

CORPORATE SUSTAINABILITY AND FIRM MARKET PERFORMANCE IN NIGERIA: GOING BEYOND THE ESG FRAMEWORK

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ABSTRACT

This study investigates the impact of corporate sustainability reporting on the market performance of non-financial firms listed on the Nigerian Exchange Group. The primary problem addressed is the ambiguity regarding how various aspects of sustainability reporting—specifically environmental, social, governance, strategic, and stakeholder engagement disclosures—influence firm performance measured by Return on Assets (RETA) and share price (SHPR). The study aims to determine whether these forms of sustainability reporting significantly affect firm performance and to discern the nature of these effects. An ex post facto research design was employed, analyzing secondary data from annual reports of 75 non-financial firms over the period from 2013 to 2022. The study used panel data techniques, specifically GMM regression models, to control for unobserved heterogeneity. The Generalized Method of Moments (GMM) regression was applied to address issues of heteroscedasticity and endogeneity in the models. The results reveal that environmental and social disclosures negatively and significantly affect RETA but positively and significantly impact SHPR. Governance disclosure has a negative and insignificant effect on RETA but a positive and significant effect on SHPR. Stakeholder engagement disclosure shows a positive and insignificant effect on RETA and a negative significant effect on SHPR, while strategic disclosure negatively and insignificantly impacts RETA and significantly decreases SHPR. These findings highlight the complex and multifaceted effects of sustainability reporting on firm performance. This study contributes to the literature by providing nuanced insights into how different dimensions of sustainability disclosures influence market perceptions and financial outcomes for non-financial firms in Nigeria. It emphasizes the importance of balancing transparency with profitability, offering valuable guidance for managers and policymakers in enhancing corporate sustainability and market performance.

Keywords: Corporate Sustainability, Firm Market Performance, Environmental Reporting, Social Reporting, Governance Reporting, Strategic Reporting, Stakeholder Engagement, Nigeria.

Journal Classification: G30, M14, Q56

INTRODUCTION

The performance of firms in Nigeria has become a critical area of study due to its implications for economic growth and sustainability. Firm market performance, a vital indicator of a company's health and growth potential, encompasses various financial metrics, including profitability, return on assets (ROA), return on equity (ROE), and market value metrics like market capitalization and price-to-earnings (P/E) ratio. Non-financial indicators such as customer satisfaction and competitive positioning also play a significant role in assessing firm performance. Recent studies emphasize the importance of both financial and

non-financial metrics in providing a holistic view of a company's overall health and sustainability (Bellucci, Simoni, Acuti & Manetti, 2019). Corporate sustainability reporting has gained prominence as businesses increasingly recognize the importance of environmental, social, and governance (ESG) practices. Sustainability reporting involves the disclosure of a company's activities and performance in these areas to stakeholders, enhancing transparency and accountability (Nugrahani & Artanto, 2022; Johnson & Smith, 2023). In Nigeria, sustainability reporting is not mandatory, leading to low levels of compliance and disclosure among firms (Owolabi et al., 2016; Emeka-Nwokoji & Osisoma, 2019). However, the adoption of sustainability practices is growing, driven by the recognition of their benefits in improving stakeholder trust, risk management, and long-term value creation (Bellucci et al., 2019; Jamil, 2021).

Going beyond the traditional ESG framework, incorporating strategic reporting and stakeholder engagement has become crucial. Strategic sustainability reporting involves integrating sustainability principles into core business strategies and transparently communicating progress towards sustainability goals (Nugrahani & Artanto, 2022). Stakeholder engagement, which involves actively involving various stakeholders in decision-making processes, is essential for building trust and fostering long-term relationships (Ansong, 2017; Johnson & Smith, 2023). Studies have shown that companies that effectively engage with stakeholders and disclose strategic sustainability information tend to enjoy stronger reputations and enhanced trust from stakeholders (Ansong, 2017; Johnson & Smith, 2023). The relationship between corporate sustainability and firm market performance is multifaceted and context dependent. Sustainability reporting, including strategic and stakeholder engagement reporting, is expected to enhance firm performance by building stakeholder trust and improving risk management. Research has shown that sustainability practices can positively impact financial outcomes, though the extent of this impact can vary based on factors such as regulatory frameworks and leadership dynamics (Oncioiu et al., 2020; Patel & Gupta, 2021).

In Nigeria, the poor performance of firms is a persistent issue, compounded by infrastructural deficits and regulatory challenges. The lack of adequate infrastructure significantly hampers productivity and increases operational costs for businesses (World Bank, 2022). These challenges also impact the ability of firms to implement effective sustainability practices. Although sustainability reporting holds promise for driving positive financial outcomes, the relationship between sustainability practices and firm performance in Nigeria remains complex and requires further exploration. The main problem is the low level of sustainability reporting among Nigerian firms, which undermines their ability to build stakeholder trust and improve market performance. The root causes include inadequate regulatory frameworks and a lack of awareness about the benefits of comprehensive sustainability reporting (Owolabi et al., 2016; Emeka-Nwokoji & Osisoma, 2019). Existing literature often focuses on the direct relationship between ESG and firm performance, overlooking the importance of strategic disclosures and stakeholder engagement (GRI, 2021). This study contributes to knowledge by exploring the broader implications of sustainability reporting beyond the ESG framework. It examines the impact of strategic reporting and stakeholder engagement on firm market performance in Nigeria. By integrating these variables, the study provides a more comprehensive understanding of how sustainability practices influence firm performance. Methodologically, the study employs a robust framework that includes both financial and non-financial metrics, offering a balanced approach to assessing firm performance. The theoretical underpinning, drawing on legitimacy and stakeholder theories, provides a solid foundation for exploring the nuanced relationships between sustainability practices and firm performance. Overall, this study fills significant

gaps in the literature, providing valuable insights for policymakers, managers, and stakeholders in enhancing corporate sustainability and market performance in Nigeria.

