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GREEN FINANCE AND ENVIRONMENTAL ACCOUNTING: EMPIRICAL INSIGHTS FROM SUSTAINABLE BANKING PRATICES

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Abstract: This study investigates the relationship between green finance and environmental accounting, using empirical data from sustainable banking practices in Nigeria. In recent years, the pressure to align financial services with environmental sustainability has intensified, prompting banks to adopt green finance tools such as green bonds, ESG loans, and renewable energy funding. However, the extent to which these practices are supported by robust environmental accounting systems remains understudied, especially in emerging economies. This research adopts a quantitative approach, surveying 110 banking professionals across various institutions. Data were analyzed using descriptive statistics, Pearson correlation, and linear regression analysis. The results reveal a high level of awareness of green finance among respondents, with a mean score of 3.77 (Agree) and a standard deviation of 1.08. A strong and statistically significant correlation was found between green finance and environmental accounting ($r = 0.712$, $p < 0.01$), indicating a positive linear relationship. Furthermore, regression analysis shows that green finance significantly predicts environmental accounting practices ($\beta = 0.712$, $t = 10.52$, $p = 0.000$), accounting for 50.7% of the variance ($R^2 = 0.507$). These findings suggest that green financial practices are a strong driver of transparency, impact reporting, and sustainability performance in banks. The study suggests that regulatory authorities should mandate environmental accounting as a prerequisite for green finance participation and promote capacity-building initiatives within banks to embed sustainability practices into their operations. The integration of green finance and environmental accounting not only strengthens corporate accountability but also supports Nigeria's commitment to the United Nations Sustainable Development Goals (SDGs).

Keywords: Green Finance, Environmental Accounting, Sustainable Banking, Corporate Accountability, Nigeria.

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Introduction

Over the past decade, the concept of sustainable finance has gained significant traction within the global financial system, particularly in the context of achieving long-term environmental goals and sustainable economic development. The interplay between green finance and environmental accounting has become central to discussions surrounding responsible banking, climate risk mitigation, and transparent corporate reporting (Bădîrcea et al., 2021; Zhang et al., 2021). Green finance refers to the allocation of financial resources to environmentally beneficial projects, products, or services, such as renewable energy, sustainable agriculture, energy efficiency, and pollution control. In parallel, environmental accounting provides a framework for identifying, measuring, and disclosing environmental costs and liabilities that arise from business activities (Khan et al., 2021; Amran et al., 2020).

Financial institutions, especially banks, are uniquely positioned to influence sustainable development due to their role in channeling capital and managing risk. The integration of environmental, social, and governance (ESG) factors into banking decisions has led to the emergence of sustainable banking practices, whereby banks seek to balance profitability with social and ecological responsibility (Alzaidy & Alzaidy, 2021; Ali et al., 2022). By leveraging tools such as green bonds, climate-related risk assessments, carbon accounting, and environmental performance indicators, banks can influence both corporate behavior and consumer preferences in favor of environmentally sound practices (OECD, 2020; Zhang et al., 2022).

Despite growing interest and international commitments such as the Paris Agreement and the UN Sustainable Development Goals

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(SDGs), the actual implementation of green finance initiatives and environmental accounting remains uneven across countries and institutions (UNEP FI, 2020; Wang et al., 2021). Many banks operate within regulatory frameworks that either lack enforceable green finance standards or offer limited incentives for environmental transparency. This has resulted in variations in how green investments are classified, monitored, and reported (Nguyen & Phan, 2022; Scholtens, 2020). In particular, developing economies face structural challenges such as weak institutional capacity, limited data infrastructure, and low stakeholder awareness, which hinder the effective deployment of sustainable financial instruments and environmental disclosures (Ahsan et al., 2021; Chukwuma & Ifelunini, 2023).

Moreover, environmental accounting, although increasingly recognized, has not yet been fully integrated into mainstream accounting and financial management practices. There is a growing recognition that traditional financial accounting fails to capture the true costs of environmental externalities, thereby distorting both corporate valuations and policy priorities (Islam et al., 2022; Feng et al., 2021). In response, organizations such as the Global Reporting Initiative (GRI), Task Force on Climate-related Financial Disclosures (TCFD), and the International Sustainability Standards Board (ISSB) have advanced guidelines to standardize sustainability-related financial disclosures.

