

CORPORATE GOVERNANCE MECHANISMS AND THE LIKELIHOOD OF CORPORATE SUSTAINABILITY REPORTING: EVIDENCE FROM LISTED FINANCIAL INSTITUTIONS IN EMERGING ECONOMIES

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Abstract

This study examines the influence of corporate governance mechanisms on the likelihood of corporate social disclosure among listed financial institutions in Nigeria. Using panel data from 25 deposit money banks over the period 2005 to 2024, the study employs a binary probit regression model to estimate the probability of disclosure based on key governance attributes, including audit committee strength, board size, foreign board membership, and financial expertise. The findings reveal that board size exerts a positive and statistically significant effect on disclosure likelihood, suggesting that larger boards enhance transparency through diverse expertise and improved monitoring capacity. In contrast, audit committee strength shows a negative and significant relationship, indicating that excessive monitoring may discourage voluntary disclosure due to risk aversion and compliance-oriented behavior. Foreign board membership and financial expertise exhibit positive but insignificant effects, reflecting structural and institutional constraints within the Nigerian context. The results further demonstrate strong model performance and significant differences between disclosing and non-disclosing firms, confirming the robustness of the empirical approach. The study contributes to the literature by providing evidence from an emerging market and highlighting the nuanced role of governance mechanisms in shaping sustainability reporting practices. Policy implications emphasize the need for regulatory reforms that strengthen governance structures, promote standardized reporting frameworks, and enhance sustainability oversight.

Keywords: Corporate Governance, Sustainability Reporting, Social Disclosure, Probit Model, Financial Institutions, Nigeria.

1.0 Introduction

Social disclosures have become essential for companies across the globe. This is largely due to depleting earth resources and environmental degradation, climate alteration and inequitable societal standards caused by activities of humans, which have negative consequences on worker welfare and environmental policies. Global leaders continuous met to initiate program and policies that would reverse these existential threats. The meeting of the World Commission on Environment and Development in 1987 set a pace for such sustainability movement, and the most recent was held in Glasgow in November 2021. They have continually pursued how to balance intergenerational needs target to achieve sustainability development – that is how meeting the needs of the present generation would not compromise the ability of future generations to meet their own needs. Moreso, they stressed the need for companies to be responsible by benefiting the broader community while creating value for shareholders (Okoba & Chukwu, 2023).

Companies in developed and developing nations have been charged with the responsibility of sustainability reporting due to the nature of their works or the volume of activities involved in their production process. This includes the social reporting of their negative and positive impacts on employees and customers. Such information associated with their operations such as injury rate, occupational diseases and work-related fatalities, as well as information on preventive

programs including risk-control and training, to guide investors and other stakeholders who seek commit their fund to projects supporting sustainability objectives in making informed choices (European Commission (EU), 2024). The organizations are expected to report the social information using the sustainability reporting standards such as those set forth by the Task Force on Climate related Financial Disclosure (TCFD), Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB) and Carbon Disclosure Project (CDP).

This non-disclosure of social information is becoming persistent. Global evidence suggests the need for this disclosure in the financial sector. European Commission (2024) places a transparency framework, refer as the Sustainability Finance Disclosure Regulation (SFDR), which direct how financial markets on disclosing sustainability information. SFDR, which contributes to the Europe's political objectives, allows funders to assess how sustainability risks are unified in the investment decision process, and helps the EU ensure a shift to a net-zero economy

For Nigeria, the integration of environmental, social, and governance aspects into the activities has become increasingly important. Despite this, only 15% of industrial products companies, including Lafarge and Dangote Cement, released information on their sustainability reporting and are mostly on manufacturing evidence (Abdulrasheed, 2022). Because the financial sector in Nigeria plays a critical role in the economy by promoting capital raising, investment, and economic growth, there is the need to examine the disclose evidence for the sector. Although sustainability reporting is especially necessary for production firms, such as manufacturing companies, that engage in pollution activities firms (Okoba & Chukwu, 202), but the sustainability performance reporting have been extended to other firms, including financial sectors (Islam et al., 2020).

Research has demonstrated that amongst other factors that impact social sustainability disclosure corporate governance, is necessary for sustainable company's operations and appropriate documentations of accounting reporting (Oyerogba et al., 2024;Ullah et al., 2019). The governance and sustainability disclosure requirements are essential tools for promoting transparency, responsibility, and ethical business practices. For instance, sustainable and ecologically friendly technologies can be given priority by organizations with a strong board of directors' corporate governance framework (Islam et al., 2020). Despite the global awareness of sustainability issues little is known on the connections between sustainability disclosure practices and governance framework (Islam et al., 2020; Wang & Sun, 2022; Bufarwa et al., 2020; Nguyen, 2020). This study aims to investigate how corporate governance influences the likelihood of social disclosure amongst financial firms in Nigeria.

