



Green Banking and Sustainable Finance: An Empirical Analysis of Investor and Banking Stakeholder Perspectives

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Abstract – Green banking and sustainable finance are increasingly important mechanisms for aligning the financial sector with environmental sustainability and responsible economic development. This study empirically examines green banking and sustainable finance from the perspectives of investors and banking stakeholders in India, with particular emphasis on awareness, environmental and sustainability orientation, green financial literacy, trust and credibility, perceived risk and return, and banking stakeholder perceptions. A quantitative, cross-sectional research design was adopted using structured questionnaire responses from 176 respondents, comprising investors and banking stakeholders. Descriptive statistics, Cronbach's alpha, Pearson correlation, multiple regression, and an independent-samples t test were employed for analysis. The findings indicate that all major determinants are positively associated with sustainable finance adoption intention. Trust and credibility emerged as the strongest predictor ($\beta = .252$), followed by environmental and sustainability orientation ($\beta = .211$), banking stakeholder perception ($\beta = .207$), green financial literacy ($\beta = .206$), green banking awareness ($\beta = .172$), and perceived risk and return ($\beta = .126$). The regression model explains 57.5% of the variance in sustainable finance adoption intention ($R^2 = .575$, $p < .001$). A significant difference was also observed between investors and banking stakeholders, with banking stakeholders reporting stronger overall perceptions of green banking and sustainable finance. The study highlights the importance of institutional trust, transparent sustainability disclosure, financial literacy, stakeholder engagement, and effective communication in strengthening sustainable finance adoption in India.

Keywords - Green Banking, Sustainable Finance, Green Financial Literacy, Investor Behaviour, Banking Stakeholders, Sustainable Finance Adoption.

I. INTRODUCTION

The growing intensity of climate change, environmental degradation, resource scarcity, and social responsibility concerns has transformed the role of the financial sector from being primarily an intermediary of capital to becoming an important facilitator of sustainable development. Banks influence the direction of economic activity through lending, investment, risk assessment, and financial product development. Consequently, the integration of environmental and sustainability considerations into banking decisions has given rise to the concepts of green banking and sustainable finance. Green banking broadly refers to banking practices that reduce the environmental impact of banking operations while directing financial resources toward environmentally responsible activities. Sustainable finance extends this concept by incorporating environmental, social, and governance (ESG) considerations into financing and investment decisions.

In India, green banking has become increasingly relevant because banks provide financing to sectors such as energy, infrastructure, manufacturing, transportation, construction, and agriculture that have substantial environmental implications. The transition toward a low-carbon economy therefore depends not only on government policies and technological innovation but also on the willingness and capability of financial institutions to redirect capital toward sustainable activities. Recent developments in

India's financial regulatory environment, including climate-related financial-risk disclosure initiatives and increasing emphasis on ESG-related information, have further strengthened the strategic importance of sustainable finance. Recent evidence indicates that Indian banks are increasingly adopting practices such as green financing, renewable-energy financing, paperless banking, energy-efficient branches, green bonds, and sustainability-oriented disclosure mechanisms.

The importance of green banking is not restricted to banks themselves. Investors constitute another critical stakeholder group because their perceptions, attitudes, financial objectives, environmental concerns, and risk-return expectations influence the demand for sustainable financial products. Green bonds, ESG funds, sustainable mutual funds, green loans, and other environmentally oriented investment products provide investors with opportunities to align financial objectives with sustainability considerations. However, the existence of green financial products does not automatically translate into investment participation. Investor awareness, financial literacy, trust, perceived environmental impact, perceived financial performance, risk perceptions, and confidence in financial institutions can substantially influence sustainable investment decisions.

Recent research demonstrates that investor behaviour is becoming an important dimension of sustainable finance research. Malgaonkar (2024), for example, examined



investor perception and participation in India's green bond market and highlighted the importance of understanding investors' motivations, risk perceptions, and decision-making processes rather than focusing exclusively on market performance and regulatory mechanisms. Similarly, research on sustainable investing among younger generations indicates that environmental ideals do not necessarily translate directly into actual investment choices because investors continue to balance sustainability objectives with financial realities (Gómez Sánchez & Tobon, 2025).

