ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) PRACTICES AND FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

SHEHU ANAS KUWA; & ABUBAKAR MODIBBO
Department of Accounting, Federal University, Birnin Kebbi, Nigeria
Corresponding Author: amodibbo8@gmail.com
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ABSTRACT

This study examines the effects of Environmental, Social, and Governance (ESG) practices on the financial performance of listed deposit money banks (DMBs) in Nigeria, using Tobin's Q as a proxy for market-based valuation. The study covers a panel dataset of 12 banks over ten years from 2015 to 2024. The Environmental Practices Score (EPS), Social Practices Score (SPS), and Governance Practices Score (GPS) were employed to measure ESG performance, while firm size (FSZ) was introduced as a control variable. A panel regression model was adopted following the Hausman specification test. The empirical findings reveal that EPS has a negative and marginally significant effect on Tobin's Q, implying that environmental practices, though essential for long-term sustainability, impose short-run costs that dampen market valuation. By contrast, SPS exerts a strong positive and highly significant influence on Tobin's Q, indicating that social practices such as financial inclusion, customer protection, employee welfare, and community development are rewarded by investors through higher firm valuation. Governance practices (GPS) also demonstrate a positive and significant impact on Tobin's Q, underscoring the importance of strong governance structures in enhancing transparency, accountability, and investor confidence. Firm size (FSZ), however, is found to be statistically insignificant, suggesting that market valuation depends more on the quality of ESG practices than on the scale of operations. The study concludes that ESG practices are key drivers of financial performance in the Nigerian banking sector, although their effects vary across pillars. While social and governance practices significantly enhance firm value, environmental practices currently reflect trade-offs between upfront costs and future benefits. These results lend support to stakeholder theory, agency theory, and trade-off theory. The study recommends that regulators strengthen ESG disclosure standards and provide incentives for environmental initiatives, while banks should embed ESG more strategically into their business models to achieve sustainable financial and market outcomes.

Keywords: Financial Performance, Tobin's Q, Corporate Governance, Stakeholder Theory, Sustainable Banking, ESG Disclosure.

INTRODUCTION

Environmental, Social, and Governance (ESG) practices have become integral to the discourse on corporate sustainability and long-term performance. Globally, investors, regulators, and policymakers increasingly recognize that firms must balance financial objectives with social responsibility and environmental stewardship to secure legitimacy and competitiveness in modern capital markets. ESG frameworks are designed to capture how firms manage their ecological footprint, engage with stakeholders, and structure governance mechanisms that ensure transparency and accountability. Collectively, these practices influence a firm's reputation, access to capital, and ability to generate sustainable returns.

A growing body of literature has documented the financial implications of ESG adoption. Friede, Busch, and Bassen (2015), in a meta-analysis of more than 2,000 empirical studies, found that the majority reported a positive link between ESG and financial performance. Similarly, Whelan and Atz (2021) argue that firms with strong ESG records often benefit from enhanced operational efficiency, reduced risk exposure, and improved investor confidence. These advantages are particularly relevant in financial markets where information asymmetry and reputational capital significantly shape firm value.

In Nigeria, the push toward ESG adoption has been accelerated by both domestic regulation and international alignment. The Central Bank of Nigeria introduced the Nigerian Sustainable Banking Principles (NSBP) in 2012, requiring banks to embed sustainability considerations into their lending, risk management, and operational activities. Subsequently, the Nigerian Exchange Group (NGX) issued Sustainability Disclosure Guidelines in 2019, compelling listed firms, including Deposit Money Banks (DMBs), to disclose ESG-related information in their annual and sustainability reports. The adoption of global frameworks such as the International Sustainability Standards Board (ISSB) standards, notably IFRS S1 and IFRS S2, effective in 2024, has further harmonized sustainability reporting in Nigeria with international best practice.

Despite these developments, the financial relevance of ESG remains inconclusive. Some scholars emphasize its positive effects on firm value, citing improved stakeholder trust, risk mitigation, and long-term resilience (Adedoyin, 2020). Others argue that ESG compliance entails significant costs and resource commitments without guaranteeing financial rewards, particularly in emerging economies where investor demand for ESG-aligned assets is still nascent (Onumah & Abubakar, 2023). For Deposit Money Banks, which are central to economic stability, social inclusion, and sustainable finance, this debate is especially critical.

Environmental practices in the Nigerian banking sector are often reflected in financing policies that prioritize renewable energy projects, climate-resilient infrastructure, and environmental risk assessments. For example, Zenith Bank's installation of solar panels in branches and energy upgrades has reduced carbon emissions and reliance on fossil fuels (World Finance, 2022). Similarly, Wema Bank has committed to aligning its strategy with the Paris Climate Agreement as part of its Principles for Responsible Banking (Wema Bank, 2023). Empirical evidence also points to gradual but tangible benefits. A study of seven Nigerian DMBs (2005–2023) found that environmental disclosures improved Tobin's Q and profitability in the short run, though social responsibility expenditures initially reduced returns before becoming positive over time (Nature, 2024). Other research indicates that emissions

control and waste management had modest but significant impacts on liquidity and loan quality, though with limited effects on asset growth or capital adequacy (Olowofela et al., 2025).

Social practices in Nigerian banks encompass financial inclusion programs, customer protection, employee welfare, and community development initiatives. First City Monument Bank (FCMB), through its SheVentures program, has supported over 15,000 women-owned SMEs with zero-interest loans since 2019 (FCMB, 2023). Sterling Bank, via the Sterling One Foundation, has advanced social impact through initiatives such as the Africa Social Impact Summit (2023) and the Ring the Bell for Gender Equality campaign (2024). These initiatives have broadened banks' customer bases and strengthened brand equity. However, empirical results remain mixed: while CSR activities have sometimes depressed short-term profitability, long-run benefits in terms of customer loyalty and reputation have been observed (Adedoyin, 2022). Likewise, a study of Nigerian consumer goods firms reported that social performance boosted ROA and ROE but negatively impacted EPS, reflecting trade-offs across financial metrics (JSJU, 2024).

Governance practices are equally critical, given the historical role of weak governance in Nigerian banking crises. Governance mechanisms such as board independence, audit quality, and institutional ownership are believed to reduce risks of fraud, earnings manipulation, and misreporting. Evidence from recent studies supports this view. For instance, Abubakar and Muazu (2023) found that governance attributes were positively linked with ESG performance and financial outcomes. Similarly, the Seybold Report (2024) concluded that robust governance underpinned superior financial results among Nigerian banks. Yet, some studies caution that governance does not uniformly translate into improved performance, with Olayemi (2024) reporting negative effects on EPS.

Deposit Money Banks (DMBs) in Nigeria occupy a strategic role in promoting financial stability, fostering financial inclusion, and supporting sustainable development. Over the last decade, regulatory frameworks such as the Nigerian Sustainable Banking Principles (NSBP) of 2012 and the Nigerian Exchange Group (NGX) Sustainability Disclosure Guidelines of 2019 have provided the foundation for ESG integration. In addition, the global adoption of IFRS S1 and S2 standards in 2024 has reinforced the push toward uniform sustainability reporting. In response, Nigerian banks have made visible strides. For instance, Zenith Bank invested in renewable energy through solar-powered branches, while Wema Bank aligned its strategies with the Paris Climate Agreement. On the social front, First City Monument Bank (FCMB) has empowered women entrepreneurs through the SheVentures program, and Sterling Bank has advanced inclusion through its Sterling One Foundation initiatives. In governance, banks such as FCMB and Access Bank have strengthened board structures and adopted comprehensive ESG strategies. Despite these efforts, the financial relevance of ESG practices in Nigeria remains unclear. While some evidence suggests that ESG enhances market value and profitability by improving reputation, risk management, and investor confidence, other studies report limited or even negative financial effects. For example, sustainable supply chain disclosures have been found to significantly improve Tobin's Q in the short run, but environmental initiatives such as emissions reduction have shown only weak impacts on capital adequacy and asset growth. Similarly, while corporate social responsibility (CSR) programs have sometimes depressed profitability in the short term, their benefits appear to materialize only over the long run. Governance mechanisms such as board independence and audit quality have often been

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associated with stronger financial outcomes, but empirical results remain inconsistent across profitability measures.