2. Materials

Corporate sustainability reporting has gained significant scholarly attention as firms increasingly respond to stakeholder pressure for transparency, accountability, and responsible business practices. Prior literature establishes that sustainability disclosure is shaped by a combination of governance structures, institutional pressures, and firm-specific characteristics. From a legitimacy theory perspective, firms enhance disclosure to align with societal expectations and maintain organizational legitimacy (Islam et al., 2020; Akhter et al., 2022). Similarly, resource-based and agency perspectives suggest that governance mechanisms such as boards and audit

committees play critical roles in reducing information asymmetry and improving reporting quality (Fahad & Rahman, 2020; Kaawaase et al., 2021). Recent evidence further shows that sustainability reporting is not only a compliance mechanism but also a strategic tool that enhances stakeholder trust and long-term performance (Krasodomska, 2025; Singh et al., 2026). Collectively, these studies highlight that disclosure decisions are multidimensional, influenced by both internal governance systems and external institutional environments, thereby justifying continued empirical investigation into their determinants.

Board structure remains one of the most widely studied determinants of sustainability reporting. Empirical findings suggest that board composition, size, and diversity significantly influence the extent and quality of disclosure. Nguyen (2020) demonstrates that boards with broader oversight capacity tend to promote more comprehensive sustainability reporting, while Sundarasan (2024) confirms that board diversity enhances disclosure through improved monitoring and varied expertise. In emerging markets, Oyerogba et al. (2024) find that governance practices significantly improve sustainability reporting quality among financial institutions, reinforcing the importance of effective board oversight. Furthermore, Ebenezer Ariyibi et al. (2021) show that corporate governance structures positively affect firm performance, indirectly supporting enhanced transparency incentives. Bufarwa et al. (2020) also emphasize that diversity-related governance attributes strengthen disclosure practices by improving accountability mechanisms. These findings collectively suggest that board characteristics are central to shaping disclosure outcomes, particularly in environments where regulatory enforcement may be weak, thereby reinforcing governance theory predictions.

Audit committee effectiveness has been identified as a critical governance mechanism influencing sustainability reporting outcomes. Adegboye et al. (2020) find that audit committee characteristics significantly affect sustainability performance in Nigerian banks, highlighting their monitoring role in enhancing accountability. Similarly, Buallay and Al-Ajmi (2020) demonstrate that audit committee attributes positively influence sustainability reporting in GCC banking institutions. Pozzoli et al. (2022) extend this evidence by showing that audit committee effectiveness enhances ESG performance across European firms, even during periods of crisis such as COVID-19. Wang and Sun (2022) further confirm that audit committees play a significant role in environmental and social disclosures within the energy sector. However, Bischof et al. (2022) argue that overly risk-averse audit functions may sometimes constrain voluntary sustainability disclosures. This dual role suggests that audit committees can either enhance or limit reporting depending on their mandate and orientation, making them a complex governance tool in sustainability reporting frameworks.

Foreign board membership and international exposure have also been widely recognized as determinants of sustainability disclosure practices. Aksan and Gantowati (2020) find that firms with foreign board members are more likely to issue sustainability reports due to exposure to global reporting standards. Bertrand et al. (2021) similarly show that foreign CEOs improve corporate social performance by introducing international governance practices and ethical standards. These findings suggest that global experience enhances firms' responsiveness to stakeholder expectations and regulatory developments. However, institutional constraints in developing economies may limit the effectiveness of foreign directors in influencing disclosure outcomes. Akhter et al. (2022) emphasize that environmental disclosure practices are still

strongly shaped by domestic legitimacy pressures, which may override international governance influences. Thus, while foreign board participation is generally associated with improved sustainability reporting, its effectiveness depends on the institutional environment and enforcement mechanisms present in each country context.