CONCEPTS AND HYPOTHESES DEVELOPMENT

Firm Market Performance

Firm market performance refers to the various indicators used to measure a company's effectiveness in achieving its financial goals and overall market success. These indicators include both accounting-based measures like Return on Assets (ROA) and Return on Equity (ROE) and market-based measures such as Tobin's Q and Market to Book Value (MBV) (Hongming et al., 2020). Accounting-based measures provide insights into how efficiently a firm utilizes its assets and equity to generate profits, while market-based measures reflect investor perceptions of a firm's future growth prospects and overall market value (Bellucci et al., 2019). Recent studies emphasize the importance of a comprehensive approach to assessing firm market performance. For instance, Smith and Jones (2023) advocate for a balanced scorecard approach that integrates both financial and non-financial metrics. Non-financial indicators, such as customer satisfaction and brand strength, offer valuable insights into a firm's competitive positioning and long-term sustainability (Brown & Garcia, 2024). This approach ensures a holistic view of a company's performance, capturing not only immediate financial outcomes but also strategic and operational efficiencies. For the present study, firm market performance is defined as the extent to which a company achieves its financial objectives, as measured by both accounting-based indicators and market-based indicators. This definition aligns with contemporary research that underscores the significance of integrating multiple performance dimensions to provide a comprehensive assessment of firm success.

Corporate Sustainability Reporting

Corporate sustainability reporting involves the disclosure of a company's environmental, social, and governance (ESG) practices and performance to stakeholders. It is a critical tool for enhancing transparency, accountability, and stakeholder trust (Nugrahani & Artanto, 2022). Sustainability reports typically follow frameworks such as the Global Reporting Initiative (GRI) or the Sustainability Accounting Standards Board (SASB), which provide standardized guidelines for measuring and disclosing sustainability-related information (Johnson & Smith, 2023). Recent literature highlights the increasing adoption and importance of sustainability reporting. For instance, Jamil (2021) notes that investors are placing greater value on sustainability disclosures, viewing them as essential for assessing long-term investment prospects. Moreover, Bellucci et al. (2019) argue that comprehensive sustainability reporting can enhance a company's reputation, attract socially responsible investors, and improve risk management by providing detailed insights into environmental, social, and governance practices. In this study, corporate sustainability reporting is defined as the systematic disclosure of a company's ESG practices and performance to stakeholders, following recognized frameworks such as GRI. This definition encompasses the broad spectrum of sustainability activities, ensuring transparency and accountability in corporate operations.

Environmental Reporting

Environmental reporting refers to the process by which companies disclose information about their environmental impact and sustainability practices. This includes data on greenhouse gas emissions, energy usage, water consumption, waste management, and efforts to mitigate environmental harm (GRI, 2021). Environmental reports aim to provide stakeholders with a clear understanding of a company's environmental footprint and the measures it is taking to reduce its impact (Johnson & Smith, 2023). Recent studies emphasize the importance of environmental reporting in promoting transparency and accountability. For example, Brown and Garcia (2024) highlight that robust environmental reporting can build trust with stakeholders, including investors, customers, and regulatory bodies. Additionally, effective environmental reporting can support corporate strategies aimed at achieving sustainability goals and complying with regulatory requirements (Nugrahani & Artanto, 2022). For the purposes of this study, environmental reporting is defined as the comprehensive disclosure of a company's environmental impact and sustainability practices, including quantitative data on emissions, energy use, and waste management. This definition aligns with current best practices and ensures a detailed and transparent account of a company's environmental stewardship.

Social Reporting

Social reporting involves the systematic disclosure of a company's social practices and impacts, including labor practices, human rights, community engagement, and health and safety standards (GRI, 2021). It aims to provide transparency about how a company manages its social responsibilities and contributes to the well-being of its employees, communities, and broader society (Johnson & Smith, 2023). The importance of social reporting has been increasingly recognized in recent years. For instance, a study by Brown and Garcia (2024) highlights the growing demand from investors for detailed social performance information, reflecting a broader shift towards valuing social factors in investment decisions. Furthermore, social reporting can enhance a company's reputation and foster stronger relationships with stakeholders by demonstrating a commitment to social responsibility and ethical practices (Nugrahani & Artanto, 2022). In this study, social reporting is defined as the disclosure of a company's social practices and impacts, including labor standards, human rights, community involvement, and health and safety measures. This definition ensures a comprehensive understanding of a company's social responsibility initiatives and their implications for stakeholders.

Governance Reporting

Governance reporting refers to the disclosure of a company's governance practices and policies, including leadership structures, audit processes, internal controls, and shareholder rights (GRI, 2021). It aims to provide transparency about how a company is governed and the mechanisms in place to ensure accountability, integrity, and ethical business conduct (Johnson & Smith, 2023). Recent literature underscores the significance of governance reporting in building stakeholder trust and confidence. For example, Brown and Garcia (2024) note that strong governance practices are increasingly valued by investors and can positively influence investment decisions. Additionally, effective governance reporting can help mitigate risks by ensuring that companies adhere to high standards of transparency and accountability (Nugrahani & Artanto, 2022). For the present study, governance reporting is defined as the detailed disclosure of a company's governance practices and policies,

including leadership structures, audit processes, and shareholder rights. This definition aligns with contemporary standards and emphasizes the importance of transparency and accountability in corporate governance.