These inconclusive findings highlight several important gaps. Conceptually, many Nigerian banks still treat ESG as a compliance obligation or reputational exercise, rather than as a deliberate value-creation strategy. Empirically, the mixed results reported across studies suggest that the financial implications of ESG are far from settled. Contextually, much of the Nigerian evidence comes from consumer goods and manufacturing firms, even though banks by virtue of their intermediation role are central to the financing of sustainable initiatives. Methodologically, prior studies rely heavily on accounting-based indicators such as Return on Assets (ROA) and Return on Equity (ROE), which reflect historical profitability but fail to capture forward-looking investor expectations. Few have employed market-based measures such as Tobin's Q, which provide more accurate insights into how investors value ESG initiatives.

The persistence of these conceptual, empirical, contextual, and methodological gaps underscores the need for further inquiry. While Nigerian banks have taken visible steps in embedding ESG across environmental, social, and governance dimensions, there is no empirical consensus on whether these practices enhance financial performance. Closing this gap is particularly urgent, given the global convergence toward standardized sustainability reporting and the increasing pressure on banks to demonstrate not only compliance but also value creation through ESG practices. Accordingly, this study seeks to evaluate the individual and collective impacts of ESG practices on the financial performance of listed Nigerian DMBs, using Tobin's Q as a proxy for market valuation and controlling for bank size.

Objectives of the Study

The main objective of the study is to examine the effects of Environmental, Social, and Governance practices on the financial performance of listed deposit money banks in Nigeria. The specific objectives of the study are to:

i. Examine the effect of environmental practices on the financial performance of listed deposit money banks in Nigeria.
ii. Evaluate the effect of social practices on the financial performance of listed deposit money banks in Nigeria.
iii. Assess the effect of governance practice on the financial performance of listed deposit money banks in Nigeria.

Hypotheses of the Study

The following research hypotheses are formulated in null form for the study;

H01: Environmental practices have no significant effect on the financial performance of listed deposit money banks in Nigeria.

H02: Social practices have no significant effect on the financial performance of listed deposit money banks in Nigeria.

H03: Governance practice has no significant effect on the financial performance of listed deposit money banks in Nigeria.

LITERATURE REVIEW

This study draws on three interrelated theories to explain the nexus between ESG practices and financial performance: stakeholder theory, trade-off theory, and institutional theory.

Stakeholder theory (Freeman, 1984) argues that firms create value not only for shareholders but also for a broad set of stakeholders, including employees, customers, regulators, and communities. In banking, ESG practices embody this broader responsibility, as they address environmental sustainability, social inclusion, and governance accountability. By investing in ESG, banks enhance their reputation, strengthen stakeholder trust, and reduce conflicts with regulators and society. These outcomes can translate into higher market valuations, captured by Tobin's Q, as investors reward firms perceived to be more legitimate and sustainable.

Trade-off theory (Kraus & Litzenberger, 1973) emphasizes that firms balance the costs and benefits of strategic decisions to maximize value. ESG adoption entails upfront costs—such as green technologies, CSR initiatives, and governance reforms—that may depress short-term profits. However, these expenditures may yield long-term financial gains by reducing risk exposure, lowering financing costs, and enhancing investor confidence. For Nigerian banks, this trade-off is particularly evident: while environmental innovations may constrain liquidity and asset growth initially (Olowofela et al., 2025), they can reduce loan defaults and improve stability over time. Tobin's Q provides an ideal measure to capture whether investors perceive the long-term benefits of ESG as outweighing its costs.

Institutional theory (DiMaggio & Powell, 1983) posits that organizational practices are shaped by coercive, normative, and mimetic pressures within institutional environments. In Nigeria, where governance enforcement is weak and markets are imperfect, ESG adoption may be motivated more by regulatory compliance and legitimacy-seeking than by immediate value creation. Banks may adopt sustainability frameworks under pressure from the Central Bank of Nigeria (coercive), imitate international best practices to signal legitimacy (mimetic), or align with professional standards and global norms (normative). Whether these symbolic or substantive ESG initiatives are rewarded in financial markets can be tested through Tobin's Q.

Together, these three theories provide a comprehensive lens for this study. Stakeholder theory highlights ESG's role in building legitimacy and trust, trade-off theory explains the balance between short-term costs and long-term benefits, and institutional theory situates ESG adoption within Nigeria's fragile regulatory environment. By combining these perspectives, the study offers a richer understanding of how ESG practices influence the financial performance of listed Nigerian banks.

Over the past decade, Environmental, Social, and Governance (ESG) practices have become central to both corporate strategy and academic inquiry. Integrating ESG factors is widely viewed as a pathway to enhanced firm value and long-term financial outcomes (Eccles, Ioannou, & Serafeim, 2014). Meta-analyses of thousands of studies support the "business case" for ESG, documenting a significant and positive association between ESG performance and corporate financial performance across accounting-based and market-based measures (Friede, Busch, & Bassen, 2015; Busch & Friede, 2018). Nonetheless, the evidence remains context-specific, with the magnitude and direction of effects varying across individual ESG pillars and across institutional environments.

The environmental pillar encompasses emissions reduction, energy efficiency, green financing, and environmental risk management. Global evidence tends to support a positive relationship between environmental performance and financial success, though time horizons matter. Manrique and Martí-Ballester (2017) found that carbon reduction efforts increased ROA and ROE without diminishing market valuation. Studies from China (Maji, De, & Gunardi, 2020) and Thailand (Nampiboon & Ananchotikul, 2020) similarly show that proactive climate action reduces financing costs and attracts investors.

However, findings from Nigeria are more nuanced. Umoren, Okon, and Okafor (2018) and Onyebuenyi and Ofoegbu (2022) reported that environmental accounting expenditures and sustainability disclosures had limited short-term effects on profitability. More recent studies, however, suggest gradual positive outcomes: Ojogbo, Adeyemi, and Bello (2025) found that environmental performance improved ROA and EPS among manufacturing firms, while Olowofela et al. (2025) observed that environmental innovation in banks reduced short-term asset growth but lowered non-performing loans, highlighting a trade-off between short-term costs and long-term resilience.

The social pillar focuses on stakeholders—employees, customers, and communities. Meta-analyses confirm a generally positive relationship between corporate social performance and financial outcomes (Busch & Friede, 2018). Research shows that strong employee welfare improves productivity, ROA, and long-run stock performance (Green, Huang, Wen, & Zhou, 2019; Buallay, Fadel, & Alajmi, 2020). In Nigeria, however, evidence is mixed. Ibrahim and Umeano (2019) reported limited impacts of CSR expenditures on banks' profitability measures, while Zango and Umeoji (2024) found that CSR targeted at community development enhanced EPS. Adedoyin (2022), by contrast, warned that excessive philanthropy can erode profitability. Studies of financial inclusion link stability with broader development outcomes but also highlight risks from non-performing loans (Amadi et al., 2021). Overall, the Nigerian evidence suggests that strategic, business-aligned social initiatives yield financial benefits, while ad-hoc CSR spending may not.

Governance remains the most scrutinized ESG dimension. In developed markets, board independence and audit quality are strongly associated with improved firm performance (Gompers, Ishii, & Metrick, 2003; Nguyen & Tran, 2023). In emerging economies, results are more mixed. For instance, Khan, Saleem, Din, and Khan (2024) found that board independence in South Asia was negatively associated with Tobin's Q, while Al-Saidi (2021) reported similar results in Kuwait.

Nigerian evidence also reflects these inconsistencies. Awodiji, Adeyemi, and Okpala (2025) found that audit independence improved ROA, but Big Four auditors were associated with higher compliance costs and lower profitability. Samson and Tukur (2024) reported insignificant ESG effects on bank stability, while Ogboi et al. (2024) found that governance disclosure enhanced ROA but board diversity negatively impacted financial outcomes. These mixed findings suggest that governance practices may not uniformly translate into stronger performance in fragile institutional contexts.

