

Corporate Sustainability Practices and the Financial Performance of Listed Non-Financial Companies in Nigeria

DONATUS Lovina Bako¹, OLUWAGBADE Isaiah Oluyinka² (Ph.D), AWODIRAN Muideen Adeseye³(Ph.D), IGWE Chimezie⁴ EVINEMI Elijah Adeiza⁵, CHINSHAKA Ayuba Sitdang⁶ (Ph.D), ATAYI Abraham Vincent⁷

¹Department of Accounting, Afe Babalola University, Ado-Ekiti, Ekiti State, Nigeria

²Department of Accounting, Afe Babalola University, Ado-Ekiti, Ekiti State, Nigeria

³Department of Accounting, Afe Babalola University, Ado-Ekiti, Ekiti State, Nigeria

⁴Department of Information and Technology, National Open University of Nigeria, Abuja, Nigeria

⁵Department of Accounting, University of Nigeria Nsukka, Nigeria

⁶Department of Economics, Plateau State University Boko, Nigeria.

⁷Department of Economics, Plateau State University Boko, Nigeria.

Email address: abrahamatayi@gmail.com

Abstract— The study evaluated how corporate sustainability practices affect the financial performance of listed non-financial companies in Nigeria. The study specifically addressed the relationship between ROA, ROE, EVA, and Tobin's Q and social, environmental, governance, and ESG disclosure indexes. Both longitudinal and ex-post facto study designs were used. As of November 6, 2022, there were 107 non-financial companies listed on the Nigerian Exchange Group database; sampling technique was used to select 77 companies from this population. NGX database, websites of sampled companies, and annual reports were used to collect data in accordance with GRI and ESG sustainability disclosure criteria. Descriptive and inferential statistics were used to evaluate the data. The study revealed that corporate sustainability disclosure has significant effect on return on asset, Tobin's Q, and return on equity of listed non-financial companies in Nigeria. Meanwhile, the study showed that corporate sustainability disclosure has no significant effect on the economic value added of listed non-financial companies in Nigeria. The study, therefore, recommends that stakeholder engagement should be enhanced to gather information and feedback on how companies can be sustainably beneficial to stakeholders.

Keywords— Corporate sustainability disclosure, financial performance, ESG disclosure, environmental sustainability, social sustainability, governance sustainability.

I. INTRODUCTION

All countries are now concerned with corporate sustainability. Companies are under pressure from their stakeholders to raise awareness of issues connected to governance, social responsibility, and the environment as part of their corporate duties in the era of sustainable development. Stakeholders are putting more pressure on businesses to minimise their adverse effects on the environment and society (Hussain, 2015). Protecting the environment is essential for businesses if they want to avoid the depletion and destruction of natural resources. Natural resource availability is essential to the success and sustainability of businesses because without the inputs required

for the creation of commodities and the provision of services, businesses cannot function (Timothy *et al.*, 2020).

According to Asuquo *et al.* (2018), adopting a sustainability mentality can help management of any organisation make decisions that are both profitable and consider their social and environmental responsibilities. Sustainability reporting, which is essential in this respect, is a means by which organisations may be made aware of their actions in relation to human, social, and environmental resources (Uwuigbe *et al.*, 2018). Corporate sustainability practise is the behaviour that is expected to last over the long term and involves conducting corporate operations that uphold the social, economic, and environmental wellbeing of the community (Tjahjadi *et al.*, 2021). The cost of capital for the company is reduced when a company is dedicated to sustainability and corporate social responsibility (CSR) (Alexandre *et al.*, 2017).

Globally, frameworks and standards have been developed for sustainability disclosure; these include Global Reporting Initiative (GRI), ESG Sustainability Guidelines, International Integrated Reporting Council (IIRC), Dow Jones Sustainability Index (DJSI), Sustainability Accounting Standards Board (SASB) among others (Ching *et al.*, 2017; Gold *et al.*, 2020). The Nigerian Securities and Exchange Commission (SEC) approved the sustainability reporting guidelines in November 2018 because of a stakeholder engagement meeting to discuss the value of sustainability practices to businesses, its performance on environmental, social, and governance (ESG) issues, and enhancing corporate transparency. These guidelines are intended to provide information on five crucial social and environmental sustainability areas: the community, workplace, employees, and the environment (SEC, 2018).

As the world grapples with issues like gender and economic inequality, violations of human rights, global warming, carbon emissions, petrol flaring, and various degrees of environmental degradation, sustainability awareness in business organisations is continuing to rise (Ezeoha & Omkar, 2017). Due to growing

concerns over environmental degradation, resource depletion, and the need for sustainable economic activity, environmental accounting and reporting are becoming increasingly important in Nigeria (Emmanuel and Erinoso, 2022). Regarding these incidents, the business case for sustainability has increased over time to previously unheard-of heights. The problem, then, is that business activities in Nigeria are causing some environmental, societal, and economic degradation, which has led to a decline in company profitability and negative effects on the environment, soil quality, and biodiversity (Abdulkareem *et al.*, 2021; Gold & Taib, 2020).

The objective of the study is to assess the effect of corporate sustainability practices on the financial performance of listed non-financial companies in Nigeria. Specifically, the study examined the effect of corporate sustainability disclosure on return on equity, EVA, return on asset and Tobin's Q of listed non-financial companies in Nigeria. This study is structured into five parts. Firstly, an introduction to the study; secondly, literature review which includes empirical review and theoretical framework is conducted. Thirdly, the methodology is described; fourthly, the results and discussion of findings and lastly, a presentation on the conclusion and recommendation of this study.