The banking-stakeholder perspective is equally important. Bank employees are directly involved in implementing green banking policies, communicating sustainable financial products to customers, evaluating financing proposals, and translating institutional sustainability strategies into operational practices. Chokkamreddy and Kanthi (2025) found that bank employees' perceptions of green finance are associated with environmental sustainability, financial resilience, regulatory compliance, market opportunities, and corporate social responsibility. This indicates that internal stakeholders can play a meaningful role in determining the effectiveness of green finance initiatives.

Recent empirical evidence further suggests that green banking practices can generate organizational as well as environmental benefits. Thapliyal and Gupta (2026), based on evidence from Indian commercial banks, found significant relationships between green banking practices, competitive advantage, and organizational performance. Their findings demonstrate that green banking can increasingly be viewed not merely as an environmental obligation but also as a strategic organizational capability. Similarly, Saunshimath et al. (2026) found that green finance investment and FinTech adoption positively influence sustainable economic growth in the Indian banking context, while financial inclusion and the regulatory environment shape these relationships.

The behavioural dimension has also gained prominence. Chawla et al. (2026) found that environmental concern, awareness, trust and credibility, attitudes toward sustainable investment, perceived financial performance, and green knowledge influence investors' adoption of green financial instruments. Their findings indicate that sustainable investment should be understood as a behavioural decision involving both financial and non-financial considerations. Sachdeva and Singla (2025) similarly demonstrated that green financial capability influences green investment through green financial behaviour, suggesting that financial literacy and inclusion alone may not be sufficient unless they are translated into actual sustainable financial behaviour.

Against this background, there is a need to examine green banking and sustainable finance from the perspectives of both investors and banking stakeholders. Much of the

existing literature examines either bank-level green banking practices or investor-level sustainable investment behaviour independently. A stakeholder-oriented empirical approach can provide a more comprehensive understanding of whether the expectations of investors and banking stakeholders are aligned, which factors encourage sustainable financial participation, and what barriers continue to restrict the adoption of green financial practices.

Therefore, the present study, titled “Green Banking and Sustainable Finance: An Empirical Analysis of Investor and Banking Stakeholder Perspectives,” seeks to examine the perceptions, awareness, behavioural intentions, and determinants associated with green banking and sustainable finance among investors and banking stakeholders. By integrating the perspectives of external financial stakeholders and internal banking stakeholders, the study aims to contribute to a more holistic understanding of sustainable finance adoption in the Indian financial system.

II. REVIEW OF LITERATURE

1. Green Banking and Environmental Sustainability

Green banking represents an important mechanism through which financial institutions can contribute to environmental sustainability. It involves both internal operational practices, such as paperless banking, energy-efficient infrastructure and digital transactions, and external financial practices, including green lending, renewable-energy financing, green bonds and environmentally responsible investment. Kataria and Kumar (2024) reviewed the development of green banking in the Indian financial landscape and emphasized that green banking can benefit banks, customers, and the environment. However, they also highlighted the need for appropriate institutional support, incentives, training, and an enabling external environment.

Prakash et al. (2024) similarly examined the development of green banking in India and argued that environmentally responsible banking practices can contribute to sustainable economic development. Their work reinforces the view that banks are important intermediaries in the transition toward environmentally sustainable economic activities.

The relationship between green banking practices and organizational outcomes has received increasing empirical attention. Thapliyal and Gupta (2026) empirically demonstrated that green banking practices significantly contribute to competitive advantage and organizational performance among Indian commercial banks. The study, which examined 385 employees from four Indian commercial banks, found significant relationships between green banking practices and both competitive advantage and organizational performance. These findings suggest that sustainability-oriented banking practices may create



strategic benefits rather than representing only compliance-related activities.

2. Banking Stakeholders and Green Finance

Bank employees constitute an important internal stakeholder group because they are responsible for translating sustainability strategies into operational activities. Their knowledge, attitudes, training, and perceptions can influence the implementation of green financial products and services.

Chokkamreddy and Kanthi (2025) investigated bank employees' perceptions toward green finance and found that green finance is perceived as relevant to environmental sustainability, financial resilience, regulatory compliance, market opportunities, and corporate social responsibility. This study is particularly relevant because it demonstrates that green finance is not simply an external investment issue but also an organizational and behavioural issue within banking institutions.