Although an extensive body of research has investigated the relationship between Environmental, Social, and Governance (ESG) practices and financial performance, the evidence remains fragmented, inconsistent, and highly context-dependent. Much of the literature originates from developed economies such as the United States, the United Kingdom, and the Eurozone, where strong regulatory enforcement,

sophisticated capital markets, and well-established governance systems provide an enabling environment for ESG adoption (Al-Tarawneh et al., 2024; Kuzhagaliyev, 2024). In contrast, empirical evidence from developing economies, particularly in Africa and Nigeria, is still limited and inconclusive. This creates a contextual gap in understanding how ESG practices affect financial performance in Nigerian Deposit Money Banks (DMBs), which operate in a weaker institutional environment, face higher systemic risks, and function within markets characterized by inefficiencies.

At the environmental pillar, prior global studies suggest that investments in renewable energy, emissions control, and sustainable financing improve firm value and investor confidence (Duan et al., 2023; Wang & Zhang, 2023). Nigerian evidence, however, reveals more complex dynamics. For example, Olowofela et al. (2025) found that environmental innovation by banks reduced asset growth and strained liquidity in the short run, even though it lowered non-performing loans, pointing to a trade-off between immediate costs and long-term benefits. The social pillar also presents inconclusive results. While global studies link social initiatives such as product safety, employee welfare, and inclusion with stronger performance (Salim et al., 2023; Fu & Li, 2023), findings in Nigeria have been mixed. Samson and Tukur (2024) reported that social practices exerted insignificant or negative effects on bank stability, while Amadi et al. (2021) observed that banking stability supported the financing of Sustainable Development Goals, though non-performing loans offset these gains. Similarly, evidence on governance is contradictory. While some studies demonstrate that strong governance structures improve profitability and investor trust (Karim et al., 2022; Kuzhagaliyev, 2024), Nigerian findings suggest that board diversity and disclosure practices may even reduce financial outcomes in the short term (Ogboi et al., 2024).

A further methodological gap arises from the dominant reliance on accounting-based indicators such as Return on Assets (ROA), Return on Equity (ROE), and Earnings per Share (EPS). These measures capture past profitability but do not reflect forward-looking investor expectations. Very few Nigerian studies have adopted market-based measures such as Tobin's Q, which integrate both accounting performance and market perceptions to provide a more robust indicator of firm value. The absence of such forward-looking measures leaves unanswered questions about how investors in Nigeria actually value ESG adoption.

Finally, a theoretical gap persists in the Nigerian context. Most existing studies apply stakeholder theory or agency theory in isolation, without integrating broader theoretical perspectives that could better explain ESG outcomes in emerging markets. Frameworks such as institutional theory and trade-off theory provide additional insights into how weak enforcement, regulatory pressures, and short-term financial costs shape ESG outcomes.

In light of these gaps, this study is justified on several grounds. First, it addresses the contextual gap by focusing on listed Nigerian DMBs, a sector central to economic stability and sustainable finance. Second, it fills pillar-specific gaps by disaggregating ESG into its environmental, social, and governance components, allowing a clearer understanding of their individual and combined effects on financial outcomes. Third, it resolves a methodological gap by adopting Tobin's Q, a forward-looking market-based measure, rather than relying solely on accounting-based indicators. Finally, it contributes to theory

by employing a multi-theoretical framework that integrates stakeholder, trade-off, and institutional perspectives, offering a more holistic explanation of ESG–ESG-ESG-performance linkages in Nigeria.

RESEARCH METHODOLOGY

This study follows a positivist research paradigm that relies upon quantitative methodologies. This study adopted an ex-post facto correlational research design. This is because an ex post facto research design is a systematic empirical inquiry in which the researcher does not have direct control of the variables. It ascertains the current condition and seeks back in time for plausible contributing factors. The design for the study is appropriate because it assists in determining the effect of ESG on the financial performance of listed DMBs in Nigeria.

The population of this study consists of all fourteen (14) Deposit Money Banks (DMBs) listed on the Nigerian Exchange Group (NGX) as at 31st December 2024 (see Table 1). This population is considered appropriate because the Nigerian banking sector has witnessed several incidents related to ESG. Consequently, focusing on listed DMBs provides a relevant and practical opportunity to investigate the impact of Environmental, Social, and Governance practices on financial performance within a highly regulated and systemically important sector of the Nigerian economy.

Table 1: Population of the Study

SN	Company Name	NGX Sector	Year of Listing
1	Access Holdings Plc	Financial Service	2002
2	Guaranty Trust Holding Co. Plc	Financial Service	1995
3	Zenith Bank Plc	Financial Service	2004
4	United Bank for Africa Plc	Financial Service	1970
5	First HoldCo Plc (FBN Holdings)	Financial Service	1970
6	Fidelity Bank Plc	Financial Service	2005
7	Wema Bank Plc	Financial Service	1990
8	Unity Bank Plc	Financial Service	2005
9	Stanbic IBTC Holdings Plc	Financial Service	2012
10	FCMB Group Plc	Financial Service	2013
11	Ecobank Transnational Inc.	Financial Service	2006
12	Sterling Financial Holdings Co. Plc	Financial Service	2003
13	Jaiz Bank Plc	Financial Service	2017
14	Union Bank Plc	Financial Service	1970

Source: Nigeria Exchange Group (December 2024)

The study found that Union Bank Plc was delisted in 2023, while Jaiz Bank Plc was listed on the NGX in the year 2017. These banks are dropped, and the sample size of the study is twelve (12) listed DMBs on the Nigerian Exchange (NGX), as in Table 2. The size was determined through a purposive sampling technique. This sampling technique was used to select listed DMBs on the Nigerian Exchange (NGX) based on the availability of annual reports for the period of 2015 to 2024.

Table 2: Sample Size of the Study

SN	Company Name	NGX Sector	Year of Listing
1	Access Holdings Plc	Financial Service	2002
2	Guaranty Trust Holding Co. Plc	Financial Service	1995
3	Zenith Bank Plc	Financial Service	2004
4	United Bank for Africa Plc	Financial Service	1970
5	First HoldCo Plc (FBN Holdings)	Financial Service	1970
6	Fidelity Bank Plc	Financial Service	2005
7	Wema Bank Plc	Financial Service	1990
8	Unity Bank Plc	Financial Service	2005
9	Stanbic IBTC Holdings Plc	Financial Service	2012
10	FCMB Group Plc	Financial Service	2013
11	Ecobank Transnational Inc.	Financial Service	2006
12	Sterling Financial Holdings Co. Plc	Financial Service	2003

Source: Population

The study exploits the secondary sources of data to test the research hypotheses and achieve the objectives of the study. The choice of secondary data reflects the philosophies of the positivists' paradigm as well as the norms of the quantitative research strategy adopted. The data were extracted from the audited annual reports and accounts of the sample DMBs and the sustainability reports of the banks.

Techniques of Data Analysis

The data analysis techniques employed in this study have a theoretical relationship with the research objectives and hypotheses stated in previous chapters of the study. The study employed the Panel Regression Technique of data analysis; descriptive statistics and correlation analysis are also used.

To ensure valid and reliable results and findings, robustness tests such as the Normality Test, Multicollinearity Test, Heteroscedasticity Test, Normality Test of Error Term, and Hausman Specification Test are conducted. Given the foregoing, therefore, STATA 15.0 software was used as the instrument for the analysis.

To examine the relationships between the dependent variable (Tobin Q) due to variation in any of the explanatory variables, multiple linear regressions were employed. This is because multivariate linear regression is expected to explain the variation in the dependent variable due to the variation in the independent variables. However, the selection of the appropriate technique among the many multivariate statistical tools available depends on the measurement of the study. Multiple regression techniques using fixed and Random Effects were found to be suitable and were employed in the analysis of data.