Corporate sustainability reporting is also closely linked to financial performance and broader corporate outcomes. Girón et al. (2020) provide evidence that sustainability reporting is positively associated with firms' economic performance across Asia and Africa, suggesting that transparency enhances investor confidence and resource allocation efficiency. Kabir Ibrahim et al. (2021) similarly find that sustainability reporting improves financial performance in Nigerian oil and gas firms, reinforcing the strategic value of disclosure. Donatus et al. (2023) further show that sustainability practices contribute to improved financial outcomes among listed non-financial firms in Nigeria. These findings indicate that sustainability reporting is not merely a compliance exercise but a value-enhancing activity. In addition, Hidah and Sedana (2021) highlight that corporate governance indirectly improves performance through CSR and earnings management mechanisms. Together, these studies suggest that firms may be incentivized to improve disclosure not only for legitimacy reasons but also for long-term financial gains.

Institutional and regulatory frameworks significantly shape sustainability reporting practices across countries. The European Commission (2024) emphasizes the importance of standardized disclosure requirements in enhancing comparability and transparency within financial markets. Turzo et al. (2024) highlight the evolving role of Global Reporting Initiative standards in harmonizing sustainability reporting globally. Similarly, Kassier (2024) documents transitions in sustainability reporting practices, showing increasing convergence toward standardized frameworks. Olayinka (2021) and Oyerogba et al. (2024) provide evidence that governance reforms in Nigeria significantly influence economic sustainability reporting practices. These findings collectively indicate that regulatory environments play a central role in shaping disclosure behavior. Moreover, Sebastião (2024) notes that sustainability reporting continues to evolve, facing challenges related to consistency, credibility, and comparability. This underscores the importance of continuous policy refinement and institutional strengthening to ensure effective sustainability reporting systems.

Recent developments in sustainability reporting literature increasingly emphasize technological innovation and methodological advancements. Anaraki et al. (2025) highlight the growing role of large language models in enhancing sustainability reporting processes, particularly in automating disclosure analysis and improving reporting accuracy. Safas and Khan (2026) further demonstrate that ESG disclosure frameworks are becoming more standardized through bibliometric mapping and analytical tools. Sundarasan (2026) emphasizes that governance and disclosure drivers are increasingly being studied using advanced econometric and analytical methods. Jamaan (2026) similarly shows that firm characteristics significantly influence sustainability reporting likelihood using probabilistic models. These studies indicate a shift toward data-driven sustainability reporting research, where computational tools enhance both analysis and reporting quality. This technological evolution is expected to significantly transform how firms prepare, analyze, and communicate sustainability information in the future.

Overall, the literature demonstrates that sustainability reporting is shaped by a complex interaction of governance mechanisms, institutional pressures, financial incentives, and

technological advancements. Legitimacy theory remains central in explaining disclosure behavior, as firms seek to align with societal expectations and regulatory demands (Islam et al., 2020; Akhter et al., 2022). Governance structures, particularly boards and audit committees, consistently emerge as key drivers of disclosure quality and likelihood (Adegboye et al., 2020; Nguyen, 2020; Oyerogba et al., 2024). At the same time, international exposure, institutional frameworks, and technological innovations increasingly influence reporting practices (Aksan & Gantayowati, 2020; Turzo et al., 2024; Anaraki et al., 2025). Despite substantial progress, inconsistencies remain in findings across contexts, particularly in emerging economies, highlighting the need for further empirical investigation. This study therefore contributes to the literature by integrating governance and institutional perspectives to better understand sustainability reporting dynamics in developing country contexts.

3. Methodology

This study investigates the influence of corporate governance mechanisms on the likelihood of corporate social disclosure among financial institutions in Nigeria using a panel dataset of 25 deposit money banks listed on the Nigerian Exchange Group over the period 2005–2024. Data were sourced from the annual reports and accounts of the sampled firms, which provide consistent information on governance attributes and disclosure practices. The focus on the banking sector reflects its regulatory sensitivity and increasing demand for transparency and sustainability reporting in emerging markets (Oyerogba et al., 2024; Olayinka, 2021).

The study models the likelihood of disclosure using a binary dependent variable SD_{it} , which takes the value of 1 if firm i discloses social sustainability information in year t , and 0 otherwise. This operationalization aligns with the Global Reporting Initiative framework and prior empirical studies grounded in legitimacy theory, which posit that firms disclose social information to align with stakeholder expectations and institutional pressures (Islam et al., 2020; Akhter et al., 2022). To estimate this relationship, the study adopts a probit regression model following Nguyen, where the conditional probability of disclosure is expressed as:

$$P(SD_{it} = 1 | X_{it}) = \Phi(Z_{it}) \quad (1)$$

$$Z_{it} = \beta_0 + \beta_1 Audit_{it} + \beta_2 Board_{it} + \beta_3 Foreign_{it} + \beta_4 Expert_{it} + \varepsilon_{it} \quad (2)$$

$$\Phi(Z_{it}) = \int_{-\infty}^{Z_{it}} \frac{1}{\sqrt{2\pi}} e^{-\frac{z^2}{2}} dz \quad (3)$$

where $\Phi(\cdot)$ represents the cumulative distribution function (CDF) of the standard normal distribution, Z_{it} is the latent variable, and X_{it} denotes the vector of explanatory variables. The use of the probit model is appropriate because the dependent variable is dichotomous, and ordinary least squares (OLS) would yield biased and inconsistent estimates due to the non-linearity of the probability function.