This study seeks to contribute to the existing body of knowledge by empirically examining how green finance and environmental accounting are operationalized within the context of sustainable banking. The objective is to explore the level of integration, effectiveness, and challenges surrounding these concepts in financial institutions, with a focus on emerging economies. By doing so, the study aims to inform policy recommendations, strengthen regulatory frameworks, and promote transparency and accountability in the financial sector's environmental commitments.

Statement of the Problem

The global shift towards sustainability and environmental accountability has placed increasing pressure on financial institutions to align their operations with ecological principles. However, despite the widespread advocacy for green finance and the introduction of environmental accounting frameworks, a significant gap remains between policy discourse and actual implementation in the banking sector (Sohail et al., 2021; Eltayeb et al., 2021). Many financial institutions have adopted sustainability labels and published green commitments, yet empirical evaluations reveal inconsistencies in how environmental risks, liabilities, and green investments are documented, monitored, and disclosed (Okafor & Onwumere, 2023; Rana et al., 2020).

One core issue is the absence of standardized metrics and uniform reporting structures for environmental accounting within banks. While international bodies such as the GRI and TCFD have introduced disclosure standards, adoption remains voluntary in many jurisdictions, leading to fragmented and non-comparable environmental data (Hussain et al., 2021). Banks frequently publish sustainability reports that lack independent verification, robust environmental cost analysis, or detailed metrics on carbon emissions and resource efficiency (Wang et al., 2021). This undermines transparency and limits the usefulness of such reports for stakeholders, including regulators, investors, and the general public.

Additionally, in developing economies, green finance initiatives are often hampered by structural limitations such as inadequate regulatory frameworks, lack of technical expertise, poor data infrastructure, and low levels of stakeholder awareness (Adebayo & Salami, 2022; Ndubuisi, 2021). Banks operating in these regions may lack incentives or face disincentives to engage in environmentally responsible lending due to perceived risks, low returns, and insufficient government support. This has resulted in limited uptake of green loans, underdeveloped green bond markets, and insufficient integration of ESG considerations in credit risk assessments (Kola-Olusanya et al., 2023; Zhang & Su, 2020).

Furthermore, the banking sector often fails to incorporate environmental externalities into its financial evaluations, leading to mispricing of risks and underfunding of green projects. Traditional accounting systems do not account for environmental degradation, carbon intensity, or ecosystem loss, thus creating a blind spot in financial reporting and investment decisions (Luo et al., 2020; Zubair et al., 2022). This deficiency is particularly problematic given the rising financial risks posed by climate change, which can affect credit quality, asset values, and operational stability.

This study addresses these gaps by empirically investigating how green finance and environmental accounting are being implemented within the banking sector. It explores whether sustainable banking practices are translating into measurable environmental outcomes and evaluates the challenges banks face in embedding sustainability into their core operations. Understanding these dynamics is crucial not only for improving policy and regulatory oversight but also for ensuring that financial institutions contribute meaningfully to the transition toward a green and resilient economy.

Research Questions

1. What is the current level of integration of green finance in the operations of sustainable banks?
2. How do banking institutions apply environmental accounting frameworks in their sustainability reporting?
3. What are the major barriers to the effective implementation of green finance practices in banking?
4. How does green finance influence the environmental performance of banks?
5. What role does regulatory oversight play in promoting sustainable banking practices?

Research Hypotheses

Ho1: There is no significant relationship between green finance integration and environmental performance in banks.

Ho2: Environmental accounting practices do not significantly influence sustainability reporting quality in banks.

Ho3: There is no significant effect of regulatory oversight on the adoption of green banking practices.

Ho4: There is no statistically significant relationship between green loans and environmental impact disclosures.

Ho5: Banks that adopt green finance frameworks do not perform better in ESG metrics compared to those that do not.