II. LITERATURE REVIEW

The idea of sustainable development started to emerge in opposition to the emerging environmental issues towards the end of the 20th century. The phrase "sustainable development," gained popularity at the 1992 Rio Earth Summit, which is where the term "sustainability" originates. According to the Brundtland Report for the World Commission on Environment and Development (1992), sustainable development is defined as meeting present-day requirements without compromising the ability of future generations to meet their own needs (SEC, 2018). Sustainability performance is an organization's capacity to maintain long-term profitability while also remaining productive over time (Edward *et al.*, 2016). Sustainability disclosure is the act of making known to the public and stakeholders the activities of a firm that contribute to economic, social, and environmental wellbeing of citizens. Sustainability seeks to minimise the use of energy and raw materials while also preventing the development of waste throughout the entire production process (Cigdem & Ebru, 2018).

Environmental, social and governance (ESG) disclosures, according to Putri and Puspawati (2023), offer an overview of the company's position in minimizing adverse environmental effects, the company's function in managing interactions with surrounding conditions, and how corporations execute good governance standards. Investors typically analyse and sort out the investments that they will take using the criteria for the three aspects mentioned above. Environmental sustainability performance evaluates how well a company uses resources, uses energy, produces, and manages waste, regulates emissions and effluents, and makes any other efforts to manage operational activities that have an impact on the environment (Magaji *et al.*, 2018). Okoye *et al.* (2020) describe social sustainability reporting as managing corporate impacts on people, both positive and bad as the effectiveness of a

company's interactions and engagement with its stakeholders is essential. Governance sustainability is an organizational structure that governs businesses and integrates sustainability concerns in a way that enables long-term value generation for the business and positive outcomes for all stakeholders (Kent & Chan, 2009).

Financial performance is a gauge of a company's success over a specific period. The goal of assessing corporate performance is to gather data on the effective use of resources, which can aid management in making decisions that are best for the business (Putri & Puspawati, 2023). Financial performance measures the monetary outcomes of a company's policies and activities; these outcomes are represented in the firm's profitability (Okafor, 2018). It can be measured in numerous ways, including profitability, return on investment, liquidity, and market share. Return on asset measures the ability of the corporation to use its assets to generate profit. ROA indicates the ratio of an organization's profits to its entire resources (assets). A high ROA indicates that a company is generating a significant amount of profit for each asset it owns, while a low ROA indicates that the company is less efficient at using its assets to generate profit. ROE is an important metric used by investors to evaluate the performance of a company. A high ROE indicates that a company is generating a significant amount of profit relative to the amount of capital contributed by shareholders. Conversely, a low ROE indicates that a company is not generating profit relative to the amount of money invested by its shareholders. From a financial management standpoint, the EVA indicator contains all the essential elements needed to define the company's financial status. A positive value suggests that a business has outperformed its cost of capital, whereas a negative value suggests that it has not produced enough revenue to pay its operating expenses (Edward *et al.*, 2016). It is measured as net operating profit less weighted average cost of capital multiplied by capital employed. Tobin's Q is an instrument used to measure the value of a company (Putri & Puspawati, 2023). It is calculated as market capitalization divided by total asset (Felix, 2021; Haidar *et al.*, 2021). A value less than 1 implies that the company is undervalued, a value greater than 1 it implies that the company is overvalued while a value equal to 1 indicates that there is break even.

The concepts examined in this study are disaggregated into financial performance (ROA, ROE, EVA, and TQ), and corporate sustainability disclosure (ESG sustainability disclosure index, environmental sustainability disclosure index, social sustainability disclosure index, and governance sustainability disclosure index) as shown in Figure 1.

Theoretical Review

The agency theory, created in 1976 by Michael C. Jensen and William H. Meckling (Eisenhardt, 1989), serves as the foundation for this study. It is based on the idea that principals assign certain duties to agents to accomplish goals. This theory considers risk sharing from an economic angle (Eisenhardt, 1989) and acknowledges the connection between principals and agents, noting that they might approach the principal-agent dilemma in diverse ways (Jensen *et al.*, 1976). Agents are people who operate on behalf of the principals in a commercial

environment, and management is regarded as an agent acting on behalf of shareholders, who are the principals. The principal determines the goals for the relationship to thrive. According to the Agency theory, those who are employed in agency roles and own stock in the company are more likely to act in the principals' interests as if they were their own (Fama *et al.*, 1983). Agency theory is important in the context of sustainability practices because it draws attention to the

potential conflict of interest between executives and shareholders, particularly between those who prioritize social and environmental issues and those who prioritize maximizing profits. Organizations can promote sustainability practices and experience long-term success by coordinating the interests of shareholders and executives and putting in place efficient monitoring and control procedures (Emeka-Nwokeji *et al.*, 2019).