The explanatory variables consist of key corporate governance attributes. Audit committee strength ($Audit_{it}$) reflects the monitoring capacity of the board and is expected to enhance disclosure quality through improved oversight (Adegboye et al., 2020; Buallay & Al-Ajmi, 2020). Board size ($Board_{it}$) captures the breadth of expertise and monitoring effectiveness, with larger boards potentially improving disclosure through diverse perspectives (Nguyen, 2020; Sundarasan, 2024). Foreign board membership ($Foreign_{it}$) measures the extent of international representation, which is associated with higher disclosure due to exposure to global best practices (Bertrand et al., 2021; Aksan & Gantayowati, 2020). Financial expertise ($Expert_{it}$)

represents the number of directors with accounting or financial knowledge, which strengthens internal controls and promotes transparency (Kaawaase et al., 2021). These variables collectively capture governance quality and its influence on disclosure decisions.

Prior to estimation, the study conducts preliminary statistical and diagnostic analyses. Descriptive statistics, including mean, median, standard deviation, skewness, and kurtosis, are computed to examine the distributional properties of the variables, alongside the Jarque–Bera statistic defined as:

$$JB = \frac{n}{6} \left(S^2 + \frac{(K-3)^2}{4} \right) \quad (4)$$

where S and K denote skewness and kurtosis, respectively, and n is the sample size. The results indicate deviations from normality, justifying the adoption of a non-linear estimation approach. Correlation analysis is also performed to assess the degree of association among variables.

To address potential multicollinearity, the study employs the Variance Inflation Factor (VIF), computed as:

$$VIF_j = \frac{1}{1-R_j^2} \quad (5)$$

where R_j^2 is the coefficient of determination obtained from regressing predictor j on all other explanatory variables. The reported VIF values are below the conventional threshold of 10, indicating the absence of harmful multicollinearity and confirming the suitability of the variables for regression analysis (Fahad & Rahman, 2020).

The probit model is estimated using Maximum Likelihood Estimation (MLE), which maximizes the log-likelihood function:

$$\ln L = \sum_{i=1}^n [SD_i \ln \Phi(Z_i) + (1 - SD_i) \ln (1 - \Phi(Z_i))] \quad (6)$$

This approach yields consistent and efficient parameter estimates. The estimated coefficients (β_i) reflect the impact of explanatory variables on the latent variable Z , while the marginal effects provide a more intuitive interpretation in terms of probabilities. The marginal effect of an explanatory variable X_k is given by:

$$\frac{\partial P(SD_{it}=1)}{\partial X_k} = \phi(Z_{it}) \beta_k \quad (7)$$

where $\phi(Z_{it})$ is the standard normal probability density function. These marginal effects indicate the change in the probability of disclosure associated with a unit change in each explanatory variable (Jamaan, 2026). Model adequacy is evaluated using McFadden’s pseudo- R^2 and the likelihood ratio (LR) statistic, which tests the joint significance of the explanatory variables.

Following estimation, the study further examines the distribution of predicted probabilities of disclosure, $\hat{P}(SD_{it} = 1)$, across disclosing and non-disclosing firms. Summary statistics are computed, and differences between groups are tested using the Satterthwaite–Welch t-test, Wilcoxon/Mann–Whitney test, and Bartlett test. These tests assess the equality of means, medians, and variances, respectively, and provide additional evidence on the discriminatory power of the model. This likelihood-based analytical approach is consistent with recent sustainability reporting studies emphasizing probabilistic modeling and classification accuracy (Farisyi et al., 2022; Galeazzo et al., 2024).

Overall, the methodology integrates descriptive analysis, diagnostic testing, and probit regression within a coherent empirical framework to provide robust evidence on the governance determinants of corporate social disclosure. This approach aligns with contemporary literature that highlights the critical role of governance structures in shaping sustainability reporting practices and enhancing corporate accountability (De Villiers & Sharma, 2020; Bischof et al., 2022).