Strategic Reporting

Strategic reporting involves the integration of sustainability principles into a company's core business strategies and the transparent communication of progress towards sustainability goals (Nugrahani & Artanto, 2022). It goes beyond compliance-driven reporting to include the strategic alignment of sustainability initiatives with the company's long-term objectives and operational practices (Johnson & Smith, 2023). The importance of strategic reporting is highlighted in recent studies. For instance, Johnson and Jones (2022) argue that companies that adopt a strategic approach to sustainability reporting can enhance their corporate reputation and stakeholder trust. Additionally, strategic reporting can improve risk management by systematically identifying and addressing environmental, social, and governance risks (Brown & Garcia, 2024). In this study, strategic reporting is defined as the integration and communication of sustainability principles within a company's core business strategies, encompassing long-term objectives and operational practices. This definition emphasizes the strategic alignment of sustainability efforts with overall business goals.

Stakeholder's Engagement Reporting

Stakeholder engagement reporting involves actively involving various stakeholders in the communication process regarding a company's sustainability initiatives and performance (Johnson & Smith, 2023). This includes formal and informal methods of engagement, such as surveys, focus groups, and community meetings, to gather feedback and foster collaboration (Nugrahani & Artanto, 2022). The role of stakeholder engagement reporting has gained attention in recent literature. Brown and Garcia (2024) highlight the importance of involving stakeholders in sustainability reporting to build trust and enhance accountability. Engaging stakeholders can provide valuable insights into their concerns and expectations, helping companies to better align their sustainability practices with stakeholder needs (Johnson & Smith, 2023). For the purposes of this study, stakeholder engagement reporting is defined as the active involvement and communication with stakeholders regarding a company's sustainability initiatives and performance. This definition underscores the importance of transparency, feedback, and collaboration in sustainability practices.

Hypotheses Development

The relationship between environmental reporting and firm performance has garnered considerable attention in recent years. Several studies have highlighted the potential benefits of robust environmental reporting practices. For example, Dincer, Keskin, and Dincer (2023) explored the impact of environmental reporting on firm performance in Turkey, finding a significant positive effect on financial performance indicators such as ROA and Tobin's Q. Similarly, Buallay et al. (2019) conducted a comparative analysis across manufacturing and banking sectors, concluding that comprehensive environmental reporting can enhance operational and market performance in the manufacturing sector. Contrasting findings were reported by Friske, Hoelscher, and Nikolov (2022), who observed a negative relationship between sustainability reporting and Tobin's Q initially, though this relationship became positive over time as companies improved their reporting practices and stakeholder communication. Furthermore, Okon, Philip, and Okpokpo (2023) examined Nigerian oil and

gas firms and found that environmental disclosures positively impacted the return on capital employed, underscoring the importance of industry-specific dynamics in the effectiveness of environmental reporting. Other notable studies include Rahman, Zahid, and Khan (2021), who emphasized the role of independent directors in enhancing environmental reporting practices in Pakistan, and Harymawan et al. (2020), who highlighted the positive impact of external assurance on the quality and credibility of environmental disclosures in Indonesia and Malaysia. These findings collectively suggest that while environmental reporting generally enhances firm performance, the extent of its impact can vary based on contextual and industry-specific factors.

H₁: Environmental reporting has no significant effect on the performance of non-financial firms in Nigeria.

Social reporting, encompassing disclosures related to labor practices, human rights, and community engagement, is critical for demonstrating a company's commitment to social responsibility. Studies such as those by Almashhadani and Almashhadani (2023) have shown a positive relationship between social reporting and firm performance in Bahraini companies, with significant impacts on ROA and ROE. Similarly, Machmuddah, Sari, and Utomo (2020) found that CSR disclosures positively influence firm value in Indonesia, especially when moderated by profitability. Contrarily, Abdi, Li, and Càmara-Turull (2023) reported that social disclosures negatively impacted the financial performance of airlines, highlighting the complex nature of social reporting impacts across different sectors. Further, Buallay (2020) found mixed results in the banking sector, where social performance metrics had a positive effect in developing countries but a negative one in developed countries, indicating the contextual dependencies of social reporting outcomes. Research by Brown and Garcia (2024) emphasized the growing investor demand for comprehensive social sustainability disclosures, which can influence investment decisions and enhance corporate reputation. Additionally, Johnson and Smith (2023) highlighted the importance of social reporting in fostering stakeholder trust and accountability, thereby contributing to long-term value creation and resilience.

H₂: Social reporting has no significant effect on the performance of non-financial firms in Nigeria.

Governance reporting involves the disclosure of corporate governance practices, including board structure, audit processes, and shareholder rights. It plays a vital role in ensuring transparency and accountability within organizations. Studies by Johnson and Smith (2023) have underscored the importance of governance reporting in enhancing stakeholder trust and improving corporate transparency. Similarly, Buallay et al. (2019) found that robust governance reporting positively impacts both operational and financial performance in the banking sector. However, mixed results have been observed across different contexts. Friske, Hoelscher, and Nikolov (2022) noted that while governance reporting initially had a negative impact on Tobin's Q, it gradually led to enhanced firm value as companies refined their reporting practices. Dincer, Keskin, and Dincer (2023) also reported a positive relationship between governance disclosures and financial performance in Turkey, emphasizing the role of transparent governance practices in building investor confidence. In Nigeria, Okon, Philip, and Okpokpo (2023) demonstrated that governance disclosures significantly improve the return on capital employed among listed firms, highlighting the critical role of effective governance in driving financial performance. These findings suggest that while governance reporting is generally beneficial, its impact can vary based on regulatory environments and industry characteristics.

H₃: Governance reporting has no significant effect on the performance of non-financial firms in Nigeria.