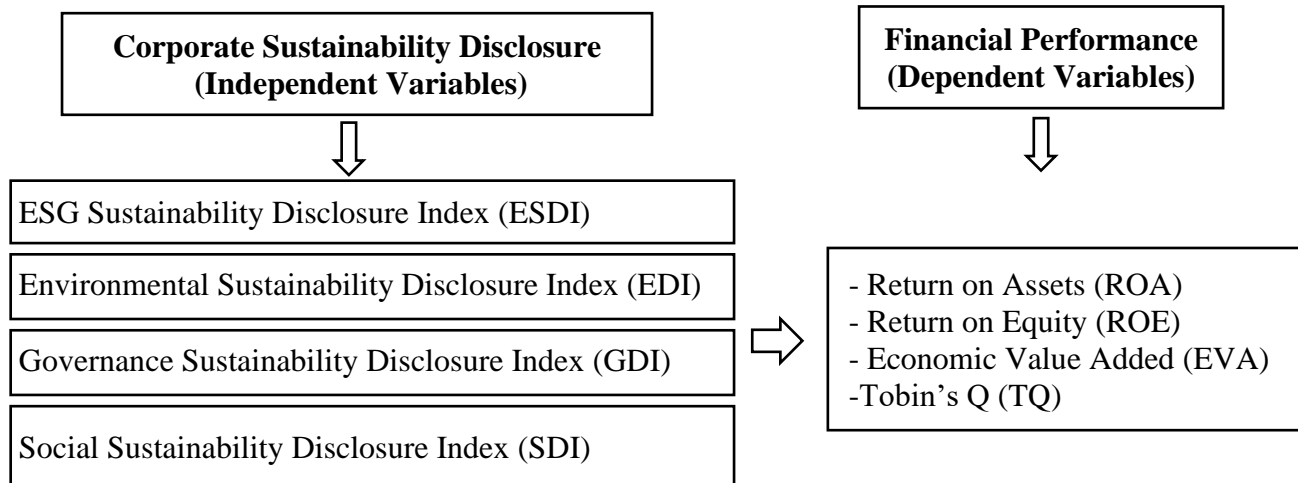


Figure 1 Conceptual Framework

Source: Researcher's Conceptualisation based on deductions from literatures (2023)

Empirical Review

Putri and Puspawati (2023) investigated the effect of ESG disclosure, company size, and leverage on company's financial performance in Indonesia with the aim of examining the effect of disclosure of ESG, company size and leverage on financial performance of all companies listed on the Indonesian Stock Exchange (IDX) in 2018 – 2021. Financial performance was proxied by Tobin's Q and ROA. The sample size was selected using purposive sampling technique to obtain 42 samples that met the criteria: company must be listed on the IDX in 2018-2021, company must disclose ESG values on the Thompson Reuters website, and company must provide complete financial reports and annual reports for 2018-2021. The data analysis employed a panel data regression method. The findings revealed that environmental, social, and governance (ESG) factors did not have a significant impact on return on assets (ROA). However, company size was found to have a significant effect on ROA and leverage also had a significant effect on ROA. Similarly, the analysis indicated that ESG had no significant effect on Tobin's Q, a measure of firm's market value. Company size, on the other hand, was found to have a significant effect on Tobin's Q, and leverage also had a significant effect on Tobin's Q. These results are consistent with the findings of Memed *et al.* (2020). However, the study focused on only ROA and Tobin's Q while the period is considered not sufficient; this study included ROE and EVA and extended the period from 2012-2021.

The impact of environmental preservation, sustainability, and financial performance on listed oil and gas businesses in Nigeria from 2011 to 2020 was examined by Oyedokun and

Erinoso in 2022. The data were acquired from the listed oil and gas businesses on the Nigerian Stock Exchange as of December 31, 2020, and the study used an ex-post facto research design. Out of the 13 listed oil and gas businesses on the Nigerian stock exchange, a sample of 11 of these companies was chosen. Environmental accounting disclosure was evaluated based on environmental sustainability and conservation, whereas financial performance was evaluated based on return on equity, profit after tax, and return on assets. The data was analyzed using panel data regression. The result of the analysis showed that environmental sustainability has a significant effect on the financial performance of listed oil and gas companies in Nigeria. The study concluded that oil and gas producing companies should prioritize their environment to improve future performance and operational profitability of their operation. The result of this study conforms with the study of Omaliko *et al.* (2020). However, the study only focused on environmental sustainability disclosure and only 3 financial performance indicators were examined. Also, only oil and gas companies were analysed. This study focused on environmental, social and governance sustainability disclosures and examined all the listed companies in Nigerian. Also, 4 financial performance indicators (return on asset, return on equity, economic value added and Tobin's Q) were assessed.

Umar *et al.* (2021) conducted a study in Nigeria to examine the relationship between sustainability reporting and financial performance of listed consumer goods firms. The main objective was to assess the impact of sustainability reporting on return on assets (ROA) and return on equity (ROE) of these firms. The population consisted of 26 consumer goods firms,

and the researchers used census sampling techniques to include all 26 firms in their sample. The study employed a correlational research design, and data was collected from the firms' annual reports and financial statements spanning a 10-year period from 2009 to 2018. Using multiple regression analysis, the collected data was subjected to diagnostic checks and post-estimation analyses. The findings of the study revealed that both social and environmental performances had a significant positive influence on financial performance. In contrast, economic performance showed a notable negative effect on financial performance. These results were consistent with a previous study by Nnamani *et al.* (2017) concerning social and environmental performance. However, the finding regarding economic performance contradicted the findings of Nnamani *et al.* (2017). The study focused on a single sector, specifically consumer goods firms, and analysed only two financial performance indicators (ROA and ROE). In contrast, the current study aimed to address these limitations by analysing all non-financial companies and assessing two additional financial performance indicators. By doing so, this study bridged the existing research gap in the field.

Memed *et al.* (2020) conducted a study to investigate the impact of sustainability reporting on the performance of the mining sector in Indonesia during the period of 2012-2016. The researchers selected 20 firms as samples specifically from the mining sector. Sustainability disclosure was evaluated through content analysis, while company performance was assessed using return on equity (ROE), Tobin's Q, and return on assets (ROA) as indicators. Multiple regression analysis was employed as the statistical method for the investigation. The results of the study indicated that sustainability reporting did not have a significant effect on ROA, ROE, or Tobin's Q. These findings contradicted the results of previous studies conducted by Johari *et al.* (2019) and Swarnapali *et al.* (2018). It is important to note that the scope of this study was limited to the period of 2012-2016. Additionally, the study did not measure Economic Value Added (EVA) as a financial performance indicator. To address these gaps, the current study covered a broader time frame, spanning from 2012-2021, and include EVA.