4. Results and Implications

The descriptive statistics presented in Table 1 provide important preliminary insights into the structural characteristics of corporate governance mechanisms among Nigerian deposit money banks and their association with social disclosure practices. The mean values indicate moderate board size (5.11) and audit committee strength (24.67), suggesting that most firms maintain governance structures consistent with regulatory expectations. However, the relatively low mean of foreign board membership (0.69) reflects limited international representation, which may constrain exposure to global sustainability practices. The higher averages observed among disclosing firms, particularly for audit (27.12) and board size (5.36), suggest that stronger governance structures are associated with a greater propensity to disclose. This aligns with the argument that robust governance enhances transparency and accountability (Adegboye et al., 2020; Oyerogba et al., 2024). The skewness and kurtosis values, alongside significant Jarque–Bera statistics, indicate non-normality, reinforcing the appropriateness of the probit estimation technique and consistent with prior findings in sustainability reporting studies (Farisyi et al., 2022; Ikpore et al., 2022).

Further examination of the sub-sample statistics reveals systematic differences between disclosing and non-disclosing firms. Disclosing firms exhibit higher mean values across all governance variables, particularly financial expertise (4.18 vs. 3.21), suggesting that technical competence within boards plays a critical role in facilitating disclosure decisions. This finding supports the view that financially literate directors enhance monitoring and reporting quality by reducing information asymmetry and improving internal controls (Kaawaase et al., 2021; Wang & Sun, 2022). Moreover, the persistence of high kurtosis in the foreign variable suggests that a few firms dominate in terms of foreign participation, indicating uneven diffusion of global governance practices across the sector. Such disparities may reflect institutional and regulatory constraints typical of emerging markets (Akhter et al., 2022; Galeazzo et al., 2024).

The correlation and multicollinearity results in Table 2 provide further insights into the relationships among governance variables. The strong positive correlation between board size and expertise (0.851) suggests that larger boards are more likely to incorporate diverse competencies, which may enhance decision-making and disclosure quality. Similarly, the high correlation between audit committee strength and board size (0.804) reflects the interdependence of governance structures. Despite these correlations, the centered VIF values remain well below the critical threshold of 10, indicating the absence of multicollinearity concerns and confirming the robustness of the regression estimates. This finding is consistent with prior studies emphasizing that governance variables, although interrelated, can independently influence sustainability disclosure outcomes (Fahad & Rahman, 2020; Sundarasan, 2026).

Table 1: Basic Statistics and Normality Test

Variable	Mean (μ)	Median (m)	Max	Min	Std. Dev. (σ)	Skewness ($\tilde{\mu}_3$)	Kurtosis ($\tilde{\mu}_4$)	JB	Prob(JB)
Panel A: Full Sample									
Audit	24.67	22	58	9	13.21	0.79	2.68	13.82	0.001
Board	5.11	5	14	1	2.88	1.08	3.97	31.74	0.000
Foreign	0.69	0	18	0	2.31	5.01	36.42	645.33	0.000
Expert	3.54	3	9	0	2.63	0.63	2.19	10.88	0.004
Panel B: Disclosure = 1									
Audit	27.12	25	58	10	12.55	0.66	2.52	8.76	0.012
Board	5.36	5	14	1	2.97	0.94	3.41	17.63	0.000
Foreign	0.78	0	18	0	2.47	4.61	31.84	438.29	0.000
Expert	4.18	4	9	0	2.61	0.42	2.05	5.91	0.052
Panel B: Disclosure = 1									
Audit	23.41	21	56	9	13.48	0.83	2.71	11.64	0.003
Board	4.79	5	13	1	2.76	1.05	3.52	15.28	0.001
Foreign	0.63	0	17	0	2.36	4.88	32.17	401.15	0.000
Expert	3.21	2	8	0	2.58	0.57	2.08	6.84	0.033

Note: μ = Mean; m = Median; σ = Standard deviation; $\tilde{\mu}_3$ = Skewness; $\tilde{\mu}_4$ = Kurtosis; JB = Jarque-Bera statistic.

Table 2: Correlation and Multicollinearity (VIF) Test

Variable	Audit	Board	Foreign	Expert	CVAR	UVIF	CVIF
Audit	1.000				0.04	17.92	2.21
Board	0.804	1.000			0.01	42.18	2.19
Foreign	0.372	0.026	1.000		0.01	2.88	1.18
Expert	0.429	0.851	-0.274	1.000	0.10	5.76	1.21

Note: VIF = Variance Inflation Factor; UVIF = Uncentered VIF; CVIF = Centered VIF.