Scope and Limitation of the Study

This study focuses on selected commercial banks known for engaging in sustainable banking initiatives, particularly in emerging economies such as Nigeria. It analyzes the relationship between green finance practices and environmental accounting methods within the banking sector. Due to time constraints and limited access to proprietary financial and environmental data, the research will rely on publicly available annual reports, sustainability disclosures, and interviews with banking professionals. Limitations also include the potential lack of standardized environmental accounting frameworks and differences in regulatory compliance across regions.

Literature Review

Green Finance

Green finance refers to the financing of investments that contribute to environmental sustainability and climate resilience. It encompasses a broad range of financial instruments and services such as green bonds, green loans, sustainability-linked loans, and environmental credit guarantees (Baudino et al., 2020; Zhang et al., 2021). The central idea behind green finance is to redirect capital flows towards environmentally beneficial projects while integrating environmental risks into financial decision-making processes. It serves as a tool for achieving a low-carbon economy and meeting long-term climate targets under frameworks like the Paris Agreement.

In banking, green finance is increasingly seen as a competitive strategy and a risk mitigation mechanism. Financial institutions that adopt green finance principles aim to reduce exposure to environmental, social, and governance (ESG) risks while tapping into new markets linked to renewable energy, sustainable agriculture, and clean technology (Ali et al., 2022; Mhlanga, 2020). Green financing goes beyond product development it involves restructuring internal processes such as risk assessment, loan evaluation, and credit rating systems to account for environmental impacts.

However, the application of green finance differs by region and institution, often depending on the presence of enabling policies, incentives, and regulatory frameworks. In many developing economies, financial institutions are still in the early stages of green finance implementation, constrained by capacity gaps, data limitations, and a lack of awareness (Nguyen & Phan, 2022; Adegbite & Abimbola, 2022).

Environmental Accounting

Environmental accounting is a specialized area of accounting that focuses on identifying, measuring, and reporting the environmental costs and liabilities arising from organizational activities. It reflects the economic implications of environmental impacts and helps institutions internalize costs that are often treated as externalities in traditional accounting systems (Feng et al., 2021). In the context of banking, environmental accounting supports both internal decision-making and external sustainability reporting. It allows banks to account for environmental risks, assess the ecological impact of financed projects, and report environmental performance to stakeholders.

There are two main approaches within environmental accounting: physical and monetary. Physical accounting involves tracking the use of natural resources (such as water, energy, and raw materials), while monetary accounting translates these physical flows into financial terms. Both approaches are essential for comprehensive sustainability reporting (Islam et al., 2022). Banks use environmental accounting to identify environmental hotspots in their loan portfolios, set targets for carbon reduction, and develop green risk indicators that inform lending policies.

Despite growing recognition, environmental accounting is not yet universally practiced across banking institutions. One major challenge is the lack of standardized frameworks and mandatory disclosure requirements, which results in inconsistencies in how banks measure and report their environmental impacts (Wang et al., 2021). Moreover, there is limited integration of environmental accounting into core financial practices, especially in regions with underdeveloped sustainability infrastructures (Ndubuisi, 2021).

The Link Between Green Finance and Environmental Accounting in Banking

Green finance and environmental accounting are conceptually interrelated. While green finance provides the capital and strategic direction for environmental investments, environmental accounting offers the tools for measuring, managing, and reporting the environmental outcomes of those investments. Together, they form a comprehensive framework for sustainable banking practices (Khan et al., 2021; Hussain et al., 2021).

Banks that actively engage in green finance must rely on environmental accounting methods to track the environmental returns on their investments, assess compliance with environmental criteria, and report on their ESG performance. For instance, issuing a green bond requires that the proceeds be used for eligible projects, and environmental accounting ensures that such use is documented and disclosed transparently (Zhang & Su, 2020). Similarly, loans tied to sustainability performance metrics require accounting systems that can measure indicators such as energy savings, emission reductions, or waste minimization.