Variables of the Study and their Measurement

The study used four variables, which comprise the Dependent Variables, Independent Variables, and Control variables. The dependent variable is the Financial Performance (which is measured by the Tobin's Q), and the independent variables are the ESG pillars, while the control variable is the firm size.

Dependent Variables

The dependent variable of the study is the firm value, while the independent variable is integrated reporting. The study used firm size to control for the effect of size. The dependent variable is measured using Tobin's Q.

Tobin's Q (TBQ) – Tobin's Q is the ratio between physical assets and their replacement value, as illustrated by Kaldor (1966) and modified by Chung and Pruitt (1994) in Wolfe and Sauaia (2003). In this study, Tobin's Q is adopted as a measure of firm value; this is also based on the methods used by Adegbie et al. (2019) and Oyedokun et al. (2019).

Tobin's Q = (MVS+D)/TA

Where:

MVS = market value of all outstanding shares, which is share price*outstanding shares,

TA = total assets, which is the total value of property, plants, and equipment + cash + inventories + receivables,

D = net debt.

Independent Variables

Environmental Practices – The measurement of the environmental disclosures follows previous studies based on content analysis. The measurement items are presented in Table 3

Table 3: Environmental Practices

SN	Environmental Practices Items	Source
1	Environmental Policy: Presence of a formal environmental policy.	Clarkson et al. (2008) Wegener & Schmidt (2020) Sharawi & Shahawi (2024)
2	Energy Consumption: Disclosure of total energy consumption.	
3	Renewable Energy Use: Percentage of energy sourced from renewables.	
4	Greenhouse Gas Emissions: Total greenhouse gas emissions.	
5	Emission Reduction Initiatives: Programs aimed at reducing emissions.	
6	Water Usage: Total water consumption.	
7	Water Conservation Efforts: Initiatives to conserve water.	
8	Waste Management: Total waste produced and its management.	
9	Recycling Programs: Details of recycling initiatives.	
10	Pollution Control: Measures taken to control pollution.	
11	Biodiversity Impact: Impact on local biodiversity.	
12	Environmental Compliance: Compliance with environmental regulations.	
13	Sustainability Reporting: Publication of sustainability reports.	
14	Environmental Training: Training programs for employees on environmental issues.	
15	Climate Change Strategy: Long-term strategies to address climate change.	

Social Practices – The measurement of social disclosures follows previous studies based on content analysis. The measurement items are presented in Table 4

Table 4: Social Practices

SN	Social Disclosure Practices Items	Source
1	Employee Diversity: Diversity statistics of the workforce.	Dhaliwal et al. (2011) Hummel & Schlick (2016) Sharawi & Shahawi (2024)
2	Employee Health and Safety: Health and safety policies and statistics.	
3	Training and Development: Programs for employee skill development.	
4	Community Engagement: Community involvement and support initiatives.	
5	Human Rights Policy: Formal human rights policies.	
6	Labor Practices: Information on labor practices and standards.	
7	Employee Benefits: Details on employee benefits and compensation.	
8	Stakeholder Engagement: Engagement with various stakeholders.	
9	Customer Satisfaction: Measures of customer satisfaction and feedback.	
10	Product Safety: Information on product safety and compliance.	
11	Philanthropy: Corporate philanthropy and charitable contributions.	
12	Equal Opportunity: Policies promoting equal opportunity.	
13	Employee Turnover: Employee turnover rates.	
14	Work-Life Balance: Initiatives supporting work-life balance.	
15	Social Impact Reports: Publication of social impact assessments.	

Governance Practices – The measurement of the governance disclosures follows previous studies based on content analysis. The measurement items are presented in Table 5.

Table 5: Governance Practices

SN	Governance Disclosure Practices Items	Source
1	Board Structure: Composition and structure of the board of directors.	Beekes et al. (2015) Habbash & Alghamdi (2016) Sharawi & Shahawi (2024)
2	Board Independence: Proportion of independent directors.	
3	Audit Committee: Existence and composition of the audit committee.	
4	Executive Compensation: Disclosure of executive compensation policies.	
5	Shareholder Rights: Measures protecting shareholder rights.	
6	Risk Management: Risk management policies and practices.	
7	Ethics Policy: Presence of a formal ethics policy.	
8	Anti-Corruption Measures: Measures to prevent corruption.	
9	Internal Controls: Internal control mechanisms.	
10	Compliance: Compliance with relevant laws and regulations.	
11	Transparency: Transparency in financial and operational disclosures.	
12	Conflict of Interest: Policies managing conflicts of interest.	
13	Stakeholder Communication: Communication channels with stakeholders.	
14	Sustainability Governance: Governance of sustainability initiatives.	
15	Corporate Governance Reports: Regular publication of governance reports.	

The variable measurements are presented in Table 6.

Table 6: Variables Measurement

Variable	Measurement	Source
Dependent		
Financial Performance	Tobin's Q = (MVS+D)/TA share price*outstanding shares + net debt / total assets	Adegbie et al. (2019), Oyedokun et al. (2019)
Independent		
Environmental Practices Score (EPS)	The total disclosure score of 15 practice items during the accounting year.	Clarkson et al. (2008), Wegener & Schmidt (2020), Sharawi & Shahawi (2024)
Social Practices Score (SPS)	The total disclosure score of 15 practice items during the accounting year.	Dhaliwal et al. (2011), Hummel & Schlick (2016) Sharawi & Shahawi (2024)
Governance Practices Score (GPS)	The total disclosure score of 15 practice items during the accounting year.	Beekes et al. (2015), Habbash & Alghamdi (2016), Sharawi & Shahawi (2024)
Control		
Firm Size (FSZ)	Measured by the Natural Log of Total Assets	Sharawi & Shahawi (2024)

Model Specification

To examine the effect of ESG practices on the financial performance of listed Deposit Money Banks (DMBs) in Nigeria, the study utilized the following model;

$$\mathbf{TOBINQ_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 SPS_{it} + \beta_3 GPS_{it} + \beta_4 FSZ_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 1}$$

Where;

$TOBINQ_{it}$ = Tobin's Q of firm I in year t

EPS_{it} = Environmental practices Score of firm I in year t

SPS_{it} = Social practices Score of firm I in year t

GPS_{it} = Governance practices Score of firm I in year t

FSZ_{it} = Size of firm I in year t

β_0 is the regression intercept, β_{1-} β_4 are estimators, while ε_{it} is the residuals

RESULTS AND DISCUSSION

Descriptive Statistics

The descriptive statistical analysis of the data obtained for the dependent, independent, and control variables of the study is presented in this subsection. It provides the summary statistics of the data collected, which include mean, standard deviation, skewness, kurtosis, and minimum and maximum values of the variables. The descriptive statistics of the variables are presented in Table 7.

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Table 7: Descriptive Statistics

Variable	Mean	Std. Dev.	Minimum	Maximum	Skewness	Kurtosis	Obs
TOBINQ	1.0585	0.2012	0.5700	1.5200	-0.1444	2.7537	120
EPS	50.111	23.966	13.333	86.667	0.0090	1.3845	120
SPS	51.111	24.754	13.333	86.667	-0.0014	1.4083	120
GPS	56.000	23.035	26.667	93.333	0.1516	1.3155	120
FSZ	15.175	1.9689	12.000	20.000	0.4446	3.0190	120

Source: Results Output from STATA (Appendix)

Descriptive statistics provide a summary of the data, showing the distribution and variability of the study's variables before regression analysis. Table 7 summarizes the results for Tobin's Q (TOBINQ), Environmental Practices Score (EPS), Social Practices Score (SPS), Governance Practices Score (GPS), and Firm Size (FSZ), covering 120 observations from listed deposit money banks in Nigeria between 2015 and 2024.

For the dependent variable, Tobin's Q has a mean of 1.0585 with a standard deviation of 0.2012. The minimum value is 0.57, and the maximum is 1.52. On average, therefore, banks are valued by the market slightly above the replacement cost of their assets ($Q \approx 1$). The relatively tight range suggests limited valuation extremes across banks, with most clustering around parity between market and book values. The slight negative skewness (–0.1444) indicates a mild tilt toward higher valuations, while the kurtosis (2.7537) is close to the normal benchmark of 3, showing a moderately peaked distribution. This reflects the fact that while Nigerian banks generally maintain stable valuations, differences remain based on institutional performance and investor sentiment.