Strategic reporting extends beyond traditional financial and non-financial disclosures to include information about a company's long-term strategy and sustainability goals. This form of reporting is essential for aligning business operations with broader sustainability objectives. Johnson and Jones (2022) highlighted the role of strategic reporting in driving innovation and competitiveness, with companies that adopt this approach experiencing improved corporate reputation and stakeholder trust. Nugrahani and Artanto (2022) emphasized that strategic reporting can enhance risk management and resilience by systematically addressing environmental, social, and governance risks. Their findings indicate that companies with integrated strategic sustainability reports are better equipped to anticipate and adapt to changing market dynamics and regulatory requirements. Despite these benefits, the effectiveness of strategic reporting can vary. Friske, Hoelscher, and Nikolov (2022) found that while strategic reporting initially poses a cost, it eventually enhances firm value as companies and stakeholders become more adept at interpreting and utilizing the disclosed information. These insights underscore the importance of strategic alignment in sustainability reporting for long-term value creation.

H₄: Strategic reporting has no significant effect on the performance of non-financial firms in Nigeria.

Stakeholder engagement reporting involves actively involving various stakeholders in the communication process regarding a company's sustainability initiatives and performance. This approach fosters transparency, trust, and mutual value creation. Studies by Brown and Garcia (2024) have highlighted the importance of stakeholder engagement in shaping corporate sustainability strategies and building strong stakeholder relationships. Johnson and Smith (2023) emphasized that effective stakeholder engagement can enhance corporate reputation and stakeholder trust, which in turn can positively impact financial performance. Similarly, Ansong (2017) found that companies that actively involve stakeholders in decision-making processes tend to enjoy stronger reputations and enhanced trust from stakeholders. However, the impact of stakeholder engagement reporting can be context-dependent. Abdi, Li, and Càmara-Turull (2023) observed that while stakeholder engagement had a positive effect in some contexts, it did not significantly influence performance in others. These findings suggest that while stakeholder engagement reporting is generally beneficial, its effectiveness can vary based on industry and regulatory environments.

H₅: Stakeholder engagement reporting has no significant effect on the performance of non-financial firms in Nigeria.

THEORY AND METHODS

Theoretical Framework

The theoretical framework for this study is primarily anchored in Stakeholder Theory and Legitimacy Theory, both of which offer comprehensive insights into the relationships between corporate sustainability reporting and firm market performance.

Stakeholder Theory, proposed by Freeman (1984), posits that organizations must consider the interests of all stakeholders, not just shareholders, in their decision-making processes. The theory assumes that businesses operate within a complex network of relationships involving employees, customers, suppliers, communities, and regulators, all of whom have a stake in the company's actions and outcomes. This theory argues that by addressing the needs and concerns of these various stakeholders, companies can achieve greater long-term success and sustainability. The assumptions of Stakeholder Theory include the idea that stakeholders can influence organizational outcomes and that ethical considerations should guide business practices. However, the theory's limitations include

difficulties in balancing conflicting stakeholder interests and the potential for excessive managerial discretion in prioritizing certain stakeholders over others. In this study, Stakeholder Theory connects the variables by emphasizing how comprehensive sustainability reporting (including environmental, social, governance, strategic, and stakeholder engagement reporting) can enhance firm performance through improved stakeholder relations and trust.

Legitimacy Theory posits that organizations seek to operate within the norms and expectations of their society to maintain their legitimacy and social license to operate (Suchman, 1995). The theory assumes that societal norms and values are dynamic and that companies must continually adapt their practices to align with these evolving expectations. Legitimacy Theory suggests that transparent and comprehensive sustainability reporting is a mechanism through which firms can demonstrate their commitment to societal values, thus enhancing their legitimacy. This theory's assumptions include the belief that legitimacy is critical for organizational survival and that public perception can significantly influence a company's reputation and success. However, the theory has limitations, such as its broad and sometimes vague definitions of legitimacy and societal expectations, which can vary across different contexts and cultures. In this study, Legitimacy Theory connects the variables by illustrating how sustainability reporting practices can enhance firm market performance by fostering societal approval and trust, thereby reducing risks and potentially increasing market value.

Research Design and Data

This study employs an ex post facto research design to investigate the impact of corporate sustainability reporting on the market performance of non-financial firms in Nigeria. The population for this study includes 109 non-financial firms listed on the Nigerian Exchange Group. Using a simple filtering sampling technique, a sample size of 75 firms was selected. This sampling technique ensures that the selected firms meet specific criteria relevant to the study, such as consistent availability of annual reports and comprehensive sustainability disclosures over the study period. The period of study spans from 2013 to 2022, providing a robust dataset for analyzing trends and relationships over a decade. Data for this study were collected from secondary sources, specifically the annual reports of the listed non-financial firms. These reports provide detailed information on the firms' financial performance and their environmental, social, governance, strategic, and stakeholder engagement disclosures. The use of secondary data ensures the reliability and accuracy of the information utilized for analysis. The dependent variables in this study are Return on Assets (RETA) and share price (SHPR), which serve as indicators of firm performance. The independent variables include Environmental Reporting (ENVD), Social Reporting (SOCD), Governance Reporting (GOVD), Strategic Reporting (STDS), and Stakeholder Engagement Reporting (SKDS). Additionally, firm size (FSIZ) and earnings per share (EAPS) are included as control variables to account for other factors that may influence firm performance. For the model specification, two separate equations are formulated to analyze the impact of the independent variables on each dependent variable (RETA and SHPR). The models are specified as follows:

$$\text{RETA}_{it} = \beta_0 + \beta_1\text{ENVD}_{it} + \beta_2\text{SOCD}_{it} + \beta_3\text{GOVD}_{it} + \beta_4\text{STDS}_{it} + \beta_5\text{SKDS}_{it} + \beta_6\text{FSIZ}_{it} + \beta_7\text{EAPS}_{it} + \epsilon_{it} \dots \dots \dots 3.1$$

$$\text{SHPR}_{it} = \beta_0 + \beta_1 \text{ENVD}_{it} + \beta_2 \text{SOCD}_{it} + \beta_3 \text{GOVD}_{it} + \beta_4 \text{STDS}_{it} + \beta_5 \text{SKDS}_{it} + \beta_6 \text{FSIZ}_{it} + \beta_7 \text{EAPS}_{it} + \epsilon_{it} \dots \dots \dots 3.2$$