Omaliko *et al.* (2020) conducted a study to examine the influence of social and environmental disclosures on the performance of non-financial firms in Nigeria. The research design employed in this study was ex-post facto, and data was collected from the Nigeria Stock Exchange (NSE) Fact book and published annual reports of all 112 non-financial firms listed on the Nigeria Stock Exchange between 2011 and 2018. The findings of the study revealed that social and environmental disclosures had a significant positive impact on firm performance, specifically measured by net asset per share. These results were inconsistent with the findings of Memed *et al.* (2020). The scope of this study was limited to the period from 2011 to 2018, creating a time gap in the research. Additionally, the study solely examined the impact on net asset per share as a measure of firm performance. To address these gaps, the current study aimed to expand the time frame, covering the period up to 2021, and analysed multiple indicators of firm performance, including return on assets

(ROA), return on equity (ROE), Tobin's Q (TQ), and Economic Value Added (EVA).

Tanjung *et al.* (2019) conducted a study to investigate the impact of sustainability report disclosure, economic value added (EVA), and other fundamental factors on company value. To measure firm value, the researchers utilized economic value added (EVA), debt to equity ratio (DER), and price to earnings ratio (PER). The sample size was determined through purposive sampling, focusing on companies that were consistently listed in the LQ 45 Index on the Indonesia Stock Exchange over a 3-year research period from 2016 to 2018. Multiple regression analysis was employed to estimate the model. The findings of the study indicated that the disclosure of sustainability report, DER, and PER had a significant impact on firm value. However, EVA did not have a significant influence on firm value. These results differed from the conclusions drawn by Ndubuisi *et al.* (2018). It is worth noting that the study did not measure return on assets (ROA), return on equity (ROE), and Tobin's Q as financial performance indicators, thus creating a research gap. To address this gap, the current study included ROA, ROE, and Tobin's Q.

Johari *et al.* (2019) conducted a study to investigate the effectiveness of sustainability reporting on the performance of publicly listed firms in Malaysia. The main objective was to examine the extent to which sustainability reporting contributes to improving firm performance among these listed firms. The study sample consisted of 100 firms, which were selected based on their strong disclosure practices in the year 2016. The researchers used earnings per share (EPS), return on equity (ROE), return on assets (ROA), and dividend per share (DPS) as measures of firm performance. To assess sustainability reporting, the study employed a weighted disclosure index as the independent variable. The findings of the study indicated that the level of sustainability reporting positively influenced the profitability of the selected firms in terms of ROE and ROA. However, sustainability disclosure did not have a significant effect on DPS and EPS of these firms. These findings were consistent with a previous study by Nnamani *et al.* (2017). It is important to note that the study did not consider Economic Value Added (EVA) and Tobin's Q as indicators of financial performance. To address this limitation, the current study incorporated EVA and Tobin's Q as additional indicators for financial performance.

Sanusi *et al.* (2019) conducted a study to examine the environmental sustainability reporting practices in the manufacturing industry in Nigeria. The objective of the study was to assess the prevalence and extent of environmental sustainability practices among publicly traded industrial companies in Nigeria and the impact of these practices on their financial performance. The researchers utilized descriptive analysis, content analysis, and inferential statistics as the primary methods of analysis. Panel data from 2010 to 2015 and survey research were also used. The empirical findings of the study revealed that most manufacturing firms in Nigeria reported extremely low levels of environmental disclosures. However, the data presented in this study accurately depicted the prevalence of environmental sustainability reporting among Nigerian manufacturing companies. The study also found a

positive impact of environmental sustainability reporting on financial performance, as measured by earnings per share, revenue growth, and return on assets. These findings were consistent with the results of a study by Umar *et al.* (2021). It is important to note that the study focused on earnings per share, revenue growth, and return on assets as the accounting measurement variables. Additionally, the data analysis period ended in 2015, which created a time and concept gap in the research. To address these gaps, the current study aimed to explore additional financial performance indicators such as return on equity (ROE), economic value added (EVA), and Tobin's Q. Furthermore, the research period was extended until 2021, providing a more up-to-date analysis of the relationship between environmental sustainability reporting and financial performance.

Oyedokun *et al.* (2019) conducted a study to examine the relationship between environmental accounting disclosure and firm value among industrial goods companies in Nigeria. The objective was to assess the impact of environmental accounting disclosure on firm value during the period from 2007 to 2016. The study population included all 18 industrial goods companies listed on the Nigerian Stock Exchange (NSE) between 2007 and 2016, as documented by the Nigerian Stock Exchange. However, due to incomplete data for three of these companies, a sample of 15 companies was selected using a census sampling method. The research design employed in this study was ex-post facto, and data were collected from the annual financial statements of the selected sample companies. Multiple regression analysis was used to analyse the relationship between environmental accounting disclosure and firm value. Environmental accounting disclosure was evaluated using a combination of financial indicators, non-financial indicators, and performance indicators. Firm value was assessed using Tobin's Q. The findings of the study revealed that all three types of environmental information (financial, non-financial, and performance) are important for the value of business organizations. Specifically, non-financial environmental information had a positive and significant effect on the value of the participating business organizations. On the other hand, performance environmental information had a negative and significant effect on firm value, while financial environmental information did not have a significant effect. These results contradicted the findings of Nnamani *et al.* (2017). The study focused only on industrial goods firms, which may be considered a limited subset compared to the overall number of firms in Nigeria. In contrast, the current study covered all listed companies in Nigeria, providing a broader perspective on the relationship between environmental accounting disclosure and firm value.