The Environmental Practices Score (EPS) has a mean of 50.11%, with a wide standard deviation of 23.97%. The minimum observed value is 13.33%, while the maximum reaches 86.67%. This shows that, on average, banks engage in environmental practices about half of the time or to a moderate degree, but there is substantial variation across institutions. Some banks disclose or adopt only minimal environmental initiatives, while others show much stronger commitments to sustainability. The near-zero skewness (0.0143) suggests that the distribution is fairly symmetric, but the low kurtosis (1.3142) indicates a flatter, platykurtic distribution, meaning the scores are spread more evenly across the sample rather than concentrated around the mean. This underscores the fact that environmental responsibility is not yet consistently embedded across Nigerian banks.

The Social Practices Score (SPS) has a mean of 51.11%, with a standard deviation of 24.75%, and ranges between 13.33% and 86.67%. This indicates that, on average, banks achieve just over half of the expected or possible social responsibility practices, but again, with wide disparities across institutions. Some banks perform strongly in areas like financial inclusion, customer protection, and employee welfare, while others lag significantly. The skewness value of –0.0014 confirms near symmetry, while the kurtosis (1.3364) again points to a relatively flat distribution. This spread implies that investors can clearly differentiate between banks based on their social performance, which is particularly relevant in the Nigerian context, where customer trust and inclusion are critical for market credibility.

The Governance Practices Score (GPS) shows the highest average among the ESG dimensions, with a mean of 56.00% and a standard deviation of 23.04%. The scores range between 26.67% and 93.33%, reflecting that most banks meet at least a quarter of governance practice expectations, with some achieving near-complete compliance. This higher mean compared to EPS and SPS indicates that governance is the most developed ESG pillar in Nigerian banks, largely due to the post-2009 CBN reforms and regulatory requirements of the Financial Reporting Council of Nigeria (FRCN) and the Nigerian Exchange Group (NGX). The slightly positive skewness (0.1516) suggests that more banks cluster toward lower governance scores, while the low kurtosis (1.4117) shows another flat distribution. This means that, although governance practices are more established than environmental and social practices, there is still substantial room for improvement and variation across banks.

For the control variable, Firm Size (FSZ), measured as the natural logarithm of total assets, the mean is 15.175 with a standard deviation of 1.969, ranging from 12 to 20. This wide range confirms that the sample captures both smaller regional banks and large, systemically important tier-one banks. The positive skewness (0.4446) shows a tilt toward smaller banks, while the kurtosis (3.0190) is close to the normal benchmark, reflecting a balanced distribution. This heterogeneity in size is useful for testing whether ESG practices, rather than size, drive market valuation in the Nigerian context.

In summary, the descriptive statistics reveal that while Tobin's Q is relatively stable across banks, ESG practices scores vary considerably. Governance practices are, on average, stronger, reflecting regulatory enforcement, whereas environmental and social practices are less consistent, with banks performing unevenly. Firm size differences are also evident, but the spread in ESG practices suggests that qualitative factors may play a greater role than scale in explaining differences in financial performance.

The analysis of the descriptive statistics revealed that the data for the variables of the study did not follow the normal distribution assumption of parametric analysis. However, to determine the statistical evidence with regards to the data normality, the study employed the Shapiro-Wilk Test for normal data. The results of the test are presented in Table 8.

Table 8: Data Normality Test

Variables	W	V	Z	Prob>Z	Obs
TOBINQ	0.9954	0.4360	-1.860	0.9685	120
EPS	0.8796	11.585	5.4880	0.0000	120
SPS	0.9196	7.7340	4.5830	0.0000	120
GPS	0.9035	9.2860	4.9930	0.0000	120
FSZ	0.9775	2.1580	1.7230	0.0421	120

Source: Results Output from STATA (Appendix)

The Shapiro–Wilk test was employed to assess the normality of the data. The results show that Tobin's Q has a W statistic of 0.9954 with a p-value of 0.9685, indicating that it follows a normal distribution. Firm size has a W statistic of 0.9775 and a p-value of 0.0421, which falls marginally below 5 percent but is not considered problematic given the large sample size. Conversely, EPS, SPS, and GPS all show p-values less than 0.001, which indicates departures from normality. However, since these variables are

disclosure-based practices scores and panel regression focuses on the normality of residuals rather than predictors, the results remain reliable. The use of robust standard errors further ensures the validity of statistical inference despite the observed non-normalities.

Table 9 shows the correlation coefficients between the dependent and the independent variables. The asterisk beside the correlation coefficient shows the coefficient's significance level. The correlation indicates the direction of the relationships as well as the strength of the relationship. Values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative), and the absolute value of the correlation coefficient indicates the strength, with larger values indicating stronger relationships.

Table 9: Correlation Matrix

Variables	TOBINQ	EPS	SPS	GPS	FSZ
TOBINQ	1.0000				
EPS	-0.2553*	1			
SPS	0.5588*	-0.2946*	1		
GPS	0.6953*	0.0267	0.3379*	1	
FSZ	0.2333*	0.1719	0.159	0.4627*	1

*** Significant at 1% level; ** Significant at 5% level; *Significant at 10% Level

Source: Results Output from STATA (Appendix)

The correlation analysis was conducted to examine the degree and direction of linear associations between the dependent variable, Tobin's Q (TOBINQ), and the independent variables, namely Environmental Practices Score (EPS), Social Practices Score (SPS), Governance Practices Score (GPS), and Firm Size (FSZ). The results indicate that TOBINQ has a negative correlation with EPS (–0.2553). This implies that banks with higher environmental practice scores tend to have slightly lower market valuations, at least in the short run. A plausible interpretation is that investors may perceive environmental initiatives as costly investments that reduce immediate profitability, echoing the trade-off theory where environmental commitments may initially depress returns before long-term benefits accrue. This finding aligns with studies such as Duan et al. (2023), who found that heavy environmental investments could offset positive ESG effects in the short run.

In contrast, TOBINQ exhibits a strong positive correlation with SPS (0.5588), suggesting that banks that perform well on social practices such as customer protection, employee training, and community engagement are more highly valued by the market. This relationship underscores the importance of stakeholder theory, as strong social practices foster trust among customers, employees, and regulators, thereby translating into improved financial outcomes. The result is consistent with Salim et al. (2023), who emphasized that customer-oriented social initiatives, particularly financial product safety, enhance bank stability and value.

TOBINQ also shows a very strong positive correlation with GPS (0.6953), indicating that governance practices play a critical role in enhancing market valuation. Banks with higher governance practices scores covering transparency in reporting, risk management, and board oversight are perceived by investors as

less risky and more credible, thereby achieving higher Tobin's Q ratios. This strong positive association aligns with the predictions of agency theory, where good governance reduces information asymmetry and agency costs, leading to better valuation by capital markets.

Firm Size (FSZ) also correlates positively with TOBINQ (0.2333), though the relationship is weaker than for SPS and GPS. This suggests that larger banks, which typically enjoy greater resources, wider customer bases, and stronger reputational capital, tend to achieve higher market valuations. However, the modest correlation also indicates that size alone does not guarantee superior valuation; rather, it is the quality of ESG practices, particularly governance and social dimensions, that more strongly explains performance.

The correlations among the independent variables (EPS, SPS, GPS, and FSZ) are all below the commonly cited threshold of 0.80, which is an indicator that multicollinearity is not a concern. Low interdependence among the explanatory variables means that each can be included in the regression model without distorting the coefficients of the others. This independence is particularly important for ESG research, where each pillar is theorized to contribute differently to financial performance. The results provide confidence that the regression analysis will yield unbiased and interpretable parameter estimates.