An effective integration of environmental accounting into green finance practices enhances accountability and builds investor confidence. It also provides regulators and policymakers with reliable data to evaluate the effectiveness of sustainability-oriented financial interventions. Thus, environmental accounting is not only a complement but a necessity for the long-term credibility and success of green finance in the banking sector.

Stakeholder Theory

Stakeholder theory, as proposed by Freeman (1984), emphasizes that organizations should create value not only for shareholders but also for all stakeholders, including customers, employees, regulators, communities, and the environment. This theory has become a foundational perspective for sustainability and corporate responsibility discussions in the banking sector. Within the framework of green finance and environmental accounting, stakeholder theory posits that banks should consider the interests of diverse stakeholders impacted by their lending, investment, and reporting decisions.

Banks operate within a web of stakeholder relationships where public perception, social license to operate, and regulatory compliance directly influence their legitimacy and market access. By adopting green finance strategies and transparent environmental accounting practices, banks demonstrate responsiveness to the demands of environmentally conscious stakeholders, including governments, institutional investors, civil society, and climate

advocacy groups (Ali et al., 2022; Hussain et al., 2021). Empirical studies show that banks that report sustainability data and issue green financial instruments are more likely to retain stakeholder trust, attract long-term capital, and reduce reputational risks (Islam et al., 2022).

Moreover, stakeholder theory explains why banks in different regulatory environments behave differently when it comes to environmental disclosures. In economies with strong environmental governance and civil society engagement, stakeholder pressure often compels banks to integrate ESG and environmental metrics into core decision-making. In contrast, where such pressure is weak, compliance may remain superficial or symbolic (Nguyen & Phan, 2022).

Legitimacy Theory

Legitimacy theory posits that organizations seek to operate within the bounds of what is considered acceptable by society. It is rooted in the idea that corporate survival depends on maintaining congruence between an organization's values and those of the wider social system (Suchman, 1995). Applied to the banking sector, legitimacy theory helps explain the motivation behind environmental disclosures and green financing initiatives, even when these practices are not strictly mandated by law.

Banks may use environmental accounting as a tool to legitimize their operations in a world increasingly concerned with climate change, pollution, and resource depletion. By publicly disclosing carbon footprints, sustainability targets, and green investment outcomes, banks attempt to align themselves with societal expectations around ecological responsibility (Feng et al., 2021; Eltayeb et al., 2021). Legitimacy theory also provides insight into the symbolic use of sustainability reporting, where some institutions publish environmental reports more for image management than for accountability.

In competitive markets, banks with superior environmental credentials gain legitimacy and reputational capital that can translate into market advantages. Green labels such as “sustainable bank” or “ESG-aligned institution” can attract investors, especially those operating in ethical or impact investing spaces (Wulandari et al., 2021). However, legitimacy theory also cautions that without robust environmental accounting systems, sustainability claims may become superficial, leading to "greenwashing" and erosion of stakeholder trust.

Resource-Based View (RBV)

The Resource-Based View (RBV) of the firm argues that organizations can gain a competitive advantage through the acquisition and deployment of valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). When applied to sustainable banking, RBV suggests that green finance capabilities and environmental accounting systems can be viewed as strategic resources that enhance firm value and competitiveness.

Banks that invest in building internal environmental accounting competencies, such as environmental risk modeling, carbon tracking software, and ESG data analysis tools, are better positioned to manage environmental risks, innovate in product development, and respond to regulatory changes (Khan et al., 2021). These capabilities enable banks to design customized green financial products, strengthen their credibility in sustainable finance markets, and enhance long-term institutional resilience.

Unlike physical assets, sustainability-related knowledge and systems are often developed internally and may be difficult for competitors to replicate quickly. This gives environmentally proactive banks a temporary competitive advantage. Moreover, incorporating environmental metrics into decision-making enhances long-term financial performance, strengthens operational efficiency, and ensures better regulatory preparedness (Zubair et al., 2022; Wang et al., 2021).

RBV also underscores the importance of aligning internal resources, such as human capital, information systems, and governance structures, with external opportunities in the green finance landscape. For example, banks that effectively link their accounting systems with international green taxonomies or reporting frameworks are more likely to qualify for sustainability-linked capital and institutional investment (Baudino et al., 2020).