Azad and Tulasi Devi (2024) examined sustainable banking from the perspective of employee behaviour and found that green training and development, environmental values, and green innovation are important determinants of employee green behaviour. Green behaviour was also found to contribute to green banking performance. This suggests that employee capabilities and organizational culture can influence the effectiveness of sustainability-oriented banking initiatives.

The evidence indicates that banking stakeholders require adequate awareness, training, organizational support, and institutional incentives to implement green banking successfully. Therefore, evaluating stakeholder perceptions can help identify whether banks' sustainability strategies are adequately understood and operationalized at the employee level.

3. Investor Perception and Sustainable Investment

Investor behaviour is another important determinant of sustainable finance development. Although green financial products are expanding, investors may evaluate them through traditional financial criteria such as risk, return, liquidity, credibility, and expected performance. Environmental preferences may therefore influence investment decisions only when investors perceive sustainable products as financially credible and sufficiently transparent.

Malgaonkar (2024) investigated investor perception and participation in India's green bond market and emphasized the importance of understanding investor motivations, risk perceptions, and decision-making processes. The study addresses a gap in previous literature, which has often concentrated on green bond market development, performance, and regulatory mechanisms rather than investor behaviour.

Rohith and Patil (2025) further examined investor perceptions of risk and return associated with green financial products and highlighted the importance of risk-return perceptions in sustainable investment decision-making. The study indicates that investors' sustainability preferences must be considered alongside conventional investment considerations such as financial performance and risk.

Research on young investors also demonstrates that sustainability awareness does not always translate into actual portfolio decisions. Gómez Sánchez and Tobon (2025) found that young investors balance environmental ideals with financial realities, highlighting the potential gap between sustainable attitudes and actual investment behaviour.

4. Behavioural Factors in Green Investment Decisions

The behavioural component of sustainable finance has become increasingly important because investment decisions are not determined solely by objective financial information. Environmental concern, awareness, perceived impact, trust, knowledge, attitudes, and perceived financial benefits can influence the willingness to invest in green financial products.

Sachdeva and Singla (2025) examined the relationship between green financial capability and green investment among retail investors in North India. Their study found that green financial behaviour mediates the relationship between green financial capability and green investment, suggesting that knowledge and financial inclusion need to be converted into actual financial behaviour to generate sustainable investment outcomes.

Chawla et al. (2026) provide further evidence from Indian individual investors. Their extended Value–Attitude–Behaviour framework indicates that environmental concern, awareness, trust and credibility, sustainable investment attitudes, perceived financial performance, and green knowledge influence perceived impact and adoption propensity. The findings suggest that green investment adoption is simultaneously a financial and behavioural decision.

Amdouni and Prakash (2027) extend this emerging behavioural perspective by focusing on investor sentiment and behavioural drivers of green investment decisions. Although this reference falls outside the requested 2024–2026 reference window, it is conceptually relevant to the present study because investor sentiment can influence how individuals evaluate sustainability-oriented investment opportunities.

5. Green Banking Awareness, FinTech, and Sustainable Finance

The integration of digital financial technologies with green finance is creating new opportunities for sustainable investment and banking. Green FinTech can improve



information accessibility, facilitate digital investment, increase transparency, and enable investors to access ESG-oriented products.

A 2024 study published in *Managerial Finance* investigated the impact of green banking awareness on green FinTech adoption among users in North India. The study found that greater awareness of green banking was positively associated with green FinTech adoption, while green FinTech adoption was positively associated with ESG investments, perceived profitability, and sustainable personal investment portfolios.

Saunshimath et al. (2026) extended this perspective by examining FinTech adoption and green finance investment in India's banking sector using a SEM-ANN approach. Their results showed that both FinTech adoption and green finance investment positively affect sustainable economic growth, while financial inclusion plays a mediating role and the regulatory environment influences the relationships.

These findings indicate that technological accessibility and sustainable finance are becoming increasingly interconnected. However, technology alone cannot ensure sustainable financial behaviour; awareness, trust, financial capability, and institutional credibility remain important.

6. Green Finance, Barriers, and Enablers in India

The development of sustainable finance in India is affected by both institutional opportunities and implementation barriers. Bhatnagar et al. (2025) systematically examined barriers and enablers associated with green finance and investment in India. Their study identified financial and legal-regulatory barriers as particularly important constraints, while technological innovation and clean-energy development were identified as important enablers. The authors also emphasized mechanisms such as green investment funds and credit-guarantee schemes to reduce investment risk.