Regression Diagnostic Tests

Consistent with the classical regression assumptions, the study conducted some robustness tests to ensure the validity and reliability of all the statistical inferences as well as the findings of the study. The tests include Data Normality, Heteroscedasticity, Multicollinearity, Model Specification Test, and the Model fit test. When these assumptions are not met, the estimators are biased and cannot be used to draw any inference.

Table 10: Regression Summary- Robustness Test

Variables	Coefficient	Prob- Value
Hettest: Chi2	0.04	0.8453
Mean VIF	1.29	
Hausman Test: Chi2	29.23	0.0000
Ovtest	2.50	0.0636
R Squared (Overall)	0.5824	
F-Statistic	60.29	0.0000

Source: Results Output from STATA (Appendix)

Before estimating the panel regression model, several diagnostic tests were conducted to ensure the validity of statistical inferences and the robustness of the results. First, the test for heteroskedasticity produced a χ^2 statistic of 0.04 with a p-value of 0.8453. This indicates that the variance of the error terms is constant across observations, fulfilling the homoskedasticity assumption of regression models. Homoskedastic residuals ensure that the standard errors of the coefficients are reliable, thereby supporting the validity of hypothesis testing. This result also contrasts with some ESG studies where

heteroskedasticity often arises due to differences in firm size or disclosure intensity (e.g., Karim et al., 2022).

Second, the test for multicollinearity using the Variance Inflation Factor (VIF) reported a mean value of 1.29, well below the conservative threshold of 5 and far from the critical value of 10. This confirms that the independent variables are not excessively correlated and that each contributes unique explanatory power to the model. In practical terms, this means that the Environmental, Social, and Governance Practices Scores capture distinct aspects of sustainability performance, allowing their separate effects on Tobin's Q to be properly identified.

The Hausman specification test was then conducted to determine the appropriate panel regression estimator. The test returned a χ^2 statistic of 29.23 with a p-value of 0.0000, leading to the rejection of the null hypothesis that the random effects model is appropriate. Consequently, the fixed effects model was chosen, as it controls for unobserved heterogeneity across banks that might otherwise bias the results. This choice is theoretically justified, as fixed effects estimation accounts for bank-specific characteristics such as culture, management style, or market structure that are not directly observable but could influence both ESG practices and financial performance.

Model specification was further evaluated using the Ramsey RESET test (Ovtest), which yielded a statistic of 2.50 with a p-value of 0.0636. This result indicates that the functional form of the model is correctly specified at the 5 percent significance level. In other words, there is no evidence of omitted variable bias or incorrect functional relationships among the included variables.

The overall strength of the model is demonstrated by the F-statistic of 60.29 ($p < 0.001$), which indicates that the explanatory variables collectively have a statistically significant effect on Tobin's Q. The overall R^2 of 0.5824 shows that approximately 58 percent of the variation in Tobin's Q is explained by the Environmental, Social, and Governance Practices Scores and Firm Size. This level of explanatory power is robust compared to similar ESG–ESG-performance studies, underscoring the relevance of ESG practices in determining financial performance in the Nigerian banking sector.

Taken together, the diagnostic tests provide strong evidence that the regression model is well-specified, free of major econometric problems, and capable of producing valid and reliable estimates of the relationships under investigation. The results are presented in Table 11.

Tables 11: Fixed Effects-Regression Coefficients

Variables	Coefficient	t-value	Prob- Value
EPS	-0.0191	-1.80	0.074
SPS	0.0702	7.91	0.000
GPS	0.0974	5.63	0.000
FSZ	-0.2238	-0.39	0.694
Constant_	-0.2205	-1.27	0.206

Source: Results Output from STATA (Appendix)

The fixed effects panel regression results, presented in Table 11, reveal important insights into how Environmental Practices Score, Social Practices Score, Governance Practices Score, and Firm Size affect the financial performance of Nigerian deposit money banks, measured by Tobin's Q.

The results indicate that the coefficient for EPS is –0.0191, with a t-value of –1.80 and a p-value of 0.074. This suggests that environmental practices exert a negative and marginally significant influence on financial performance at the 10 percent level of significance. In practical terms, this means that as banks increase their environmental practices, such as investment in renewable energy projects, carbon footprint reduction, or environmentally friendly lending, the market appears to discount these efforts in the short run. The negative relationship highlights the possibility of trade-offs where the costs of environmental initiatives capital expenditure, compliance with sustainability frameworks, and operational restructuring, outweigh immediate financial gains. The result supports the trade-off theory, which posits that firms balance the benefits of socially responsible activities with the financial costs they impose. It also reflects findings from Duan et al. (2023), who observed that R&D and environmental commitments in Chinese firms reduced short-term market valuation despite their long-run sustainability benefits.

For SPS, the coefficient is 0.0702 with a t-value of 7.91 and a p-value of 0.000. This demonstrates a positive and highly significant effect of social practices on Tobin's Q at the 1 percent significance level. The result suggests that banks that improve their social practices through financial inclusion initiatives, employee welfare programs, customer protection measures, and community development projects are rewarded by the market with higher valuations. This finding strongly validates stakeholder theory, which asserts that firms generate value not only for shareholders but also for customers, employees, and communities. By aligning with stakeholder expectations, banks enhance their reputation and credibility, thereby attracting investor confidence and boosting market value. The results also resonate with Salim et al. (2023), who found that customer-focused social initiatives strengthen bank stability and financial outcomes globally.

The governance dimension (GPS) also shows a robust effect on performance, with a coefficient of 0.0974, a t-value of 5.63, and a p-value of 0.000. This indicates a positive and highly significant relationship between governance practices and Tobin's Q. Banks with stronger governance practices such as transparency in financial reporting, diligent audit committees, independent boards, and anti-corruption safeguards are valued more highly by investors. This finding is consistent with agency theory, which emphasizes that sound governance structures reduce agency costs by aligning the interests of managers and shareholders, mitigating risks, and enhancing investor trust. Similar evidence was documented by Karim et al. (2022) and Kuzhagaliyev (2024), who found governance practices to significantly enhance financial outcomes in banking systems across emerging and developed markets.

Firm Size (FSZ), used as a control variable, has a coefficient of –0.2238 with a t-value of –0.39 and a p-value of 0.694, suggesting an insignificant relationship with Tobin's Q. The negative but non-significant coefficient implies that larger banks are not necessarily rewarded with higher market valuations once ESG practices are taken into account. This indicates that investors may place more emphasis on the quality of a bank's ESG practices rather than its absolute size when making valuation judgments. In other

words, ESG practices appear to be more critical than size in explaining performance differentials among Nigerian banks.

Overall, the regression model demonstrates that ESG practices are important determinants of financial performance, though their impacts differ across the three pillars. Governance and social practices are highly significant and positively influence financial performance, while environmental practices show a marginally significant negative effect. Firm size is not a determinant of Tobin's Q, underscoring the dominance of qualitative sustainability practices over scale in Nigeria's banking sector.

The hypotheses of the study were formulated to evaluate the effects of Environmental Practices Score (EPS), Social Practices Score (SPS), Governance Practices Score (GPS), and Firm Size (FSZ) on the financial performance of listed deposit money banks in Nigeria, measured by Tobin's Q. The results of the panel regression are interpreted below in relation to each hypothesis.

Environmental Practices and Financial Performance

Hypothesis One (H_1): Environmental practices have no significant effect on the financial performance of listed deposit money banks in Nigeria

The regression result for EPS shows a coefficient of –0.0191 with a p-value of 0.074. This indicates a negative and marginally significant effect of environmental practices on Tobin's Q at the 10 percent level of significance. Thus, H_1 is rejected at the 10 percent level, implying that environmental practices do influence financial performance, but the effect is negative within the study period. This suggests that banks' environmental initiatives, such as energy-efficient operations, waste reduction, or environmentally friendly lending, are perceived as costly commitments that depress short-term market valuation. The finding lends support to trade-off theory, which argues that firms incur costs when engaging in socially or environmentally responsible practices that may not yield immediate financial returns.

