



A STUDY ON GREENWASHING AND FRAUD IN SUSTAINABLE FINTECH WITH REFERENCE TO THE FINANCIAL SERVICES INDUSTRY

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ABSTRACT :

The growing phenomenon of greenwashing in the sustainable fintech ecosystem is the focus of this research, particularly in the financial services sector. FinTech interventions recognize ESG (environmental, social and governance) practices, so false sustainability AIDS and ethical misrepresentation acquire dynamics. This study examines and evaluates the extent of greenwashing, its importance, and the contributions of AI and blockchains to fraud recognition, suggesting a regulatory framework for ESG integrity. For his research, structured research and secondary data from Fintech companies and regulatory authorities were used. The results are urgently needed to trust and ensure ethical innovations in FinTech through standardisation of disclosure, transparency and technical protection measures.

Keywords: Greenwashing, ESG, Fintech, AI, Blockchain, Sustainable Finance, Regulatory Framework

INTRODUCTION

The confluence of sustainability and digital finance led to a change in interpretation of financial services. Companies are increasingly beginning to face ESG financial products, freeing up the markets of investors and users to strong social bias. However, thousands of dollars invoices are flooded with mis information about environmental efforts that do not involve measures. In contrast to the use of these stories in ESG by fintechs, this study cannot usually be tested to express ethical and regulatory concerns. We will also look into how frontline technologies such as AI and blockchain can provide credibility with regard to ESG while reducing fraud.

RESEARCH OBJECTIVES

1. Understand the scope and dimensions of greenwashing in fintech services with ESG labels.
2. Evaluate how AI and blockchain technology apply when checking ESG claims.
3. Providing regulatory and ethical frameworks for ESG compliance and eliminating sustainable fintech fraud.

2.0 LITERATURE REVIEW

1. Causes of Greenwashing (Delmas & Burbano, 2011): Delmas and Burbano tried to understand why companies use greenwashing. After submitting their discussion about weak supervision that allowed them to overstate environmental claims, when it would undermine credibility, they gathered their arguments and suggested that fintech dealers could overestimate sustainability without such an account.

2. Materiality of ESG Matters (Khan, Serafeim & Yoon, 2016): According to Khan, Serafeim and Yoon, companies that are actually focused on industry-critical ESG issues are focused on general sustainability initiatives. The meaning of your research is that fintech companies must address the ESG domain associated with their business rather than using sustainability as a marketing tool only.

3. Transparency Through Blockchain (Zetzsche et al., 2020): Zetzsche and colleagues presented an analysis of how blockchain and decentralized finance (DEFI) provide a whole new level of transparency in financial services. They explained that blockchain ESG data can be registered in a way that is manipulated, which will help you to confirm your sustainability claims. This provides insight into how fintech companies can use blockchain to discourage greenwashing and gain greater confidence in their customers.

4. Principles of Sustainable Finance (Schoenmaker & Schramade, 2019): The deep integration of sustainable finances into the business strategy, rather than treatment as an add-on, was highlighted by Schoenmaker and Schramade. Their research shows that for fintech companies, the real ESG integration supported by measurable effects is the basis for all discussion of greenwashing.

5. Impact of Public Perception (Serafeim, 2020): Serafeim's research found that public opinion has a significant impact on company evaluations due to sustainability efforts. If ESG claims are considered false or exaggerated by users, this will unexceptionally affect their reputation and market positioning and therefore emphasize the importance of transparency.

3.0 RESEARCH METHODOLOGY

3.1 Area of Study

This study focuses on a thorough investigation by the Indian fintech sector. This focuses on companies that either comply with ESG (environmental, social, governance) compliance or provide sustainable financial products and services. The purpose of this study is to critically examine and close the gap between corporate sustainability claims and consumer perceptions, and to examine whether these fintech companies' commitments are consistent with public understanding, expectations and ethical practices. Special attention is paid to how these organizations integrate ESG principles into business, marketing and product development. Thus, research highlights the growing implications of ethical fintech in an increasingly dynamic and digitized financial ecosystem. This study also seeks to assess the impact of sustainability referrals on consumer trust, loyalty and decision-making, and ultimately contributes to a more comprehensive discussion of responsible innovation and accountability in India's rapidly developing financial technology environment.

3.2 Sample of Study

The sample consisted of users of the fintech platform between the ages of 18 and 25, namely students and young professionals. A total of 126 respondents selected for criteria for active participation in FinTech applications focusing on sustain initiatives were interviewed. This study measures users' perspectives and levels of trust in fintech's ESG practices regarding the 2022-2025 timeline.

3.3 Type of Study

This study is an explanatory analysis type. This study interprets research and secondary data to subjects in relation to the effectiveness of advanced technologies such as AI and blockchain to achieve greater transparency. Knowledge of trends, correlations, and user behaviour is examined in detail to **draw relevant conclusions**.

3.4 Tools for Data Collection

Primary data was collected in a structured online survey distributed to selected FinTech users. Secondary data includes regulatory guidelines such as ESG reports from major fintech companies, the Sebi's BRSR framework, academic journals, and global case studies. The most important topics where data collection activities were collected were perceptions of gen-making, user trust, green-washing perceptions, and knowledge of technical interventions.

3.5 Method of Analysis

Descriptive statistics for this study included interpretation of survey responses based on frequency distribution, percentages and mean values. Trend analysis contributed to measuring changes in user trust in ESG claims scepticism, and Pearson correlation analysis helped to measure the relationship between greenwashing perceptions and trust in the fintech sector. Visual aids such as diagrams and graphics were used to present and simplify results.