Empirical Evidence on Green Finance Adoption in Banking

Recent empirical studies have examined how financial institutions implement green finance and the impacts of these practices on performance and environmental outcomes. Ali et al. (2022) investigated the role of green finance in enhancing environmental protection in developing economies and found that banks adopting green financial instruments experienced improved risk management and stakeholder perception. Similarly, Zhang et al. (2021) conducted a study on sustainable banking in China and discovered a significant positive relationship between green credit issuance and environmental performance indicators such as reduced carbon emissions and improved compliance with pollution control laws.

Other studies have emphasized the enabling factors that influence green finance adoption. Nguyen and Phan (2022) used data from emerging markets and concluded that regulatory frameworks, institutional quality, and financial innovation are key drivers of green financial practices in banks. However, their research also revealed that many banks lack the internal infrastructure and expertise required for the effective implementation of green finance strategies, especially in lower-income countries.

Empirical Findings on Environmental Accounting Practices

Empirical research on environmental accounting within the banking sector shows that while awareness is increasing, actual practice remains limited. Feng et al. (2021) analyzed corporate environmental disclosures and concluded that only a minority of banks provide detailed, verifiable environmental reports, with most offering vague or general sustainability statements. Their findings suggest a gap between environmental commitment and measurable action, often due to the absence of regulatory enforcement or standard metrics.

Islam et al. (2022), studying listed firms in Malaysia, found that firms with structured environmental accounting systems were more likely to show improved long-term financial performance and reduced reputational risks. However, they also highlighted that environmental accounting was rarely integrated into mainstream decision-making and remained siloed within corporate social responsibility departments. This indicates a need for a more embedded, institution-wide approach to environmental accounting in financial institutions.

Integrating Green Finance and Environmental Accounting: Empirical Gaps

Although green finance and environmental accounting are conceptually aligned, few empirical studies examine their integration. Zubair et al. (2022) observed that banks issuing green bonds frequently neglect to monitor or disclose the environmental impacts of funded projects, largely due to inadequate environmental accounting mechanisms. This disconnect hinders transparency and reduces the credibility of green financial instruments.

Moreover, studies such as Wang et al. (2021) found that the presence of robust environmental accounting systems enhances the efficiency and accountability of green finance by providing data for monitoring, evaluation, and strategic decision-making. These findings underscore the need for further empirical research on how environmental accounting can serve as a foundational support for effective green financial practices, especially in contexts with limited institutional capacity.

Research Design

This study adopts a quantitative research design using a descriptive and inferential survey approach to examine the relationship between green finance practices and environmental accounting in sustainable banking. The study is empirical and employs statistical analysis to explore patterns, associations, and the predictive influence of green finance variables on environmental accounting disclosures. This design is considered appropriate as it allows for the generalization of findings across the sampled institutions (Saunders et al., 2019).

The population of the study comprises employees of selected commercial banks in Nigeria known for adopting sustainable banking practices and reporting environmental performance. Purposive sampling was used to select banks that are either signatories to the Nigerian Sustainable Banking Principles (NSBP) or have published sustainability reports between 2019 and 2023. A total of 120 questionnaires were distributed, out of which 110 valid responses were retrieved and used for analysis.

Primary data was collected using a structured questionnaire, divided into three sections. Section A focused on demographic data; Section B assessed the extent of green finance implementation; and Section C evaluated environmental accounting practices. A 5-point Likert scale was used to measure responses, ranging from “Strongly Disagree” (1) to “Strongly Agree” (5), in line with prior studies (Ali et al., 2022; Feng et al., 2021).

To ensure content validity, the questionnaire was reviewed by subject matter experts in accounting, finance, and sustainability. Their feedback was used to refine the clarity and appropriateness of items, ensuring alignment with the study’s objectives. Face validity was established by conducting a pilot test with 10 respondents similar to the target population. For reliability, internal consistency was assessed using Cronbach’s Alpha, which yielded a coefficient of 0.81, indicating that the items were reliable and suitable for further statistical analysis (Islam et al., 2022; Mhlanga, 2020).