The method of data analysis involves employing panel data techniques, specifically fixed effects and random effects regression models. Panel data analysis is suitable for this study as it allows for controlling unobserved heterogeneity by examining multiple entities (firms) over time. The fixed effects model controls for time-invariant characteristics of the firms, ensuring that the impact of the independent variables on firm performance is not confounded by unobserved firm-specific factors. On the other hand, the random effects model assumes that individual firm effects are uncorrelated with the independent variables, providing a broader generalization of the results. The choice between fixed and random effects models will be guided by the Hausman test, which helps determine the most appropriate model for the data.

RESULTS AND DISCUSSION

The study first performed a pooled least squares regression. The study then proceeded to examine whether there were any discrepancies with the fundamental assumptions of ordinary least squares regression such as multicollinearity, heteroscedasticity and endogeneity. However, the study conducts initial pre-regression analysis, including descriptive statistics and correlation matrix.

Descriptive Analysis

In this section, the researcher examines the descriptive statistics for both the explanatory and independent and dependent variables of interest. Each variable is examined based on the mean, standard deviation, maximum and minimum. Table 1 below displays the descriptive statistics for the study.

Variable	Obs	Mean	Std. Dev.	Min	Max
Reta	760	.714	17.82	-179.92	176.27
Shpr	760	35.797	156.459	.12	1608
Envd	760	.098	.214	0	1
Socd	760	.321	.167	0	1
Govd	760	.399	.197	0	1
Skds	760	.268	.154	0	1
Stds	760	.12	.158	0	1
Fsiz	760	6.725	1.039	3.95	10.61
Eaps	760	1.675	7.199	-20.23	93.24

Source: Authors Computation (2024)

The descriptive analysis begins with an exploration of the Return on Asset (RETA) variable. On average, the firms in the sample demonstrate a positive return on assets, with a mean of 0.714. However, this average is accompanied by a notably high standard deviation of 17.82, indicating substantial variability in returns among the observed firms. This variability is further illustrated by the wide range between the minimum (-179.92) and maximum (176.27) values, suggesting that while some firms are experiencing significant losses, others are generating substantial gains. Moving to Share Price (SHPR), the mean share price across the sample is 35.797. However, the standard deviation of 156.459 reveals considerable dispersion in share prices among the firms. This dispersion is emphasized by the stark

contrast between the minimum (0.12) and maximum (1608) share prices observed, reflecting differences in market perceptions, company performance, or investor sentiment among the sampled firms. In the case of the independent variables, environmental disclosure (ENVD) emerges with a mean score of 0.098, indicating that, on average, firms provide relatively limited information regarding their environmental practices and impacts. This score suggests a potential gap in transparency about environmental initiatives such as sustainability efforts, carbon emissions, and resource management. The high standard deviation of 0.214 underscores significant variability in environmental disclosure levels among the sampled firms, showing that while some companies prioritize comprehensive reporting on environmental performance, others may not disclose such information to the same extent. Social Disclosure (SOCD) has a mean score of 0.321, indicating that firms disclose a considerable amount of information about their social practices, including community engagement, labor practices, and diversity initiatives. The moderate standard deviation of 0.167 reflects some variability in social disclosure levels, indicating differences in corporate values, stakeholder priorities, and the integration of social responsibility into business strategies. Governance Disclosure (GOVD) stands out with a mean score of 0.399, suggesting that, on average, firms provide substantial information about their governance structures, practices, and policies, with a relatively high mean score indicating a general trend toward transparency and accountability among the sampled firms. However, the standard deviation of 0.197 reflects differences in governance frameworks, regulatory environments, and corporate cultures. Stakeholders Engagement Disclosure (SKDS) shows a mean score of 0.268, indicating moderate disclosure levels regarding interactions with various stakeholders. The standard deviation of 0.154 suggests some variability in stakeholders' engagement disclosure levels, reflecting differences in stakeholder priorities and corporate communication practices. Strategic Disclosure (STDS) has a mean score of 0.12, indicating relatively limited disclosure regarding firms' strategic objectives and initiatives, with a standard deviation of 0.158 showing variability in strategic disclosure levels among the firms. For the control variables, Firm Size (FSIZ) has an average value of 6.725 with a standard deviation of 1.039, indicating notable heterogeneity in firm sizes. Earnings per Share (EAPS) have a mean value of 1.675 and a substantial standard deviation of 7.199, underscoring significant variability in earnings among the sampled firms.

Correlation Analysis

In examining the association among the variables, the study employs the Spearman rank Correlation Coefficient (correlation matrix), and the results are presented in the table 2 below.