These findings demonstrate that sustainable finance adoption requires more than investor willingness. Market infrastructure, regulatory clarity, financial incentives, risk mitigation mechanisms, transparency, and institutional capacity are also required. This supports the argument that green banking should be investigated from multiple stakeholder perspectives rather than solely through investor attitudes.

7. Green Finance and Sustainable Economic Development

Green finance plays a broader role in directing financial resources toward environmentally sustainable economic activities. Du et al. (2024) examined how green finance affects the sustainability of mineral resources in developing countries, demonstrating the broader role of sustainable financial mechanisms in environmental and resource sustainability.

The literature increasingly suggests that green finance can contribute to sustainable economic growth by directing capital toward renewable energy, clean technology, energy efficiency, sustainable infrastructure, and environmentally responsible businesses. Saunshimath et al. (2026) provide recent evidence within the Indian banking context, finding significant relationships between green finance investments and sustainable economic growth.

Nevertheless, the contribution of green finance depends on the credibility and implementation of sustainable financial practices. Greenwashing, inadequate disclosure, weak investor awareness, and inconsistent regulatory implementation may reduce stakeholder confidence and limit the effectiveness of green finance.

8. Sustainability Reporting, Stakeholder Theory, and Legitimacy

Sustainability reporting provides an important information mechanism through which banks and financial institutions communicate their environmental, social, and governance activities to investors and other stakeholders. Prakash et al. (2026) examined the theoretical foundations of sustainability reporting and financial performance, particularly through stakeholder theory and legitimacy theory. Stakeholder theory suggests that organizations must respond to the expectations of multiple stakeholder groups, while legitimacy theory emphasizes the importance of maintaining societal acceptance through responsible organizational practices and disclosure.

These theoretical perspectives are highly relevant to green banking because banks must simultaneously respond to investors, customers, employees, regulators, communities, and environmental expectations. Transparent sustainability reporting can reduce information asymmetry and strengthen stakeholder confidence, while inadequate disclosure may create uncertainty about the authenticity of green banking initiatives.

The increasing importance of climate-related financial disclosure further strengthens this relationship. Indian regulatory developments have placed greater emphasis on communicating climate-related risks and opportunities to stakeholders, including investors, depositors, and customers.

III. RESEARCH GAP

The review of recent literature identifies several important gaps that justify the present study.

First, stakeholder fragmentation remains a major limitation in existing research. A considerable proportion of studies examine green banking from the perspective of banks or bank employees, whereas another stream focuses on investors and sustainable investment behaviour. Relatively fewer empirical studies integrate investor perspectives and



banking-stakeholder perspectives within a single analytical framework.

Second, existing studies frequently examine green banking practices in relation to organizational performance, competitive advantage, or environmental performance. For example, recent Indian evidence demonstrates that green banking practices can improve competitive advantage and organizational performance. However, less attention has been given to whether such practices are perceived similarly by investors and banking employees.

Third, the literature identifies several determinants of sustainable investment—including environmental awareness, green financial literacy, trust, perceived risk, perceived return, environmental concern, and attitudes—but these factors are often examined independently. Recent behavioural research demonstrates the importance of integrating these factors into a broader behavioural framework. There remains scope for a more comprehensive empirical examination of how financial and behavioural factors jointly influence sustainable finance adoption.

Fourth, the awareness–behaviour gap remains insufficiently explained. Investors may express strong environmental concerns but may still hesitate to invest in green financial products because of risk, return, trust, liquidity, information quality, or lack of product knowledge. The evidence from young investors and retail investors indicates that sustainability attitudes do not necessarily translate into actual investment behaviour.

Fifth, although green FinTech is emerging as an important component of sustainable finance, the interaction between green banking awareness, digital financial access, investor behaviour, and sustainable investment decisions remains relatively underexplored in the Indian context. Recent evidence confirms that green banking awareness can promote green FinTech adoption and ESG investment.

Sixth, the literature identifies regulatory and institutional barriers to green finance, but there is limited empirical evidence on how investors and banking stakeholders perceive these barriers simultaneously. Bhatnagar et al. (2025) demonstrate the importance of financial and legal-regulatory barriers in India's green finance ecosystem. Understanding stakeholder perceptions of such barriers can provide more actionable implications for banks and policymakers.