Data were analyzed using SPSS (version 26). Descriptive statistics were presented through frequency tables to summarize respondents’ characteristics and their responses to the survey questions. Inferential statistics included:

- Pearson correlation analysis to assess the strength and direction of the relationship between green finance and environmental accounting.
- Linear regression analysis to test the predictive effect of green finance indicators (e.g., green credit, ESG reporting, green bonds) on environmental accounting practices.

These methods were selected to validate the study’s hypotheses and test the strength of relationships between the variables under investigation (Wang et al., 2021; Zubair et al., 2022).

Data Analysis

Frequency Distribution of Green Finance Awareness

Response	Green Finance Awareness
Strongly Disagree	5
Disagree	10
Neutral	20
Agree	45
Strongly Agree	30

Interpretation of Frequency Table

The frequency table reveals the distribution of responses concerning green finance awareness among banking professionals. Out of 110 total responses, 45 participants (40.9%) agreed, and 30 participants (27.3%) strongly agreed that they are aware of green finance practices within their institutions. In contrast, only 5 respondents (4.5%) strongly disagreed, while 10 (9.1%) disagreed. A notable 20 participants (18.2%) maintained a neutral stance.

The trend demonstrates a strong awareness of green finance initiatives among the sample population, indicating that sustainable banking practices are gaining recognition and may be increasingly integrated into Nigerian banking operations. The high proportions in the 'Agree' and 'Strongly Agree' categories further suggest a rising consciousness and potential institutional support for environmental financial instruments such as green loans, bonds, and ESG-linked credit policies.

Pearson Correlation between Green Finance and Environmental Accounting

Variables	Green Finance	Environmental Accounting
Green Finance	1.000	0.712
Environmental Accounting	0.712	1.000

Interpretation of Correlation Results

The correlation analysis shows a strong positive relationship between green finance and environmental accounting with a Pearson correlation coefficient (r) of 0.712. This value indicates a statistically significant and positive association, suggesting that an increase in green finance practices is strongly related to an increase in the use of environmental accounting systems within banks.

The implication here is that institutions that are more engaged in green finance are also likely to adopt or enhance their environmental accounting practices. A correlation coefficient above 0.7 is considered high, signifying that the two variables move together in the same direction, which supports theoretical expectations from stakeholder and legitimacy theories.

Regression Analysis Summary

Model Summary

- R = 0.712
- R Square = 0.507
- Adjusted R Square = 0.501
- Std. Error = 0.842

ANOVA Table

- F (1, 108) = 110.56
- Significance (p) = 0.000

Coefficients Table

Variable	B	Std. Error	Beta	T	Sig.
(Constant)	2.104	0.214	–	9.83	0.000
Green Finance	0.643	0.061	0.712	10.52	0.000

Interpretation of Regression Results

The regression analysis indicates that green finance is a significant predictor of environmental accounting practices in commercial banks. The R value of 0.712 signifies a strong linear relationship, while the R^2 of 0.507 indicates that approximately 50.7% of the variance in environmental accounting practices can be explained by green finance initiatives alone.

The model is statistically significant, as confirmed by the F-value (110.56) and p-value (0.000), which is less than 0.05. This implies the model fits well, and green finance is a valid predictor of environmental accounting practices. The unstandardized coefficient (B = 0.643) shows that for every unit increase in green finance activities, environmental accounting practices improve by 0.643 units, holding other factors constant.

Hypothesis Testing

Hypothesis	Test Statistic	p-value	Decision	Conclusion
H_1: There is a significant relationship between green finance and environmental accounting practices.	r = 0.712	0.000	Reject H_0	Supported: A strong positive relationship exists.
H_2: Green finance significantly predicts environmental accounting practices.	B = 0.643, t = 10.52	0.000	Reject H_0	Supported: Green finance is a significant predictor.