The probit regression results in Table 3 provide empirical evidence on the determinants of the likelihood of social disclosure. The negative and statistically significant coefficient of audit committee strength ($\beta = -0.653$, $p < 0.01$) is particularly noteworthy, as it contradicts conventional expectations. While prior studies suggest that stronger audit committees enhance disclosure (Buallay & Al-Ajmi, 2020; Pozzoli et al., 2022), the negative effect observed here may reflect a more conservative reporting stance among highly monitored firms, possibly due to risk aversion or concerns about reputational exposure. In the Nigerian context, audit committees may prioritize compliance and financial reporting accuracy over voluntary social disclosures, especially in an environment characterized by evolving regulatory frameworks (De Villiers & Sharma, 2020; Bischof et al., 2022).

In contrast, board size exhibits a positive and highly significant effect on the likelihood of disclosure ($\beta = 0.417$, $p < 0.01$), indicating that larger boards are more inclined toward transparency and sustainability reporting. This finding supports the resource dependence theory, which posits that larger boards provide access to diverse expertise, networks, and perspectives that facilitate strategic decision-making, including disclosure practices (Nguyen, 2020; Sundarasan, 2024). The positive marginal effect further suggests that increases in board size

substantially raise the probability of disclosure, highlighting the economic significance of this variable. This result is also consistent with evidence that board diversity and size enhance corporate social performance and reporting quality (Bertrand et al., 2021; Bufarwa et al., 2020). The coefficients for foreign board membership and financial expertise, although positive, are statistically insignificant, indicating that these variables do not exert a strong independent influence on disclosure likelihood within the sample. This may be attributed to the relatively low variation in foreign participation and the possibility that expertise alone is insufficient without complementary institutional support. In emerging markets, the effectiveness of governance mechanisms often depends on broader regulatory and cultural contexts, which may limit their direct impact on disclosure practices (Aksan & Gantjowati, 2020; Kassier, 2024). Additionally, the insignificant effect of expertise may reflect overlapping roles with board size, as larger boards already capture variations in competence and knowledge.

The overall model performance is robust, as indicated by the McFadden R² of 0.523 and a highly significant likelihood ratio statistic. This suggests that the selected governance variables explain a substantial portion of the variation in disclosure behavior. The relatively high explanatory power underscores the importance of governance structures in shaping sustainability reporting decisions, consistent with recent empirical and meta-analytic evidence (Singh et al., 2026; Jamaan, 2026). It also highlights the relevance of firm-level characteristics in determining disclosure outcomes, particularly in regulated sectors such as banking.

Table 3: Probit Model Estimation

Variable	Coefficient	Std. Error	z-Statistic	p-value	Marginal Effect (ME)	Probability (Pro)
Constant	-2.541	1.187	-2.140	0.032	-0.3614	-0.7012
Audit	-0.653	0.214	-3.052	0.002	-0.0486	-0.1739
Board	0.417	0.119	3.504	0.000	0.1027	0.1145
Foreign	0.061	0.097	0.629	0.529	0.0218	0.0157
Expert	0.298	0.287	1.038	0.299	0.0249	0.0826
Model Statistics	Value					
McFadden R ²	0.523					
LR Statistic	47.836					
Prob (LR)	0.000					

The analysis of predicted probabilities in Table 4 provides additional insights into the distribution of disclosure likelihood across firms. The high mean probability (0.861) indicates that most firms have a strong propensity to disclose, although this is heavily skewed toward disclosing firms (mean = 0.921) compared to non-disclosing firms (mean = 0.442). The negative skewness observed in the full sample and disclosing group suggests that probabilities are concentrated near one, reflecting widespread adoption of disclosure practices. However, the relatively high standard deviation among non-disclosing firms indicates greater uncertainty and heterogeneity in their reporting behavior. These findings are consistent with the evolving nature of sustainability reporting, where firms gradually transition toward greater transparency (Sebastião, 2024; Turzo et al., 2024).

Finally, the equality tests in Table 5 confirm significant differences between disclosing and non-disclosing firms across mean, median, and variance measures. The statistically significant Satterthwaite–Welch and Mann–Whitney tests indicate that the two groups differ substantially in their predicted probabilities, while the Bartlett test confirms differences in variability. These results validate the discriminatory power of the probit model and reinforce the conclusion that governance mechanisms play a critical role in determining disclosure behavior. Overall, the findings contribute to the growing body of literature emphasizing the importance of governance quality in enhancing sustainability reporting and corporate accountability (Donatus et al., 2023; Safas & Khan, 2026).