Polycarp (2019) conducted a study to examine the relationship between environmental accounting and financial performance of oil and gas companies in Nigeria from 2016 to 2017. The researcher collected data from secondary sources, specifically the annual reports of Nigerian oil companies obtained through the Nigerian Stock Exchange (NSE). A random selection method was used to choose 11 Nigerian oil companies based on the availability of their annual reports. To measure financial performance, the study employed various

proxies including earnings per share (EPS), return on equity (ROE), net profit margin (NPM), and dividends per share (DPS). The independent variable, environmental accounting disclosure cost, was used to evaluate the extent of environmental disclosure in the companies' reports. The findings of the study indicated no correlation between financial performance and environmental disclosure. These results contrasted with the findings of Asuquo *et al.* (2018). It is important to note that the study was limited to a two-year period, specifically 2016 to 2017. To address this limitation, the current study examined a broader timeframe spanning ten years from 2012 to 2021.

Emeka-Nwokeji *et al.* (2019) conducted a study to examine the impact of sustainability disclosure on the market value of non-financial companies listed in Nigeria. The research focused on a sample of 93 non-financial companies selected from a total of 120 listed companies that were active between 2006 and 2015. The study utilized various regressors, including social sustainability disclosure, environmental sustainability disclosure, corporate governance disclosure, and an aggregate sustainability disclosure index. The market value of the selected firms was measured using Tobin's Q. Correlation analysis, principal component analysis, and pooled ordinary least squares (OLS) regression were employed as analytical methods. The findings revealed that corporate governance and environmental sustainability disclosure had a positive and significant influence on the market value of the selected firms. However, social sustainability disclosure had a negative and insignificant effect. These results were consistent with the findings of Memed *et al.* (2020). The study analysed annual reports from 2006 to 2015, which may be considered out-dated as it does not provide current data. In contrast, the present study examined annual reports from 2012 to 2021, allowing for a more up-to-date assessment of the relationship between sustainability disclosure and market value.

Swarnapali *et al.* (2018) conducted a study to examine the impact of sustainability reporting on the value of firms in Sri Lanka. The objective was to assess the effect of sustainability practices on firm value. Data from 220 companies listed on the Colombo Stock Exchange were collected for the period from 2012 to 2016. Sustainability reporting, which served as the independent variable, was measured using content analysis. The dependent variable, representing firm value, was measured using Tobin's Q. Multiple regression analysis was employed to analyse the data. The results of the analysis indicated that sustainability reporting had a positive and significant effect on Tobin's Q, indicating an increase in firm value. These findings were consistent with the results of Gunarsih *et al.* (2018), supporting the positive impact of sustainability reporting on firm value. However, it is important to note that the study focused solely on Tobin's Q as a financial indicator, and the time limit of 2012-2016 is considered out-dated as it does not provide up-to-date results. To address these limitations, the present study examined four financial indicators (ROA, ROE, Tobin's Q, and EVA) and extended the time limit from 2012 to 2021.

Tri *et al.* (2018) investigated the effect of sustainability reporting on the performance of the Indonesian mining, metal,

and food processing industry between 2014 -2017. The study used 60 quoted Indonesian firms. The independent variables are sustainability reporting, social, and environmental segments of sustainability reporting as well as economic segment. The dependent variables are ROA and Tobin Q. A multivariate analysis was used, and the results indicate that economic and social dimensions of sustainability reporting positively and significantly affects market value (Tobin's Q), but do not affect ROA. The result on Tobin's Q concurs with Swarnapali *et al.* (2018) while the results of Johari *et al.* (2019) disagree with the findings on ROA. The study, however, focused on only sustainability economic, environment and social dimensions. This is narrow. Also, the study was underpinned with only one theory; hence, this study broadened the scope by focusing on sustainability disclosure and utilizing 3 theories that are related to the study.

Ndubuisi *et al.* (2018) conducted a study to assess the impact of sustainability reporting on the economic value added (EVA) of quoted brewery companies in Nigeria over a ten-year period from 2008 to 2017. The study utilized social sustainability reporting, economic sustainability reporting, and environmental sustainability reporting as proxies for sustainability reporting. The sample for the study consisted of six brewery firms, while the population included seven brewery firms. Panel data from sources such as the Nigerian Stock Exchange publications, fact books, financial statements, and annual reports of the listed beer enterprises were used as the data source. The data were analysed using an ex-post facto research methodology, correlation coefficients, and multiple regression analysis. The findings of the study revealed that reporting on economic, social, and environmental sustainability had a significant and positive impact on economic value added (EVA) at a statistically significant level of 5%. These results contrast with the findings of Tanjung *et al.* (2019). However, it is important to note that the study was limited to listed brewery firms, which may not provide a comprehensive representation of the overall impact of sustainability reporting. The present study examined all sectors listed in Nigeria to address this limitation.

Najul (2018) assessed whether sustainability reporting affect the performance of Asian firms. Data were retrieved from firms listed in selected countries as follows: South Korea (26), Japan (36), South (26), India (28), and Indonesia (21) from 2009-2014. The study employed content analysis to compute sustainability disclosure in accordance with Global reporting initiatives (GRI). Binary logistic regression was used to analyse collected data. Considerable positive correlation exists between sustainability reporting and the performance of firms, according to the findings. The result of Amacha *et al.* (2017) agrees with the findings of the study. The scope of 2009-2014 is considered obsolete as it does not provide up-to-date result. This study closed this gap by increasing the scope from 2012-2021.