Interpretation:

Both hypotheses were supported. The first confirmed a strong positive relationship between green finance and environmental accounting, while the second demonstrated that green finance significantly predicts the adoption of environmental accounting practices, explaining 50.7% of the variance. These findings align with theoretical expectations from stakeholder and legitimacy theories, highlighting the importance of green finance in shaping sustainable banking practices.

Implication of findings

Implications for Accounting Practice

The findings demonstrate that green finance significantly predicts environmental accounting practices, indicating that accountants and financial reporting professionals must increasingly incorporate sustainability-related information into mainstream reporting systems. This calls for the adoption of integrated accounting frameworks that embed environmental costs, green assets, and ESG indicators into financial statements. For accounting practice, the implication is that traditional financial reporting should evolve into sustainability-oriented accounting, where both financial and environmental metrics are jointly considered in evaluating organizational performance.

Implications for Regulators

For regulators such as the Central Bank of Nigeria (CBN) and the Financial Reporting Council (FRC), the study underscores the need to strengthen existing policies on sustainability disclosures and ensure mandatory compliance with environmental reporting standards. Since the results show that green finance drives environmental accounting adoption, regulatory frameworks should provide clear guidelines on integrating green finance instruments into reporting standards. This would enhance comparability, accountability, and transparency across the banking sector.

Implications for Banks in Nigeria

For Nigerian banks, the findings highlight that green finance is not merely an ethical choice but a strategic driver of improved environmental accountability and competitiveness. Banks should deepen their investment in green financial instruments, such as green bonds and ESG-linked loans, and ensure these are backed by verifiable environmental accounting disclosures. Strengthening the integration of environmental accounting within internal reporting systems can enhance legitimacy, stakeholder trust, and long-term sustainability. Moreover, aligning green finance initiatives with global best practices could position Nigerian banks more competitively in the international financial system.

Conclusion

This study empirically examined the relationship between green finance and environmental accounting within the context of sustainable banking practices in Nigeria. Drawing on data from commercial banks through a structured questionnaire and applying descriptive, correlational, regression, and hypothesis testing techniques, the results provide strong evidence of a significant and positive association between green finance initiatives and environmental accounting practices.

The findings revealed high levels of awareness of green finance among banking professionals, with correlation results ($r = 0.712$, $p < 0.001$) indicating a strong linear relationship, and regression results confirming that green finance significantly predicts environmental accounting practices, explaining 50.7% of the variance. Hypothesis testing further validated these outcomes,

demonstrating that sustainable financial instruments such as green bonds, ESG-linked credit, and green lending directly enhance environmental accounting disclosures.

Theoretically, the study extends stakeholder theory, legitimacy theory, and the resource-based view by demonstrating that green finance functions not only as a compliance or ethical mechanism but also as a strategic resource that strengthens organizational legitimacy and long-term sustainability.

From a practical perspective, the study highlights the urgent need for Nigerian banks to institutionalize environmental accounting frameworks supported by robust green finance mechanisms. Although adoption is growing, the integration of environmental accounting into core operational systems remains uneven, which may weaken transparency and sustainability performance. Hence, banks are encouraged to adopt integrated frameworks where green finance instruments are systematically linked to measurable and verifiable environmental accounting systems. Doing so will enhance transparency, accountability, and resilience in the face of global sustainability challenges.

Recommendations

i. Regulatory authorities such as the Central Bank of Nigeria (CBN) should enforce environmental accounting and sustainability reporting as a mandatory condition for issuing or accessing green finance instruments.

ii. Commercial banks should invest in specialized training for staff on environmental accounting standards, ESG reporting tools, and climate finance risk modeling to enhance internal capacity.

iii. Environmental accounting practices should be fully integrated into banks' financial reporting and risk assessment frameworks, rather than treated as peripheral CSR activities.

iv. There is a need for national alignment with global frameworks such as GRI, IFRS Sustainability Standards, and TCFD to ensure consistent, comparable, and credible disclosures.

v. Policymakers should design incentives, such as tax rebates or access to special credit facilities, for banks that meet green finance and environmental reporting benchmarks.

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