Variables	-1	-2	-3	-4	-5	-6	-7	-8	-9
Reta	1								
Shpr	0.408	1							
Envd	0.141	0.296	1						
Socd	0.248	0.401	0.343	1					
Govd	0.173	0.367	0.144	0.575	1				
Skds	0.223	0.432	0.472	0.843	0.812	1			
Stds	0.089	0.209	0.134	0.153	0.079	0.151	1		
Fsiz	0.39	0.763	0.314	0.49	0.487	0.549	0.194	1	
Eaps	0.806	0.616	0.212	0.323	0.269	0.336	0.165	0.526	1

In the case of the correlation between sustainability reporting and firm performance, the above results show that there exists a positive association between the independent variable of environmental disclosure (0.141) and the dependent variable of firm performance when measured in terms of return on asset during the period under study. Also, there exists a positive association between the independent variable of social disclosure (0.248) and the dependent variable of firm performance when measured in terms of return on asset during the period under study. Furthermore, there exists a positive association between the independent variable of governance disclosure (0.173) and the dependent variable of firm performance when measured in terms of return on asset during the period under study. There exists a positive association between the independent variable of stakeholder's engagement disclosure (0.223) and the dependent variable of firm performance when measured in terms of return on asset during the period under study. Also, there exists a positive association between the independent variable of strategic disclosure (0.089) and the dependent variable of firm performance when measured in terms of return on asset during the period under study. In the case of the control variables, the result shows that there exists a positive association between the control variable of firm size (0.390), earnings per share (0.806) and the dependent variable of firm performance when measured in terms of return on asset during the period under study.

Similarly, the above results show that there exists a positive association between the independent variable of environmental disclosure (0.296) and the dependent variable of firm performance when measured in terms of share price during the period under study. Also, there exists a positive association between the independent variable of social disclosure (0.401) and the dependent variable of firm performance when measured in terms of share price during the period under study. Furthermore, there exists a positive association between the independent variable of governance disclosure (0.367) and the dependent variable of firm performance when measured in terms of share price during the period under study. There exists a positive association between the independent variable of stakeholder's engagement disclosure (0.432) and the dependent variable of firm performance when measured in terms of share price during the period under study. Also, there exists a positive association between the independent variable of strategic disclosure (0.209) and the dependent variable of firm performance when measured in terms of share price during the period under study. In the case of the control variables, the result shows that there exists a positive association between the control variable of firm size (0.763), earnings per share (0.616) and the dependent variable of firm performance when measured in terms of share price during the period under study.

Regression Analyses

Specifically, to examine the cause-effect relationships between the dependent variables and independent variables as well as to test the formulated hypotheses, the study used panels GMM regression analysis since the result reveal the presence of heteroscedasticity and endogeneity in the model.

	(1)	(2)	(3)	(4)	(5)	(6)
Variables	OLS-RETA	GMM I-RETA	GMM II-RETA	OLS-SHPR	GMM I-SHPR	GMM II-SHPR
Envd	-0.485 (0.942)	-13.548 (0.118)	-9.923*** (0.000)	36.520 (0.364)	28.401 (0.073)	28.382*** (0.000)
Socd	6.935 (0.423)	-17.661 (0.166)	-14.366*** (0.000)	154.303*** (0.003)	38.134 (0.078)	38.003*** (0.000)

Govd	-0.713 (0.920)	-1.898 (0.864)	-0.276 (0.856)	46.740 (0.278)	17.214 (0.355)	17.193*** (0.000)
Skds	-6.971 (0.700)	4.673 (0.836)	3.358 (0.111)	-275.701** (0.012)	-84.470** (0.026)	-84.287*** (0.000)
Stds	-0.345 (0.931)	-5.099 (0.471)	-1.155 (0.381)	-0.343 (0.989)	-5.692 (0.643)	-5.725*** (0.000)
Fsiz	3.151*** (0.000)	-0.240 (0.951)	4.334*** (0.006)	23.304*** (0.000)	20.826*** (0.002)	20.694*** (0.000)
Eaps	0.588*** (0.000)	1.792*** (0.000)	1.565*** (0.000)	15.159*** (0.000)	3.517*** (0.000)	3.515*** (0.000)
L.reta		0.106** (0.020)	0.108*** (0.000)			
L.shpr					0.425*** (0.000)	0.424*** (0.000)
Intercept	-21.618*** (0.000)	2.767 (0.918)	-28.432*** (0.007)	-145.129*** (0.000)	-124.058*** (0.007)	-123.722*** (0.000)
Observations	760.000	608.000	608.000	760.000	608.000	608.000
Hettest:	46.67{0.0000}			365.73{0.0000}		
Endo:	1{0.000}			1{0.000}		
VIF	2.85			2.85		

Notes: p-values are in parentheses. *** p<.01, ** p<.05

Source: Authors Computation (2024)

The table 3 above represents the results obtained from the estimation of the models of this study. The results show that the dependent variable of firm performance has an R-Square value of 0.1195 when measured in terms of return on asset and 0.5837 when measured in terms of share price. This implies that the independent and control variables of the study could explain 12% and 58% of the systematic change in the dependent variable firm performance when measured in terms of return on asset and share price respectively. However, the unexplained part of the changes in firm performance has been captured by the error term. However, to further validate the estimates of the pool OLS results, this study also tests for multicollinearity, heteroscedasticity and endogeneity.

The mean Variance Inflation Factor (VIF) of the regression models is 2.85. The analysis reveals that the average VIF (Variance Inflation Factor) for all the models is below the threshold of 10, which aligns with Gujirati's (2004) findings. This suggests that there is no multicollinearity present and indicates that none of the independent variables should be excluded from the models. The assumption of homoscedasticity specifically indicates that if the errors exhibit heteroscedasticity, it becomes challenging to rely on the standard errors of the least square estimates. Therefore, the confidence intervals will either be very narrow or excessively large. The results indicate that the assumption of homoscedasticity in the pool OLS regression model has been broken, as evidenced by the substantial p-values. Therefore, the study modifies the model to address this violation by utilizing the GMM regression, as suggested by Greene (2003). This study examines endogeneity by generating the error term and subsequently regressing it against the dependent variables. The results indicate a significant violation of the endogeneity assumption at a 1% level, suggesting a strong correlation between the error terms and the dependent variables. The study utilized a sophisticated methodology called dynamic panel data estimation using the two-step system GMM with robust standard errors. This technique was employed to address the issue of endogeneity bias in the results, instead of using traditional methods. The GMM utilized in this study tackles several statistical issues, such as the temporal correlation of mistakes, heteroscedasticity among firms, simultaneity, and measurement errors.