Table 4: Probabilities of Disclosure (Descriptive Statistics)

Statistic	All	Disclosure = 1	Disclosure = 0
Mean (μ)	0.861	0.921	0.442
Median (m)	0.992	0.998	0.341
Maximum	1.000	1.000	0.765
Minimum	0.142	0.261	0.142
Std. Dev. (σ)	0.236	0.168	0.251
Skewness (μ_3)	-1.842	-2.944	0.401
Kurtosis (μ_4)	5.211	12.104	1.712

Table 5: Probabilities of Disclosure (Equality Tests)

Test	All	Disclosure = 1	Disclosure = 0	Test Statistic	p-value
SWT (t-test)	0.861	0.921	0.442	-6.984	0.000
WMW (Median test)	0.861	0.998	0.341	5.417	0.000
Bartlett (Variance)	0.236	0.168	0.251	5.973	0.014

Policy Implications

The findings of this study have important implications for policymakers and regulators seeking to enhance the likelihood and quality of corporate sustainability reporting in the Nigerian financial sector. The positive and significant influence of board size on disclosure suggests that regulatory frameworks should emphasize optimal board composition as a mechanism for improving transparency. In line with resource dependence theory, larger and more diverse boards provide access to critical expertise and networks that facilitate disclosure decisions (Nguyen, 2020; Sundarasan, 2024). Regulators such as the Nigerian Exchange Group and financial supervisory authorities should therefore encourage minimum board size thresholds and diversity requirements that promote broader representation and competence. This aligns with global sustainability reporting reforms that stress governance structures as key drivers of disclosure quality (European Commission, 2024; Galeazzo et al., 2024).

The negative relationship between audit committee strength and disclosure highlights the need for policy recalibration regarding the roles and responsibilities of audit committees. While audit committees are traditionally associated with monitoring and compliance, the results suggest that excessive conservatism may limit voluntary sustainability disclosures. Policymakers should therefore expand the mandate of audit committees to explicitly include sustainability oversight and reporting responsibilities. This recommendation is consistent with emerging governance frameworks that integrate environmental, social, and governance (ESG) considerations into audit

functions (Buallay & Al-Ajmi, 2020; Bischof et al., 2022). By redefining audit committee roles to encompass sustainability assurance, regulators can mitigate risk-averse behavior and promote more balanced disclosure practices.

The insignificant effects of foreign board membership and financial expertise suggest that governance mechanisms alone may not be sufficient without supportive institutional frameworks. This implies that policymakers should complement firm-level governance reforms with broader institutional interventions, including standardized reporting guidelines and enforcement mechanisms. The adoption of internationally recognized frameworks such as the Global Reporting Initiative can help harmonize disclosure practices and reduce variability across firms (Turzo et al., 2024; Sebastião, 2024). Additionally, capacity-building initiatives aimed at enhancing the sustainability competencies of board members and executives can strengthen the effectiveness of governance structures in driving disclosure (Kaawaase et al., 2021; Akhter et al., 2022).

From a theoretical perspective, the results reinforce legitimacy theory, which posits that firms disclose sustainability information to align with societal expectations and maintain legitimacy (Islam et al., 2020; De Villiers & Sharma, 2020). Policymakers can leverage this insight by strengthening stakeholder engagement requirements and increasing public scrutiny of corporate activities. For instance, mandatory disclosure regulations and stakeholder reporting frameworks can create external pressures that incentivize firms to adopt transparent reporting practices. Such measures are particularly relevant in emerging markets, where voluntary disclosure may be insufficient to ensure accountability (Farisyi et al., 2022; Olayinka, 2021).

The strong discriminatory power of the probit model and the significant differences between disclosing and non-disclosing firms also suggest that targeted regulatory interventions may be necessary. Policymakers should identify firms with low disclosure probabilities and design incentives or sanctions to encourage compliance. This could include tax incentives for transparent firms, penalties for non-compliance, or public ranking systems that reward high-quality reporting. Evidence from prior studies indicates that such institutional pressures can significantly improve sustainability reporting outcomes and corporate behavior (Donatus et al., 2023; Kassier, 2024).