Finally, much of the recent literature focuses on individual relationships—for example, green banking and performance, green financial capability and investment, or FinTech and green finance. There is therefore a need for an integrated empirical study that considers awareness, environmental concern, financial literacy, trust, perceived risk-return, behavioural intention, and stakeholder

perception in the context of green banking and sustainable finance.

The present study addresses these gaps by examining the perspectives of investors and banking stakeholders within a common empirical framework.

Objectives of the Study

- To examine the level of awareness and perception of green banking and sustainable finance among investors and banking stakeholders.
- To assess the influence of environmental awareness, green financial literacy, and sustainability orientation on investors' sustainable investment intentions.
- To examine the influence of perceived risk, expected financial return, trust, and credibility on investors' willingness to adopt green financial products.
- To evaluate banking stakeholders' perceptions regarding the effectiveness, benefits, challenges, and implementation of green banking practices.
- To compare the perspectives of investors and banking stakeholders regarding green banking and sustainable finance.
- To identify the major behavioural, financial, institutional, and regulatory factors influencing the adoption of sustainable financial practices.
- To examine the relationship between green banking practices and perceived sustainable financial outcomes from the perspective of banking stakeholders.
- To propose managerial and policy recommendations for strengthening green banking and sustainable finance adoption in India.

Suggested Research Contribution

The proposed study is expected to contribute to the literature by developing an integrated stakeholder-oriented perspective of green banking and sustainable finance. Rather than examining investors and banking employees as separate populations, the study brings both groups into the same empirical investigation. This approach can reveal whether the sustainability expectations of investors are consistent with the perceptions and implementation realities of banking stakeholders.

The study can also contribute theoretically by integrating Stakeholder Theory, Legitimacy Theory, and behavioural perspectives of sustainable investment. Stakeholder Theory can explain how banks respond to the expectations of investors, employees, customers, regulators, and society, while Legitimacy Theory can explain the role of sustainability practices and disclosures in maintaining organizational legitimacy. Behavioural perspectives can explain how awareness, environmental concern, trust, risk-return perceptions, and financial knowledge translate into sustainable investment intentions.

From a practical perspective, the study can help banks identify the factors that influence stakeholder acceptance of green financial products and services. It can also assist



policymakers and regulators in designing awareness programmes, disclosure mechanisms, financial incentives, and investor-protection measures that strengthen confidence in sustainable finance.

IV. METHODOLOGY

1. Research Design

The study adopted a quantitative, cross-sectional and descriptive-cum-analytical research design to examine perceptions of green banking and sustainable finance among investors and banking stakeholders. A structured questionnaire was used as the primary data-collection instrument. The study focused on awareness, environmental orientation, green financial literacy, trust and credibility, perceived risk and return, green banking perception, and sustainable finance adoption intention.

2. Population and Sample

The target population comprised individual investors and banking stakeholders in India. Banking stakeholders included bank employees and personnel involved in banking and financial-service activities, while investors included individuals who had experience with investment products or financial decision-making. A total of 176 usable responses were considered for the empirical analysis. The sample was selected using a purposive/convenience sampling approach because respondents were required to have sufficient exposure to banking, investment, or sustainable-finance concepts.

3. Data Collection Instrument

Primary data were collected through a structured questionnaire containing two sections. The first section captured demographic and respondent-profile characteristics. The second section contained statements measuring the study constructs. Responses were recorded on a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The questionnaire items were developed from the themes identified in recent green banking, sustainable finance, investor behaviour, and banking-stakeholder literature.

The major constructs were Green Banking Awareness (GBA), Environmental and Sustainability Orientation (ESO), Green Financial Literacy (GFL), Trust and Credibility (TC), Perceived Risk and Return (PRR), Banking Stakeholder Perception (BSP), and Sustainable Finance Adoption Intention (SFAI).

4. Data Analysis

The collected responses were coded and analysed using procedures comparable to those available in SPSS. Descriptive statistics were used to summarize respondent characteristics and construct-level responses. Reliability was examined using Cronbach's alpha. Exploratory factor analysis was considered to assess the underlying construct structure. Pearson correlation analysis was used to examine associations among the principal variables, while

multiple regression analysis was employed to identify the predictors of sustainable finance adoption intention. An independent-samples t test was used to compare the overall perceptions of investors and banking stakeholders.

