationship between ethical awareness and trust in AI-driven investment decisions. Descriptive statistics show that investors have a moderate level of ethical awareness and trust in AI systems. This indicates awareness of issues like data privacy, bias, fairness, and transparency, but also a cautious approach toward fully relying on AI tools.

A major finding is the strong positive relationship between ethical awareness and trust in AI, with a high correlation ($r = 0.895$, $p < 0.01$). This suggests that greater awareness of ethical safeguards and responsible AI practices leads to higher trust in AI-generated investment recommendations.

Regression analysis confirms that ethical awareness significantly influences trust in AI ($\beta = 0.895$, $p < 0.01$), explaining 80.1% of the variance ($R^2 = 0.801$). This highlights that transparency, fairness, and security are crucial in building investor trust.

ANOVA results show no significant gender differences in ethical awareness or trust, indicating that demographic factors have limited influence on attitudes toward AI in investment decisions.

These findings align with previous studies emphasizing reliability, fairness, and transparency as key drivers of trust in AI (Glikson & Woolley, 2020; Floridi et al., 2018). Overall, the

studyhighlights the importance of ethical AI practices, suggesting that financial institutions should focus on transparency, privacy, and unbiased systems to strengthen investor trust and promote responsible AI adoption.

ETHICAL IMPLICATIONS

The growing use of Artificial Intelligence (AI) in investment decision-making raises important ethical concerns in finance. Transparency is a major issue, as many AI systems function as "black boxes," making it difficult for investors to understand how decisions are generated. This lack of clarity can reduce confidence, highlighting the need for explainable AI to improve trust and accountability.

Data privacy is another key concern, since AI platforms depend on personal and financial data. Risks such as unauthorized access and misuse of information require strong data protection and compliance with privacy standards.

Algorithmic bias is also a challenge. AI systems trained on biased data may produce unfair recommendations, leading to unequal financial outcomes and reduced trust.

The study finds that ethical awareness significantly enhances trust in AI-driven investment decisions, emphasizing the importance of responsible AI. Financial institutions should focus on fairness, transparency, accountability, and privacy to ensure trustworthy and sustainable adoption of AI in investment markets.

CONCLUSION

This study examined the relationship between ethical awareness and trust in AI-driven investment decisions among investors. The findings revealed that investors possess a moderate level of ethical awareness and a moderate level of trust in AI-based investment systems. The study further identified a strong positive relationship between ethical awareness and trust in AI, indicating that investors who are more aware of ethical issues such as transparency, privacy, fairness, and bias are more likely to trust AI technologies. Regression analysis also confirmed that ethical awareness significantly influences trust in AI-driven investment decisions.

The results successfully address the research objectives of assessing the level of ethical awareness, measuring trust in AI-based investment decisions, and examining the relationship between these variables. In addition, no significant differences were found in ethical awareness and trust based on gender, suggesting that these perceptions are broadly similar across respondents.

The study contributes to existing knowledge by highlighting the importance of ethical awareness as a key factor in building investor trust toward AI systems. It extends prior research by integrating ethics and trust within the context of AI-enabled finance. The findings offer useful insights for financial institutions, policymakers, and fintech developers seeking to promote responsible and trustworthy AI adoption.

SUGGESTIONS / RECOMMENDATIONS

For investors, structured financial literacy initiatives should be implemented with a focus on AI-driven investment tools, emphasizing algorithmic transparency, risk assessment, and data privacy. Continuous education through workshops, webinars, and digital platforms can enhance investor awareness and promote more informed and rational decision-making in AI-supported environments.

For financial institutions, it is essential to develop explainable and ethical AI frameworks that enhance transparency and build investor trust. Institutions should strengthen cybersecurity infrastructure, adopt robust data governance practices, and conduct periodic algorithmic audits to minimize bias and ensure fairness. Additionally, integrating human oversight in high-risk investment decisions remains crucial to maintaining accountability and reliability.

For regulators, comprehensive governance frameworks should be established to oversee the adoption of AI in financial services, with a strong emphasis on transparency, accountability, and ethical standards. Regular compliance assessments and independent audits should be mandated to monitor AI systems. At the same time, regulators should foster a balanced ecosystem that encourages innovation while ensuring investor protection and maintaining overall market integrity.

LIMITATIONS

This study has certain limitations. The sample size was limited to 150 respondents, which may restrict the generalization of findings. The study was conducted within a specific geographical area, limiting wider applicability. In addition, responses were based on self-reported perceptions, which may be influenced by awareness bias, personal opinions, or limited understanding of AI-driven investment systems.

SCOPE FOR FUTURE RESEARCH

Future research can conduct cross-country studies to compare ethical awareness and trust in AI across different markets and regulatory environments. Larger and more diverse samples may improve the generalizability of findings.

Advanced methods such as Structural Equation Modeling (SEM) can be used to examine relationships among ethical awareness, trust, perceived risk, and adoption intention. Future studies may also focus on AI explainability to understand how transparent systems influence investor confidence and acceptance. Overall, broader studies can provide deeper insights into responsible AI adoption in investment decisions.

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