Asuquo *et al.* (2018) conducted a study to examine the impact of sustainability reporting on the performance of quoted brewery firms in Nigeria. The study focused on the regressed variable of return on assets (ROA), with environmental, social, and economic factors serving as regressors. The data for the study was obtained from the audited financial statements of

three breweries, covering the period from 2012 to 2016. Multivariate analysis was employed as the analytical method. The findings of the study revealed significant correlations between the environmental, economic, and social dimensions of sustainability reporting and ROA. These results were consistent with the findings of Nnamani *et al.* (2017) and Johari *et al.* (2019), indicating that sustainability reporting has a positive impact on financial performance. However, it is important to note that the study was limited to only three breweries within the period of 2012-2016. Additionally, the study only considered one financial performance indicator, which may not provide a comprehensive representation of the overall performance of all firms. Furthermore, the data used in the study is considered out-dated. To address these limitations, the present study analysed a larger sample size of 113 companies, covering the period from 2012 to 2021. Additionally, the study assessed four financial performance indicators, namely Tobin's Q, ROA, EVA, and ROE.

Gunarsih *et al.* (2018) conducted a study to examine the relationship between sustainability reporting and firm performance in the mining, metal, and food processing industries listed on the Indonesia Stock Exchange (IDX) from 2014 to 2017. The study aimed to provide empirical evidence on the impact of three dimensions of sustainability reporting, namely economic, environmental, and social dimensions, on firm performance using two indicators: return on assets (ROA) and Tobin's Q. The sample for the study consisted of 60 companies selected from the metal, mining, and food processing industries, using purposive sampling as the sampling method. The researchers analysed the data to assess the influence of sustainability reporting dimensions on Tobin's Q (market value) and return on assets (book value). The findings of the study indicated that the social and economic dimensions of sustainability reporting had a significant influence on Tobin's Q, indicating market value, but did not have a significant impact on return on assets. These results align with the findings of Swarnapali *et al.* (2018) regarding Tobin's Q, while they differ from the results of Asuquo *et al.* (2018) concerning return on assets. It is worth noting that the previous study only measured the financial performance indicators of ROA and Tobin's Q. In contrast, the present study provides a more comprehensive analysis by incorporating additional financial performance indicators such as return on equity (ROE) and economic value added (EVA) alongside ROA and Tobin's Q.

Nnamani *et al.* (2017) conducted a study to investigate the impact of sustainability reporting on the performance of listed manufacturing firms in Nigeria, with a specific focus on the Nigerian brewery sector. The researchers employed purposive sampling to select three firms from the sector for data collection. Financial statements served as the primary source of data, and financial performance was measured using two indicators: return on assets (ROA) and return on equity (ROE). Ordinary linear regression was used for data analysis. The findings of the study indicated a positive and significant influence of sustainability reporting on the financial performance of the examined firms. These results align with the research conducted by Johari *et al.* (2019). However, it is

important to note that the study was limited to only three firms within the period of 2012-2016. Additionally, the measurement of financial performance was confined to ROA and ROE. As a result, this sample size and duration of the study may not be representative of the entire range of firms, and the time limit is considered out-dated. To address these limitations, the present study aimed to analyse a larger sample size of 113 companies spanning from 2012 to 2021, while incorporating additional financial performance indicators such as Tobin's Q and economic value added.

Amacha *et al.* (2017) investigated the relationship between sustainability practices and performance in a financial sense for Malaysian Oil and Gas sector. The main aim of this study is to investigate how sustainability practices affect the profitability of businesses in Malaysia. The assessment of sustainability performance was conducted using the ACSI checklist, which is a modified version of the GRI 3.0 (Global Reporting Initiative). Financial performance was evaluated using profitability indicators and financial parameters such as earnings per share (EPS), earnings before interest, taxes, depreciation, and amortization (EBITDA), and price-to-earnings (PE) ratio. Utilizing both exploratory and explanatory research designs, the methodology followed a deductive approach. The research utilized qualitative, secondary data sources to generate quantitative data for analysis; data sources include, but are not limited to, sustainability reports, annual reports, press releases, and independent research articles. In addition, secondary data sources collected from selected Bursa Malaysia-listed Malaysian companies are utilized. The population is made up of 32 oil and gas companies while the sample size is 21 companies. On each of the three selected profitability metrics, the results revealed that companies that practiced sustainability performed better than their counterparts who did not. There exists a strong and substantial correlation between improved financial performance and sustainability practices. This supports the work of Najul (2018). The study was limited to EBITDA, EPS, and PE ratio; however, the current study applied ROA, ROE, Tobin's Q, and EVA as financial performance indicators.

Two major gaps were identified in the literature reviewed. Firstly, presence of population gap. Listed non-financial companies in Nigeria are significant, thus, the need to conduct research in the context of corporate sustainability disclosure. Most studies on corporate sustainability practices focused on one sector – Emeka-Nwokeji *et al.*, 2019; Emmanuel *et al.*, 2022; Felix, 2021; Umar *et al.*, 2021, among others. Little research exists on all non-financial firms listed in Nigeria. Secondly, previous empirical research has primarily concentrated on Tobin's Q, return on equity (ROE), and return on asset (ROA) such as Asuquo *et al.* (2018), Gunarsih *et al.* (2018), Hamid *et al.* (2020), Johari *et al.* (2019), Khan (2019), Memed *et al.* (2021), Nnamani *et al.* (2017); Oyedokun *et al.* (2019), Polycarp (2019), Sanusi *et al.* (2019), Swarnapali *et al.* (2018); Umar *et al.* (2021). Few studies have been conducted on the effect of corporate sustainability practices on the economic value added (EVA).