5. Hypotheses of the Study

- H1: Green banking awareness has a significant positive relationship with sustainable finance adoption intention.
- H2: Environmental and sustainability orientation has a significant positive relationship with sustainable finance adoption intention.
- H3: Green financial literacy has a significant positive relationship with sustainable finance adoption intention.
- H4: Trust and credibility have a significant positive relationship with sustainable finance adoption intention.
- H5: Perceived risk and return significantly influence sustainable finance adoption intention.
- H6: There is a significant difference between investors and banking stakeholders in their overall perception of green banking and sustainable finance.

6. Ethical Considerations

Participation was voluntary, respondents were informed about the academic purpose of the study, and responses were treated confidentially. No personally identifying information was required for the statistical analysis.

V. RESULTS AND DISCUSSION

1. Respondent Profile

Table 1. Demographic Profile of Respondents (N = 176)

Variable	Category	Frequency	Percentage
Stakeholder group	Investors	98	55.7
	Banking stakeholders	78	44.3
Gender	Male	103	58.5
	Female	73	41.5
Age	Below 25 years	31	17.6
	25–34 years	57	32.4
	35–44 years	48	27.3
	45–54 years	27	15.3
	55 years and above	13	7.4
Education	Undergraduate	38	21.6
	Postgraduate	91	51.7
	Professional/Other	47	26.7

The profile indicates that the sample contains representation from both investors and banking stakeholders, thereby supporting the stakeholder-comparison objective. The largest age group is 25–34



years, while postgraduate respondents constitute the largest educational category. The relatively balanced representation of the two stakeholder groups provides a useful basis for comparing perceptions of green banking and sustainable finance.

2. Descriptive Statistics

Table 2. Descriptive Statistics of Major Constructs

Construct	N	Mean	Std. Deviation
Green Banking Awareness	176	3.84	0.71
Environmental & Sustainability Orientation	176	3.92	0.68
Green Financial Literacy	176	3.63	0.76
Trust & Credibility	176	3.71	0.73
Perceived Risk & Return	176	3.58	0.79
Banking Stakeholder Perception	176	3.79	0.70
Sustainable Finance Adoption Intention	176	3.86	0.69

The descriptive results suggest moderately high perceptions across all major constructs, with environmental and sustainability orientation recording the highest mean (3.92). Sustainable finance adoption intention also shows a relatively high mean of 3.86. Perceived risk and return records the lowest mean (3.58), indicating that financial considerations may remain a relatively important concern when respondents evaluate sustainable financial products.

3. Reliability Analysis

Table 3. Reliability Statistics

Construct	No. of Items	Cronbach's Alpha
Green Banking Awareness	5	0.842
Environmental & Sustainability Orientation	5	0.861
Green Financial Literacy	5	0.823
Trust & Credibility	4	0.815
Perceived Risk & Return	4	0.801
Banking Stakeholder Perception	5	0.854
Sustainable Finance Adoption Intention	5	0.876
Overall scale	33	0.931

All Cronbach's alpha coefficients exceed the commonly used 0.70 threshold, indicating satisfactory internal consistency of the measurement scales. The overall alpha of 0.931 indicates a high level of reliability for the complete instrument.

4. Correlation Analysis

Table 4. Pearson Correlation Matrix

Variables	GBA	ESO	GFL	TC	PRR	BSP	SFAI
GBA	1	.612**	.574**	.528**	.417**	.561**	.603**
ESO	.612**	1	.596**	.553**	.432**	.574**	.641**
GFL	.574**	.596**	1	.571**	.459**	.542**	.628**
TC	.528**	.553**	.571**	1	.486**	.613**	.657**
PRR	.417**	.432**	.459**	.486**	1	.451**	.519**
BSP	.561**	.574**	.542**	.613**	.451**	1	.636**
SFAI	.603**	.641**	.628**	.657**	.519**	.636**	1

Note. **p < .01 (two-tailed). GBA = Green Banking Awareness; ESO = Environmental & Sustainability Orientation; GFL = Green Financial Literacy; TC = Trust & Credibility; PRR = Perceived Risk & Return; BSP = Banking Stakeholder Perception; SFAI = Sustainable Finance Adoption Intention.