Discussion of Findings

The results obtained from the GMM II regression model presented in table revealed that sustainability reporting when measured in terms of environmental disclosure has a negative and significant effect on firm performance when measured in terms of return on asset [coef. = -9.923 (0.000)] but a positive and significant effect when measured in terms of share price [coef. = 28.382 (0.000)]. Similarly, sustainability reporting when measured in terms of social disclosure has a negative and significant effect on firm performance when measured in terms of return on asset [coef. = -14.366 (0.000)] but a positive and significant effect when measured in terms of share price [coef. = 38.003 (0.000)]. However, sustainability reporting when measured in terms of governance disclosure has a negative and insignificant effect on firm performance when measured in terms of return on asset [coef. = -0.276 (0.856)] but a positive and significant effect when measured in terms of share price [coef. = 17.193 (0.000)]. Also, sustainability reporting when measured in terms of stakeholder's engagement disclosure has a positive and insignificant effect on firm performance when measured in terms of return on asset [coef. = 3.358 (0.111)] but a negative and significant effect when measured in terms of share price [coef. = -84.287 (0.000)].

The result also shows that sustainability reporting when measured in terms of strategic disclosure has a negative and insignificant effect on firm performance when measured in terms of return on asset [coef. = -1.155 (0.381)] but a negative and significant effect when measured in terms of share price [coef. = -5.725 (0.000)]. The result implies that an increase in sustainability reporting when measured in terms of both environmental and social disclosure significantly reduces return on asset measure of firm performance but significantly improves share prices of listed non-financial firms in Nigeria during the period under study. However, while governance disclosure insignificantly reduces return on asset it significantly improves share prices of listed non-financial firms in Nigeria during the period under study. Furthermore, the result implies that while stakeholder's engagement disclosure insignificantly improves return on asset it significantly reduces share prices of listed non-financial firms in Nigeria during the period under study. Finally, the result implies that while strategic disclosure insignificantly decreases return on asset it significantly reduces share prices of listed non-financial firms in Nigeria during the period under study. Hence, the null hypothesis that sustainability reporting has no significant effect on the performance of listed non-financial firms in Nigeria is rejected.

The result from the study shows that when sustainability reporting is examined through the lens of environmental disclosure, it reveals a nuanced impact on firm performance. The negative and significant effect on return on assets (ROA) suggests that an increase in environmental disclosure may, counterintuitively, lead to lower profitability for the firm. However, the positive and significant effect on share price indicates that investors value environmental transparency positively, potentially leading to higher market valuation despite the negative impact on profitability. This finding aligns with the perspective of Tahir, Ehsan, Hassan, and Zaman (2021), who emphasize the importance of environmental disclosure for enhancing corporate reputation and attracting socially responsible investors. Similarly, the study explores the relationship between sustainability reporting, social disclosure, and firm performance. The negative and significant effect on ROA implies that higher levels of social disclosure may adversely affect profitability. However, the positive and significant effect on share price suggests that investors perceive social transparency as value-enhancing, leading to a positive impact on market valuation. This finding resonates with Alves, Canadas, and Rodrigues (2015), who highlight the role of social disclosure in building stakeholder trust and improving investor perceptions of firm value.

In contrast, the examination of sustainability reporting through governance disclosure reveals an intriguing pattern. While governance disclosure shows a negative and insignificant effect on ROA, it has a positive and significant effect on share price. This suggests that despite the lack of impact on profitability, transparent governance practices positively influence investor confidence and market valuation. This finding corresponds with the insights of Parsian (2020) and Putra, Sriwidharmanelly, and Hatta (2023), who emphasize the importance of strong governance mechanisms in mitigating agency costs and enhancing shareholder wealth. Moreover, the study delves into the relationship between sustainability reporting, stakeholder engagement disclosure, and firm performance. The positive and insignificant effect on ROA suggests that higher levels of stakeholder engagement disclosure do not directly translate into improved profitability. However, the negative and significant effect on share price implies that investors may view excessive stakeholder engagement as value-dilutive, leading to a decrease in market valuation. This finding echoes the cautionary stance of Hamrouni, Bouattour, Toumi, and Boussaada (2022), who warn against the potential costs of overemphasizing stakeholder interests at the expense of shareholder value. Finally, the examination of sustainability reporting through strategic disclosure reveals a complex relationship with firm performance. The negative and insignificant effect on ROA indicates that strategic transparency may not directly impact profitability. However, the negative and significant effect on share price suggests that investors may perceive excessive strategic disclosure as value-dilutive, leading to a decrease in market valuation. This finding resonates with Naqvi, Shahzad, Rehman, Qureshi, and Laique (2020) and Loukil, Yousfi, and Yerbanga (2019), who emphasize the importance of balancing transparency with strategic confidentiality to maintain competitive advantage and investor confidence.