The study statistically evaluated the following hypotheses at 5% level of significance:

- H₀₁: Corporate sustainability disclosure does not have a significant effect on return on asset of listed non-financial companies in Nigeria.
- H₀₂: Corporate sustainability disclosure does not have a significant effect on return on equity of listed non-financial companies in Nigeria.
- H₀₃: Corporate sustainability disclosure does not have a significant effect on economic value added of listed non-financial companies in Nigeria.
- H₀₄: Corporate sustainability disclosure does not have a significant effect on Tobin's Q of listed non-financial companies in Nigeria.

III. DATA AND METHODS

Ex-post facto and longitudinal research designs were used in this study. Over a ten-year span, the study examined a number of companies. Data for the years 2012–2021 was gathered from secondary sources such as the Nigerian Exchange Group database, annual reports, and sustainability reports retrieved from the official websites of listed non-financial companies. The ESG (Environmental, Social, and Governance) disclosure and GRI (Global Reporting Initiative) guidelines, which are available at the official GRI website (www.globalreporting.org), were complied with in measuring corporate sustainability practices. All 107 non-financial companies listed on the Nigerian Exchange Group (NGX) as of May 29, 2023, made up the study's population. A sample of 77 non-financial companies was selected using a purposive sampling technique. Mean, median, mode, and standard deviation were used as descriptive statistics, while panel regression analysis—specifically pooled ordinary least squares (OLS), fixed effects model, and random effects model were used as an inferential statistical technique.

Model Specification

The model for EVA was specified in line with the research of Subedi *et al.* (2020) while the models for ROA and ROE were adapted from Khan (2019) and in the case of Tobin's Q, the model was adapted from Felix (2021). All these models were selected because of the recency and similarities; therefore, the models for this study are mathematically stated as follows:

$$ROA_{it} = \beta_0 + \beta_1ESDI_{it} + \beta_2SDI_{it} + \beta_3EDI_{it} + \beta_4GDI_{it} + \epsilon_{it}$$

$$ROE_{it} = \beta_0 + \beta_1ESDI_{it} + \beta_2SDI_{it} + \beta_3EDI_{it} + \beta_4GDI_{it} + \epsilon_{it}$$

$$EVA_{it} = \beta_0 + \beta_1ESDI_{it} + \beta_2SDI_{it} + \beta_3EDI_{it} + \beta_4GDI_{it} + \epsilon_{it}$$

$$TQ_{it} = \beta_0 + \beta_1ESDI_{it} + \beta_2SDI_{it} + \beta_3EDI_{it} + \beta_4GDI_{it} + \epsilon_{it}$$

Where:

ESDI = ESG sustainability disclosure index

SDI = Social sustainability disclosure index

EDI = Environmental sustainability disclosure index

GDI = Governance sustainability disclosure index

$\beta_1 - \beta_4$ = Independent variables coefficient

i = firm (1-77)

t = period (2012-2021)

μ = error term

A-priori expectation = $\beta_1 - \beta_4 > 0$

IV. DATA ANALYSIS AND DISCUSSION OF FINDINGS

Descriptive Statistic

The basic features of the data used for the analysis are; the total number of observations is 770. From the table, the overall average of returns on asset (ROA) of non-financial companies is 1.079192 with minimum of -179.92 and maximum ROA of 176.27. The standard deviation of 16.21223 indicates that medium spread around the average ROA value. The overall average on returns on equity of non-financial companies is 6.968216 with minimum ROE of -1964.35 and maximum ROE of 10264.72. The value of the standard deviation of 398.5491 further shows wide variation around the average ROE value. Also, the overall average economic value added (EVA) of non-financial companies is -0.03796 indicates that economic value added have negative effect on non-financial companies with minimum of -2.89 and maximum of 1.71. The standard deviation of 0.207528 shows small variation around the average value. Furthermore, overall average Tobin Q ratio (TQ) ratio of 1.270313 indicates that it will cost non-financial companies less to replace their assets with minimum and maximum of -0.31 and 12.69, respectively. The standard deviation of 1.193527 shows small spread around the average TQ ratio.

The overall average ESG sustainability disclosure index (ESDI) is 54.95504 with minimum and maximum liquidity of 0 and 90.11, respectively. A standard deviation of 17.00694 indicates medium spread around the average value. Also, the overall average of social sustainability disclosure index (SDI) is 60.48497 with minimum and maximum SDI of 0 and 100, respectively. A standard deviation of 19.65405 indicates medium spread around the average value. Furthermore, the overall average value of environmental sustainability disclosure index (EDI) is 41.04167 with minimum EDI of 0 and maximum EDI of 100. The standard deviation of 22.1334 further shows a medium spread from the average value. Lastly, the overall average of governance sustainability disclosure index (GDI) is 63.33805 with minimum and maximum cost of 0 and 84.62, respectively. The standard deviation of 17.98228 indicates a medium spread around the average value.

To examine the effect of sustainability disclosure on return on asset of listed non-financial companies in Nigeria

The within r-square of this model is 0.0025, with between r-square of 0.0416 and overall r-square of this model is 0.0104. The result of the Wald chi2 (4.45) shows that the model is significant with a probability value of 0.048. Also, the values of the z-score shows that ESGI is negative and lies below the meanwhile SDI, EDI, and GDI are positive and lie above the mean. The regression result shows that GDI, SDI and EDI are positive significant while ESGI is negative significant. Therefore, an increase in governance sustainability disclosure index (GDI) increases the returns of asset (ROA) of listed non-financial companies by 80.546 units. Similarly, an increase in social sustainability disclosure index (SDI) increases the returns on asset of listed non-financial companies by 80.581 units. Also, an increase in environmental sustainability disclosure index (EDI) increases the returns on asset of listed non-financial companies by 80.631 units. Lastly, an increase in ESG sustainability disclosure index (ESGI) decreases the returns on asset of listed non-financial companies by 241.717 units. In conclusion, components of corporate sustainability practices

such as ESGI, SDI, EDI and GDI have significant effect on returns on asset of listed non-financial companies in Nigeria.