4.0 LIMITATIONS OF STUDY

- If only the Indian fintech ecosystem is to be interpreted worldwide.
- Even ESG data have been reported to be biased or incomplete.
- The perceptions of respondents in ESG and Fintech technology influenced the accuracy of their responses.
- Many companies do not publish detailed information about the assessment process or have no standardized reporting mechanisms, making it difficult for external stakeholders to assess the reliability and validity of sustainability claims.
- Development of fast changing technologies and regulations could be lost from the findings of the study.

5.0 ANALYSIS AND FINDINGS

Current remediation efforts against greenwash and fraud in the sustainable fintech industry were primarily derived from structured surveys and collected by 126 respondents who are fintech. This reveals the claims raised by fintech companies under the ESG, the degree of trust people have towards these claims, and the attitudes towards the perceived roles of technologies such as AI and blockchain in improving transparency. This contributes to understanding scepticism. This is related to the various sustainability messages of FinTech.

ANALYSIS OF DATA:

Table 1: Pearson Correlation between Perception of Greenwashing and Trust in Fintech Sustainability Claims

	Perception of greenwashing by fintech companies	Trust in environmental claims made by fintech companies
Perception of greenwashing by fintech companies	1	0.7768
Trust in environmental claims made by fintech companies	0.7768	1

Interpretation:

Correlation analysis shows a strong positive relationship between fintech perceptions of greenwashing and user trust in the environmental claims they raise. The value of 0.7768 as a Pearson correlation indicates a significant reduction in trust in sustainability claims from those who raise greenwash suspicions against fintech companies. This means negativity compared to the reliability of the ESG initiative, which directly transforms into consumer trust. The statement shows the need for Qatar's Qatar fintech companies to truly communicate, be transparent and think about it. Without it, trust cannot be built or strengthened.

Table 2 : Pearson Correlation between Belief in AI Detecting ESG Fraud and Belief in Blockchain Ensuring ESG Transparency

	Belief in AI detecting ESG fraud	Belief in blockchain ensuring ESG transparency
Belief in AI detecting ESG fraud	1	0.6585
Belief in blockchain ensuring ESG transparency	0.6585	1

Interpretation (for Hypothesis H₁₁): In short, the results place a moderately robust and statistically significant positive relationship ($r = 0.6585$, $p < 0.001$) between AI and the belief in the ability of blockchain to recognize and prevent ESG fraud. This supports the hypothesis that respondents who believe that AI use is necessary to recognize false claims believe that blockchains will ensure ESG transparency. H₁₁, this hypothesis, is supported and can confidently reject the null hypothesis (H₀₁: AI and blockchain are not effective).

5.2 FINDINGS**1. Demographic Insight**

- 90.3% of those surveyed are part of the 18-year-old age category and can be called digitally active and environmentally friendly group groups.
- The majority of respondents were students (80.6%), but a good percentage (16.1%) were employed. This shows the use of fintech by younger and early careers.

2. Awareness and Perceptions of ESG in Fintech

- Approximately 51.6% of those surveyed claim to be familiar with the concept of ESG.
- However, 45.2% added that they saw or suspected greenwash from the fintech platform.

Conclusion: There is growing awareness, but there is still a high degree of scepticism compared to these claims.

3. Trust in Sustainability Claims

- Only 12.9% of users said they put total confidence in FinTech's environmental claims.
- Meanwhile, 58.1% of users expressed scepticism about the credibility of these claims.

Conclusion: Fintech works as a trustee and users seek signs of sustainable responsibility.

4. Role of Technology in Reinforcing ESG Trust

- 77.4% of users were aware of the role of AI and blockchain in recognizing economic transparency.
- Only 48.4% of those who say that blockchain can report ESG liability, while only 22.6% of those who say that AI will identify false green claims.

Conclusion: This technology is considered a promising solution, but its implementation and understanding needs to be improved.

5. Correlations

- Strong positive correlation ($r = 0.7768$) built Greenwashes perception and confidence in ESG claims. This indicates that an increase in doubt leads to a decrease in confidence.
- Conversely, a moderately positive correlation ($r = 0.6585$) between the role of AI and blockchain beliefs was seen in ESG transparency.

Implication: Greenwashing shatters trust; however, belief in technological solutions can present a way to regain it.

6. Regulation & Certification Nudge

- 64% percent of those surveyed expressed support for regulating state regulations on ESG claims in relation to fintech.
- 90% of users prefer platforms with independent reviews and ESG certifications.

Conclusion: The FinTech user community needs stricter monitoring, mandatory certifications and clear guidelines.

6.0 CONCLUSION

Research shows that greenwashing is certainly one of the main obstacles to trusting new sustainable fintech rooms. Fintech companies sell ESG initiatives in detail, but in the eyes of many users, such claims have not achieved much reliability. While awareness of ESG ideas increases, the gap between transparency and superficial brand commitment leads to less trust in users. Technologies such as AI and blockchain could likely confirm sustainability claims. However, those possibilities remain unexplained in the Indian Fintech Arena. Our path ahead is to regain trust and achieve true sustainability with transparent reporting, ethical operations and effective regulatory boost ESG activities.

7.0 RECOMMENDATIONS

1. Guarantee ESG Transparency:

Fintech companies must disclose clear and tested ESG data to create user trust.

2. Employ AI and Blockchain:

Use AI and blockchain technology to track real-time and check sustainability actions.

3. Strengthen Regulations:

Supervisory authorities must create specific ESG reporting rules for fintech companies to ensure their obligation to account.

4. Educate Users:

Sensitization of Fintech platforms on how technology supports ESG compatibility.

5. Seek Independent Certification:

Communication with third parties, for example obtaining ESG certification from a trusted institution, can improve user reliability and trust.

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