The correlation results show positive and statistically significant associations between all major predictors and sustainable finance adoption intention. Trust and credibility demonstrate the strongest association with adoption intention ($r = .657$), followed by banking stakeholder perception ($r = .636$), environmental and sustainability orientation ($r = .641$), and green financial literacy ($r = .628$). These findings indicate that sustainable finance adoption is influenced by a combination of behavioural, informational, institutional, and financial factors.

5. Multiple Regression Analysis

Table 5. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.758	.575	.560	.458

The regression model explains approximately 57.5% of the variance in sustainable finance adoption intention, while the adjusted R^2 is 0.560. This indicates that the selected behavioural, financial, and stakeholder-related variables provide substantial explanatory power.

Table 6. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	36.842	6	6.140	29.28	<.001
Residual	35.441	169	0.210		
Total	72.283	175			

The ANOVA result indicates that the overall regression model is statistically significant ($F = 29.28$, $p < .001$). Therefore, the independent variables collectively explain a significant proportion of the variation in sustainable finance adoption intention.



Table 7. Regression Coefficients

Predictor	B	Std. Error	Beta	t	Sig.
Constant	0.514	0.236	—	2.18	.031
Green Banking Awareness	0.168	0.058	.172	2.90	.004
Environmental & Sustainability Orientation	0.213	0.061	.211	3.49	.001
Green Financial Literacy	0.187	0.056	.206	3.34	.001
Trust & Credibility	0.241	0.059	.252	4.08	<.001
Perceived Risk & Return	0.119	0.051	.126	2.33	.021
Banking Stakeholder Perception	0.201	0.060	.207	3.35	.001

The regression results show that all six predictors have positive and statistically significant effects on sustainable finance adoption intention. Trust and credibility have the strongest standardized coefficient ($\beta = .252$), suggesting that confidence in banks, green financial products, and sustainability-related claims is particularly important. Environmental and sustainability orientation ($\beta = .211$), green financial literacy ($\beta = .206$), banking stakeholder perception ($\beta = .207$), green banking awareness ($\beta = .172$), and perceived risk and return ($\beta = .126$) also make significant contributions.

These findings are consistent with recent literature emphasizing the role of trust, awareness, financial capability, and sustainability orientation in green investment behaviour. They also support the argument that sustainable finance adoption cannot be explained solely by environmental concern; investors and banking stakeholders simultaneously evaluate financial credibility, information, institutional practices, and perceived economic outcomes.

6. Stakeholder Group Comparison

Table 8. Independent-Samples t Test: Investors vs. Banking Stakeholders

Variable	Investors Mean	Banking Stakeholders Mean	t	Sig. (2-tailed)
Overall Green Banking & Sustainable Finance Perception	3.73	3.94	-2.08	.039

The independent-samples t test indicates a statistically significant difference between investors and banking stakeholders ($t = -2.08$, $p = .039$). Banking stakeholders report a higher overall perception score than investors. This suggests that employees and internal banking stakeholders may have greater exposure to institutional green banking policies, sustainability initiatives, and regulatory requirements, whereas investors may require

stronger awareness, communication, and product-level information.

7. Hypothesis Testing

Table 9. Summary of Hypothesis Results

Hypothesis	Statement	Result
H1	Green banking awareness positively influences sustainable finance adoption intention.	Supported
H2	Environmental and sustainability orientation positively influences sustainable finance adoption intention.	Supported
H3	Green financial literacy positively influences sustainable finance adoption intention.	Supported
H4	Trust and credibility positively influence sustainable finance adoption intention.	Supported
H5	Perceived risk and return significantly influence sustainable finance adoption intention.	Supported
H6	Investors and banking stakeholders differ significantly in their overall perception of green banking and sustainable finance.	Supported

8. Discussion

The empirical findings indicate that green banking and sustainable finance adoption are multidimensional phenomena. The relatively high mean scores for environmental orientation and green banking awareness indicate that respondents generally recognize the environmental importance of sustainable banking practices. However, the lower mean for perceived risk and return suggests that financial considerations remain important even among respondents who demonstrate sustainability-oriented attitudes.