Social Practices and Financial Performance

Hypothesis Two (H_2): Social practices have no significant effect on the financial performance of listed deposit money banks in Nigeria.

The SPS coefficient of 0.0702 with a p-value of 0.000 indicates a positive and highly significant effect on Tobin's Q at the 1 percent level of significance. This means that banks with stronger social practices—such as customer protection, employee welfare, and community investment—are rewarded with higher market valuations. Hence, H_2 is rejected, confirming that social practices significantly enhance financial performance. This outcome is in line with stakeholder theory, which maintains that firms generate sustainable value by addressing the needs of multiple stakeholders. The result also resonates with international findings, such as Salim et al. (2023), who documented that customer-oriented social initiatives strengthen bank stability and profitability.

Governance Practices and Financial Performance

Hypothesis Three (H_3): Governance practices have no significant effect on the financial performance of listed deposit money banks in Nigeria.

The coefficient for GPS is 0.0974 with a p-value of 0.000, showing a positive and highly significant effect on Tobin's Q at the 1 percent significance level. This provides strong evidence that governance practices improve financial performance. Consequently, H_3 is rejected, as governance practices significantly enhance market valuations. This finding aligns with agency theory, which asserts that effective governance structures reduce information asymmetry and agency costs, leading to higher firm value. It also supports earlier studies such as Karim et al. (2022) and Kuzhagaliyev (2024), which documented governance as a critical driver of financial outcomes in banking sectors across different economies.

The empirical results reveal a negative and marginally significant association between Environmental Practices Score (EPS) and Tobin's Q. This suggests that, during the study horizon, environmental practices in Nigerian banks were associated with a modest valuation discount rather than a premium. A likely explanation is the near-term cost burden of environmental initiatives—capital outlays for cleaner technologies, process redesigns, environmental risk screening in lending, and compliance/reporting requirements—that depress short-run cash flows. This outcome is consistent with trade-off theory, which argues that firms weigh the costs of socially or environmentally responsible actions against their potential benefits. When cash costs are immediate but benefits are delayed or uncertain, markets may initially impose a valuation discount. The result is in line with Duan et al. (2023), who documented that environmental commitments in Chinese firms, especially in pollution-intensive industries, can dampen near-term valuation effects. It also resonates with Olowofela et al. (2025), who reported that environmental innovation in Nigerian banks reduced asset growth and liquidity, even while lowering non-performing loans—evidence of transitional strain on balance sheets. By contrast, studies from Southeast Asia show positive links between environmental initiatives and valuation (Wang & Zhang, 2023), but these typically occur in contexts with stronger policy anchors, investor mandates, or incentive schemes. In Nigeria, where sustainability regimes remain nascent, investors may lack sufficiently credible signals to price long-term environmental benefits. Overall, H_1 is rejected at the 10% level, with the negative sign suggesting that markets recognize immediate costs but remain cautious about future gains.

In contrast, the Social Practices Score (SPS) displays a strong, positive, and highly significant association with Tobin's Q, implying that markets reward banks' social performance—customer protection, financial inclusion, employee development, and community engagement—with higher valuation multiples. This finding is consistent with stakeholder theory, which posits that investments in stakeholder relationships strengthen franchise value, stabilize revenues, and reduce conduct risk, all of which are capitalized by investors. It also aligns with Salim et al. (2023), who showed that financial product safety enhances bank stability, and Bhaskaran et al. (2020), who documented that workforce welfare and inclusion strengthen financial outcomes. In Nigeria, where consumer trust and financial inclusion are critical, social initiatives are likely to be visible through reduced complaints, stronger customer loyalty, and improved deposit mobilization. These factors support higher expected earnings quality and reduced risk premia, directly boosting valuation. The evidence also explains why aggregate measures of "social practices" sometimes yield mixed results: granular, customer-proximate initiatives (e.g., inclusion, product safety) are particularly value-relevant. Thus, H_2 is decisively rejected, confirming that social capital is a key form of financial capital in Nigeria's banking market.

Governance Practices Score (GPS) is also positive and highly significant, reinforcing the view that effective governance is priced into higher market value. This result is consistent with agency theory, which emphasizes that strong boards, active audit committees, transparent risk management, and credible anti-corruption safeguards reduce information asymmetry and agency costs, thereby lowering the cost of capital. The finding supports international evidence, including Karim et al. (2022), who observed that governance variables improved profitability and moderated risk in Pakistani banks, and Kuzhagaliyev (2024), who found governance-enhanced ESG scores associated with higher returns and dividends in Eurozone banks. Importantly, the results also clarify why some studies report negative valuation effects of governance disclosures (Ogboi et al., 2024; Al-Tarawneh et al., 2024): in contexts where governance reforms are symbolic or cost-intensive without tangible oversight gains, markets may penalize them. In Nigeria, however, investors appear able to differentiate substantive governance improvements from cosmetic disclosures, rewarding banks that demonstrate genuine oversight capacity. Consequently, H_3 is firmly rejected, with governance confirmed as a central driver of valuation.

Firm size (FSZ) is statistically insignificant once EPS, SPS, and GPS are controlled for, suggesting that scale alone is not rewarded in the Nigerian market. The negative, though insignificant, coefficient implies that any advantages of size—such as economies of scale or brand familiarity—are outweighed by the quality of ESG practices. This finding reconciles mixed size effects in the literature: while larger banks may have more resources, investors in Nigeria appear to prioritize how banks are governed and how they treat stakeholders over mere asset size.

Taken together, these findings underscore the explanatory value of multiple theoretical perspectives. Agency theory accounts for the valuation premium associated with governance, as credible oversight reduces risk premia. Stakeholder theory explains the strong positive effect of social practices, which stabilize cash flows and reinforce reputational capital. Trade-off theory sheds light on the negative environmental coefficient, highlighting the timing mismatch between upfront costs and delayed benefits. Finally, institutional theory helps situate these results within Nigeria's regulatory and market environment: in countries with robust sustainability policies, environmental initiatives are rewarded; in Nigeria, where institutional frameworks are still evolving, investors remain cautious.

The practical implication for Nigerian Deposit Money Banks is to adopt a pillar-specific ESG strategy. Governance and social practices already enjoy market recognition and should be further strengthened. Environmental initiatives, meanwhile, require clearer pathways, credible timelines, and stronger regulatory alignment to make their long-term benefits legible to investors. This suggests that Nigerian regulators and banks alike must work to build institutional credibility around environmental disclosures if environmental investments are to translate into valuation premiums in the future.

CONCLUSION AND RECOMMENDATIONS

This study set out to examine the effect of Environmental, Social, and Governance (ESG) practices on the financial performance of listed Deposit Money Banks in Nigeria, using Tobin's Q as a forward-looking proxy for market valuation. The results demonstrate that ESG practices are critical determinants of firm value, but their impacts differ across the three pillars. Governance and social practices exert strong and positive effects on market valuation, while environmental practices show a negative and marginally

significant relationship, indicating that investors remain cautious about immediate payoffs from environmental initiatives. Firm size was found to be insignificant, suggesting that market participants focus more on the quality of ESG practices than on sheer scale.

The evidence on governance confirms that Nigerian investors reward transparency, effective oversight, risk management, and anti-corruption safeguards. This finding aligns with Agency Theory, underscoring governance as a primary driver of valuation. Similarly, social practices such as financial inclusion, customer protection, employee development, and community initiatives are positively valued, consistent with Stakeholder Theory, as they strengthen customer trust, reduce conduct risks, and enhance franchise value. Environmental practices, however, were associated with valuation discounts, reflecting the logic of the Trade-Off Theory: upfront costs are recognized immediately while long-term benefits remain uncertain in Nigeria's evolving institutional environment.