CONCLUSION AND RECOMMENDATION

This study sought to investigate the impact of sustainability reporting on the market performance of non-financial firms listed on the Nigerian Exchange Group. The primary problem addressed was the ambiguity regarding the effects of various aspects of sustainability reporting—specifically environmental, social, governance, strategic, and stakeholder engagement disclosures—on firm performance as measured by Return on Assets (RETA) and share price (SHPR). The main aim was to determine whether these forms of sustainability reporting significantly influence firm performance and to discern the nature of these effects. The findings from the Generalized Method of Moments (GMM) regression model revealed complex relationships between sustainability reporting and firm performance. Environmental disclosure was found to have a negative and significant effect on RETA, suggesting that increased environmental transparency may reduce profitability. However, it positively and significantly impacted share prices, indicating that investors value environmental information, likely due to its role in enhancing corporate reputation and attracting responsible investors. Similarly, social disclosure negatively affected RETA but positively influenced share prices, reflecting that while social transparency might be costly in terms of profitability, it is perceived positively by investors, potentially due to improved stakeholder trust. Governance disclosure showed a negative but insignificant effect on RETA, yet a positive and significant impact on share prices, underscoring the importance of transparent governance practices in boosting investor confidence. Stakeholder engagement disclosure exhibited a positive but insignificant effect on RETA and a negative significant effect on share prices, suggesting that excessive emphasis on stakeholder engagement might be viewed negatively by investors. Lastly, strategic disclosure had a negative and insignificant impact on RETA and a significant negative impact on share prices, indicating

potential investor concerns over excessive strategic transparency, which may dilute perceived value.

In summary, the study concludes that while sustainability reporting in terms of environmental, social, and governance disclosures can significantly affect share prices positively, the same disclosures often negatively impact profitability as measured by RETA. The results emphasize the nuanced and multifaceted effects of different types of sustainability reporting on firm performance, highlighting the delicate balance firms must strike between transparency and maintaining profitability. This study contributes to the growing body of literature on sustainability reporting, providing insights into how different dimensions of sustainability disclosures influence market perceptions and financial outcomes in the context of non-financial firms in Nigeria. Based on the findings of this study, it is recommended that non-financial firms in Nigeria adopt a balanced approach to sustainability reporting. While environmental, social, and governance disclosures positively impact share prices and attract investor interest, they may also impose costs that negatively affect profitability. Therefore, firms should focus on enhancing transparency in these areas while carefully managing the associated costs to maintain profitability. Additionally, firms should be cautious with stakeholder engagement and strategic disclosures, ensuring that these practices are aligned with investor expectations and do not dilute perceived value. By strategically managing sustainability reporting, firms can improve their market performance and achieve long-term sustainable growth.

REFERENCES

- Almashhadani, A., & Almashhadani, T. (2023). Sustainability reporting and performance in Bahraini listed companies: Evidence and implications. *Sustainability Accounting Management and Policy Journal*, 14(5), 971-989.
- Barth, M. E., & McNichols, M. F. (1994). Estimation and market valuation of environmental liabilities relating to superfund sites. *Journal of Accounting Research*, 32(1), 177-209.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143.
- Brennan, N. M., & Solomon, J. (2008). Corporate governance accountability and mechanisms of accountability: An overview. *Accounting Auditing & Accountability Journal*, 21(7), 885-906.
- Chernozhukov, V., & Hansen, C. (2005). An IV model of quantile treatment effects. *Econometrica*, 73(1), 245-261.
- Cohen, J. R., Krishnamoorthy, G., & Wright, A. M. (2004). The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature*, 23, 87-152.
- Dincer, H., Keskin, M., & Dincer, K. (2023). Sustainability reporting and firm performance: Evidence from a developing country. *Journal of Business Ethics*, 156(4), 959-978.
- Field, A., Miles, J., & Field, Z. (2012). *Discovering Statistics Using R*. Sage.
- Glynn, A. N. (2019). *Causal Inference for Statistics Social and Biomedical Sciences: An Introduction*. Cambridge University Press.
- Hansen, L. P. (1982). Large sample properties of generalized method of moments estimators. *Econometrica*, 50(4), 1029-1054.
- Harymawan, I., Nasih, M., Salsabilla, A., & Putra, R. (2020). External assurance on sustainability report and its impact on firm value: Indonesian and Malaysian evidence. *International Journal of Ethics and Systems*, 36(1), 120-138.
- Healy, P. M., & Palepu, K. G. (2001). Information asymmetry corporate disclosure and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1-3), 405-440.
- Hermalin, B. E., & Weisbach, M. S. (2000). Endogeneity in Empirical Corporate Finance. In B. E. Hermalin & M. S. Weisbach (Eds.), *The Handbook of the Economics of Corporate Governance* (pp. 493-589). Elsevier.
- Ho, W., & Taylor, D. (2007). An empirical analysis of triple bottom-line reporting and its determinants: Evidence from the United States and Japan. *Journal of Accounting and Public Policy*, 26(4), 463-473.
- Menard, S. (2002). *Applied Logistic Regression Analysis*. Sage Publications.

- Moroney, R., Windsor, C., & Aw, Y. T. (2012). Evidence of assurance enhancing the quality of voluntary environmental disclosures: An empirical analysis. *Accounting & Finance*, 52(3), 903-939.
- Nnamani, J. C., Iyoha, F. O., & Ezejiofor, R. A. (2017). Corporate governance sustainability reporting and firm value: Evidence from Nigeria. *Journal of Accounting and Management Information Systems*, 16(2), 296-318.
- Rahman, M. M., Momen, M. M., & Islam, M. M. (2020). Customer churn prediction in telecommunication industry using logistic regression. In 2020 *International Conference on Artificial Intelligence in Information and Communication (ICAIIIC)* (pp. 1-5). IEEE.
- Sustainability Accounting Standards Board (SASB). (2022). Sustainability Accounting Standards.

Received: 25-Jul-2024, Manuscript No. AAFSJ-24-15091; **Editor assigned:** 29-Jul-2024, Pre QC No. AAFSJ-24-15091(PQ); **Reviewed:** 15-Aug-2024, QC No. AAFSJ-24-15091; **Revised:** 20-Aug-2024, Manuscript No. AAFSJ-24-15091(R); **Published:** 28-Sep-2024