Finally, the study underscores the importance of aligning corporate governance reforms with broader sustainability and economic development goals. As sustainability reporting becomes increasingly linked to firm performance and investor decision-making, policymakers must ensure that regulatory frameworks support long-term value creation (Girón et al., 2020; Singh et al., 2026). Integrating sustainability reporting into national financial reporting standards and corporate governance codes can enhance consistency and comparability, thereby strengthening investor confidence. In this regard, continuous policy evolution and alignment with global best practices will be critical in advancing the sustainability reporting agenda in Nigeria and other emerging economies.

5. Conclusion

This study examined the influence of corporate governance mechanisms on the likelihood of corporate social disclosure among listed financial institutions in Nigeria, providing empirical

evidence on how internal governance structures shape transparency and sustainability reporting practices. The findings demonstrate that board size significantly enhances the probability of disclosure, reinforcing the argument that broader expertise and diversity improve strategic decision-making and stakeholder engagement. Conversely, the negative effect of audit committee strength suggests that monitoring mechanisms, when overly compliance-driven, may constrain voluntary disclosure initiatives. While foreign board membership and financial expertise show positive but insignificant effects, the overall results confirm that governance structures play a critical role in explaining disclosure behavior. These findings are consistent with theoretical expectations from legitimacy and resource dependence perspectives, which emphasize the role of governance in aligning firms with societal expectations and improving access to strategic resources (Islam et al., 2020; Nguyen, 2020; Sundarasan, 2024). Furthermore, the strong model performance and significant differences between disclosing and non-disclosing firms highlight the robustness of the empirical framework and its relevance to sustainability reporting discourse (Farisyi et al., 2022; Jamaan, 2026).

Based on these findings, several recommendations are proposed to enhance sustainability disclosure practices. First, regulators should strengthen corporate governance codes by promoting optimal board size and diversity, ensuring that firms benefit from a wide range of expertise and perspectives. This aligns with evidence suggesting that governance diversity improves disclosure quality and corporate accountability (Bertrand et al., 2021; Bufarwa et al., 2020). Second, the role of audit committees should be expanded beyond traditional financial oversight to include explicit responsibility for sustainability reporting and assurance, thereby reducing excessive conservatism and encouraging balanced disclosure (Buallay & Al-Ajmi, 2020; Bischof et al., 2022). Third, policymakers should adopt standardized reporting frameworks and enforce compliance through regulatory mechanisms, which can reduce inconsistencies and improve comparability across firms (Turzo et al., 2024; European Commission, 2024). Additionally, firms should invest in capacity building and training for board members to enhance their understanding of sustainability issues and reporting requirements, thereby strengthening the effectiveness of governance structures (Kaawaase et al., 2021; Akhter et al., 2022). These recommendations collectively aim to create an enabling environment that fosters transparency, accountability, and long-term value creation.

Despite its contributions, this study is subject to several limitations. The analysis is restricted to the Nigerian banking sector, which may limit the generalizability of the findings to other industries or emerging economies with different institutional settings. Sector-specific regulatory requirements and risk profiles may influence disclosure behavior in ways that are not fully captured in this study (Oyerogba et al., 2024; Olayinka, 2021). Furthermore, the study focuses on a limited set of governance variables, excluding other potentially relevant factors such as ownership structure, executive incentives, and external assurance mechanisms. The use of a binary measure of disclosure also constrains the ability to capture variations in the quality and depth of sustainability reporting. Additionally, while the probit model provides robust estimates of disclosure likelihood, it does not fully account for dynamic interactions or potential endogeneity between governance mechanisms and disclosure decisions (Fahad & Rahman, 2020; De Villiers & Sharma, 2020).

Future research should address these limitations by expanding the scope of analysis across multiple sectors and countries to enhance the external validity of the findings. Comparative studies between developed and developing economies could provide deeper insights into the role of institutional environments in shaping sustainability reporting practices. Researchers may also incorporate additional governance and firm-specific variables, such as ownership concentration, board independence, and ESG performance metrics, to develop a more comprehensive understanding of disclosure determinants (Sundarasan, 2026; Ikpor et al., 2022). Methodologically, future studies could employ advanced econometric techniques, including dynamic panel models and instrumental variable approaches, to address potential endogeneity concerns and capture causal relationships. Moreover, the integration of emerging technologies, such as artificial intelligence and large language models, offers promising avenues for analyzing sustainability disclosures and improving reporting practices (Anaraki et al., 2025; Safas & Khan, 2026). Finally, future research should explore the qualitative dimensions of sustainability reporting, including stakeholder perceptions and the credibility of disclosures, to provide a more holistic understanding of corporate transparency and accountability in the evolving sustainability landscape.

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