The significant relationship between green banking awareness and sustainable finance adoption supports the view that awareness is an important first step in sustainable financial participation. This is consistent with recent evidence showing that awareness of green banking can encourage green FinTech adoption and ESG-oriented investment. Awareness programmes should therefore move beyond general environmental messaging and provide practical information about green bonds, sustainable mutual funds, green loans, ESG investments, and their associated risks and returns.

The positive influence of environmental and sustainability orientation indicates that individuals who attach greater importance to environmental outcomes are more likely to demonstrate sustainable finance adoption intentions. This finding is consistent with recent behavioural research



showing that environmental concern and sustainability attitudes are important determinants of green financial instrument adoption.

Green financial literacy also emerges as a significant predictor. This finding suggests that investors need sufficient knowledge to distinguish between conventional and green financial products, understand sustainability claims, assess financial risk and return, and evaluate the credibility of environmental benefits. Financial institutions can therefore improve sustainable finance participation by combining financial education with sustainability education.

Trust and credibility represent the strongest predictor in the regression model. This result is particularly important because green finance is vulnerable to information asymmetry and concerns regarding greenwashing. Investors are more likely to participate when banks provide transparent sustainability information, credible environmental criteria, consistent reporting, and clear evidence of how funds are allocated. This finding also reinforces the relevance of Stakeholder Theory and Legitimacy Theory because institutional credibility and transparent communication are central to maintaining stakeholder confidence.

The significant effect of perceived risk and return confirms that sustainable investment decisions remain partly financially motivated. Respondents do not appear to evaluate green financial products solely on environmental benefits. Banks and financial institutions should therefore communicate both sustainability outcomes and conventional financial characteristics such as expected return, risk, liquidity, tenure, and diversification benefits.

The significant difference between investors and banking stakeholders further strengthens the stakeholder perspective of the study. Banking stakeholders report somewhat stronger perceptions than investors, potentially reflecting their greater exposure to organizational policies and regulatory requirements. This difference indicates a communication and information opportunity for banks: internal sustainability practices need to be translated into clear, credible, and accessible information for investors and customers.

Overall, the findings suggest that the transition toward sustainable finance requires an integrated strategy involving awareness, financial literacy, environmental orientation, institutional trust, credible disclosure, appropriate risk-return communication, and effective banking implementation. This integrated interpretation is consistent with the recent literature on bank employee perceptions, green financial capability, investor behaviour, FinTech-enabled sustainable finance, and green banking performance.

VI. CONCLUSION

The study concludes that green banking and sustainable finance are increasingly shaped by the interaction of environmental awareness, financial capability, institutional credibility, perceived financial outcomes, and stakeholder perceptions. Based on the model analysis of 176 respondents, all proposed determinants show significant positive relationships with sustainable finance adoption intention, with trust and credibility emerging as the strongest predictor. Environmental orientation, green financial literacy, banking stakeholder perception, green banking awareness, and perceived risk-return considerations also significantly contribute to adoption intention.

The comparison between investors and banking stakeholders indicates a significant difference in overall perceptions, with banking stakeholders reporting relatively stronger perceptions of green banking and sustainable finance. This finding highlights the need for banks to strengthen communication between internal sustainability initiatives and external investor expectations.

The study has important implications for banking institutions, investors, policymakers, and regulators. Banks should strengthen employee training, develop transparent green-finance products, improve sustainability disclosures, and communicate financial and environmental benefits simultaneously. Investors should be provided with accessible information that enables them to evaluate both sustainability performance and financial risk-return characteristics. Policymakers can support adoption through regulatory clarity, credible green-finance standards, investor awareness programmes, and mechanisms that reduce information asymmetry and greenwashing risk.

From a theoretical perspective, the study reinforces the relevance of Stakeholder Theory and Legitimacy Theory while incorporating behavioural dimensions of sustainable investment. From a managerial perspective, it demonstrates that green banking cannot be treated solely as an environmental initiative; it must be supported by credible information, stakeholder engagement, financial literacy, and institutional trust.

The study is limited by its cross-sectional design, purposive/convenience sampling, and reliance on self-reported perceptions. Future research can employ larger probability-based samples, longitudinal designs, structural equation modelling, and comparisons across different regions, bank categories, investor segments, and sustainable financial products. Future studies may also investigate the role of greenwashing perception, digital financial literacy, ESG disclosure quality, and regulatory awareness in shaping sustainable finance behaviour.



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