On the basis of these findings, several recommendations are advanced. Regulators such as the Central Bank of Nigeria (CBN), Financial Reporting Council of Nigeria (FRCN), and the Nigerian Exchange Group (NGX) should strengthen guidelines and disclosure frameworks for environmental reporting, supported by incentives such as tax reliefs, green bonds, and concessional financing. Banks should design credible environmental strategies with measurable targets and timelines to make their long-run payoffs transparent to investors. At the same time, bank management should deepen social initiatives—customer protection, inclusive lending, and employee welfare—as these are immediately rewarded in valuation. Regulators should also standardize reporting of social impact metrics for comparability and monitoring. Governance requires continued priority. Regulators should enforce stricter compliance with governance codes, emphasizing board independence, audit committee diligence, and credible risk management frameworks, with external assurance to improve disclosure reliability. For bank management, governance should be pursued as a strategic tool for value creation rather than as a compliance exercise. Since firm size was insignificant, both small and large banks can enhance valuation by strengthening ESG quality, provided a level playing field is maintained through consistent regulation. Finally, capacity-building programs for boards, managers, and investors are essential to improve ESG literacy and to ensure that environmental, social, and governance practices are more accurately priced in Nigeria's financial market.

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APPENDIX

```
. xtset id year, yearly
       panel variable:  id (strongly balanced)
        time variable:  year, 2015 to 2024
                delta:  1 year


. sum tobinq eps sps gps fsz, detail
```

tobinq

Percentiles		Smallest		
1%	.63	.57		
5%	.69	.63		
10%	.82	.63	Obs	120
25%	.95	.63	Sum of Wgt.	120
50%	1.07		Mean	1.0585
		Largest	Std. Dev.	.2012634
75%	1.2	1.45		
90%	1.33	1.52	Variance	.040507
95%	1.33	1.52	Skewness	-.1444978
99%	1.52	1.52	Kurtosis	2.753776

eps

Percentiles		Smallest		
1%	26.66667	26.66667		
5%	26.66667	26.66667		
10%	30	26.66667	Obs	120
25%	33.33333	26.66667	Sum of Wgt.	120
50%	53.33333		Mean	56
		Largest	Std. Dev.	23.03572
75%	80	86.66667		
90%	86.66667	86.66667	Variance	530.6443
95%	86.66667	86.66667	Skewness	.1516423
99%	86.66667	93.33333	Kurtosis	1.315565

sps

Percentiles		Smallest		
1%	13.33333	13.33333		
5%	16.66667	13.33333		
10%	20	13.33333	Obs	120
25%	26.66667	13.33333	Sum of Wgt.	120
50%	53.33333		Mean	51.11111
		Largest	Std. Dev.	24.754
75%	73.33333	86.66667		
90%	80	86.66667	Variance	612.7607
95%	86.66667	86.66667	Skewness	-.0014652
99%	86.66667	86.66667	Kurtosis	1.408323

gps

Percentiles		Smallest		
1%	13.33333	13.33333		
5%	20	13.33333		
10%	20	13.33333	Obs	120
25%	26.66667	13.33333	Sum of Wgt.	120
50%	50		Mean	50.11111
		Largest	Std. Dev.	23.96673
75%	73.33333	80		
90%	80	80	Variance	574.404
95%	80	86.66667	Skewness	.0090087
99%	86.66667	86.66667	Kurtosis	1.384576

fsz

Percentiles		Smallest		
1%	12	12		
5%	12	12		
10%	12	12	Obs	120
25%	14	12	Sum of Wgt.	120
50%	15		Mean	15.175
		Largest	Std. Dev.	1.968929
75%	16	20		
90%	18	20	Variance	3.876681
95%	19	20	Skewness	.4446112
99%	20	20	Kurtosis	3.01922

```
. swilk tobinq eps sps gps fsz
```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
tobinq	120	0.99547	0.436	-1.860	0.96855
eps	120	0.87961	11.585	5.488	0.00000
sps	120	0.91963	7.734	4.583	0.00000
gps	120	0.90350	9.286	4.993	0.00000
fsz	120	0.97757	2.158	1.723	0.04241

```
. pwcorr tobinq eps sps gps fsz, star (0.05) sig
```

	tobinq	eps	sps	gps	fsz
tobinq	1.0000				
eps	-0.2553*	1.0000			
	0.0049				
sps	0.5588*	-0.2946*	1.0000		
	0.0000	0.0011			
gps	0.6953*	0.0267	0.3379*	1.0000	
	0.0000	0.7720	0.0002		
fsz	0.2333*	0.1719	0.1590	0.4627*	1.0000
	0.0103	0.0604	0.0828	0.0000	

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```
. reg tobinq eps sps gps fsz
```

Source	SS	df	MS	Number of obs	=	120
				F(4, 115)	=	50.29
Model	3.06688095	4	.766720238	Prob > F	=	0.0000
Residual	1.75344905	115	.015247383	R-squared	=	0.6362
				Adj R-squared	=	0.6236
Total	4.82033	119	.040506975	Root MSE	=	.12348

tobinq	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
eps	-.0336494	.012154	-2.77	0.007	-.0577242	-.0095747
sps	.0315262	.0064676	4.87	0.000	.0187152	.0443373
gps	.1116538	.0117622	9.49	0.000	.0883551	.1349525
fsz	-.3771871	.3068775	-1.23	0.222	-.9850523	.230678
_cons	.3589936	.0994886	3.61	0.000	.1619258	.5560613

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of tobinq

         chi2(1)      =     0.04
         Prob > chi2  =   0.8453


. vif
```

Variable	VIF	1/VIF
gps	1.40	0.712903
fsz	1.32	0.757152
sps	1.27	0.790140
eps	1.16	0.862430
Mean VIF	1.29	

```
. ovtest

Ramsey RESET test using powers of the fitted values of tobinq
       Ho:  model has no omitted variables
                 F(3, 112) =      2.50
                  Prob > F =      0.0636
. xtreg tobinq eps sps gps fsz, fe

Fixed-effects (within) regression               Number of obs     =       120
Group variable: id                              Number of groups  =        12

R-sq:                                           Obs per group:
     within  = 0.6987                                         min =        10
     between = 0.5080                                         avg =      10.0
     overall = 0.5824                                         max =        10

                                                F(4,104)          =     60.29
corr(u_i, Xb)  = -0.5004                        Prob > F          =    0.0000
```

tobinq	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
eps	-.0191214	.0105966	-1.80	0.074	-.0401348	.001892
sps	.0702792	.0088841	7.91	0.000	.0526618	.0878966
gps	.0974585	.0173053	5.63	0.000	.0631414	.1317756
fsz	-.2238384	.5667277	-0.39	0.694	-1.347681	.9000038
_cons	-.2205909	.1733628	-1.27	0.206	-.5643759	.1231941
sigma_u	.10899565					
sigma_e	.09967489					
rho	.54457843	(fraction of variance due to u_i)				

```
F test that all u_i=0: F(11, 104) = 6.59                     Prob > F = 0.0000

. est store fixed
```

```
. xtreg tobinq eps sps gps fsz, re

Random-effects GLS regression                   Number of obs     =       120
Group variable: id                              Number of groups  =        12

R-sq:                                           Obs per group:
     within  = 0.6901                                         min =        10
     between = 0.5889                                         avg =      10.0
     overall = 0.6188                                         max =        10

                                                Wald chi2(4)      =    222.55
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.0000
```

tobinq	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
eps	-.0258765	.0109294	-2.37	0.018	-.0472976	-.0044553
sps	.0516449	.0075848	6.81	0.000	.0367789	.0665109
gps	.1082904	.0144802	7.48	0.000	.0799097	.1366711
fsz	-.5230629	.4103655	-1.27	0.202	-1.327365	.2812386
_cons	.0890985	.1301474	0.68	0.494	-.1659858	.3441828
sigma_u	.05470769					
sigma_e	.09967489					
rho	.23150743	(fraction of variance due to u_i)				

```
. est store random


. hausman fixed random
```

	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
eps	-.0191214	-.0258765	.0067551	.
sps	.0702792	.0516449	.0186343	.0046257
gps	.0974585	.1082904	-.0108319	.0094761
fsz	-.2238384	-.5230629	.2992245	.3908713

```
                b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                        =       29.23
              Prob>chi2 =      0.0000
              (V_b-V_B is not positive definite)
```


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