TABLE 1: Effect of sustainability disclosure on return on asset of listed non-financial companies in Nigeria

ROA	Coefficient	Standard Error	Z	P> z
ESGI	-241.7166	184.5875	-1.31	0.01
SDI	80.58109	61.53307	1.31	0.039
EDI	80.63071	61.52931	1.31	0
GDI	80.54642	61.52637	1.31	0.021
_CONS	-0.1926976	2.816313	-0.07	0.045
R-SQUARE	Within 0.0025 Between 0.0416 Overall 0.0104			
WALD CHI ²	4.45 (0.048)			

Source: Computed by the Author (STATA, 16)

To evaluate the effect of sustainability disclosure on return on equity of listed non-financial companies in Nigeria

The within r-square of this model is 0.0020, with between r-square of 0.0056 and overall r-square of this model is 0.0019. The result of the Wald chi2 (1.49) shows that the model is significant with a probability value of 0.0291. Also, the values of the z-score shows that ESGI is negative and lies below the meanwhile SDI, EDI, and GDI are positive and lie above the mean. The regression result shows that ESGI is negative significant, SDI and EDI are positive significant while GDI is positive insignificant. Therefore, an increase in ESGI sustainability disclosure index decreases the returns on equity of listed non-financial companies by 1996.78 units. Also, an increase in social sustainability disclosure index (SDI) increases the returns on equity of listed non-financial companies by 666.22 units. Lastly, an increase in environmental sustainability disclosure index (EDI) increases the returns on equity of listed non-financial companies by 666.14 units. In conclusion, components of corporate sustainability practices such as ESGI, SDI, and EDI have significant effect on returns on equity of listed non-financial companies in Nigeria.

TABLE 2: Effect of sustainability disclosure on return on equity of listed non-financial companies in Nigeria

ROE	Coefficient	Standard Error	Z	P> z
ESGI	-1996.78	4413.401	-0.45	0.041
SDI	666.2185	1471.211	0.45	0.041
EDI	666.1407	1471.126	0.45	0.041
GDI	665.2106	1471.105	0.45	0.651
_CONS	-28.7963	54.28174	-0.53	0.096
R-SQUARE	Within 0.0020 Between 0.0056 Overall 0.0019			
WALD CHI ²	1.49 (0.0291)			

Source: Computed by the Author (STATA, 16)

To investigate the effect of sustainability disclosure on Tobin's Q of listed non-financial companies in Nigeria

The within r-square of this model is 0.0219, with between r-square of 0.0028 and overall r-square of this model is 0.0063. The result of the Wald chi2 (9.92) shows that the model is significant with a probability value of 0.0418. Also, the values of the z-score show that ESGI is negative and lies below the mean while SDI, EDI, and GDI are positive and above the mean. The regression result shows that ESGI is negative

significant while GDI, SDI and EDI are positive significant. Therefore, an increase in ESG sustainability disclosure index (ESGI) decreases Tobin's Q of listed non-financial companies by 5.581 units. Also, an increase in social sustainability disclosure index (SDI) increases Tobin's Q of listed non-financial companies by 1.861units. Similarly, an increase in environmental sustainability disclosure index (EDI) increases Tobin's Q of listed non-financial companies by 1.861units. Finally, an increase in governance sustainability disclosure index (GDI) increases Tobin's Q of listed non-financial companies by 1.859 units. In conclusion, corporate sustainability practices have significant effect on Tobin's Q of listed non-financial companies in Nigeria.

TABLE 3: Effect of sustainability disclosure on Tobin's Q of listed financial companies in Nigeria

TQ	Coefficient	Standard Error	Z	P> z
ESGI	-5.58066	2.36859	-2.36	0.018
SDI	1.860876	0.78958	2.36	0.018
EDI	1.860783	0.789531	2.36	0.018
GDI	1.858699	0.789495	2.35	0.019
_CONS	-0.00379	0.035606	-0.11	0.915
R-SQUARE	Within 0.0219 Between 0.0028 Overall 0.0063			
WALD CHI ²	9.92 (0.0418)			

Source: Computed by the Author (STATA, 16)

To assess the effect of sustainability disclosure on economic value added of listed non-financial companies in Nigeria.

The within r-square of this model is 0.0179, with between r-square of 0.0023 and overall r-square of this model is 0.0211 with a Wald chi2 result of 14.54. Also, the values of the z-score shows that ESGI is positive and lies above the meanwhile SDI, EDI, and GDI are negative and lie below the mean. The regression result shows that GDI, SDI and EDI are negative insignificant while ESGI is positive insignificant. In conclusion, corporate sustainability practices have insignificant effect in explaining the economic value added of listed non-financial companies in Nigeria.

TABLE 4: Effect of sustainability disclosure on economic value added of listed non-financial companies in Nigeria.

EVA	Coefficient	Standard Error	Z	P> z
ESGI	13.93739	10.06707	1.38	0.166
SDI	-4.64038	3.355937	-1.38	0.167
EDI	-4.65108	3.355718	-1.39	0.166
GDI	-4.64019	3.355441	-1.38	0.167
_CONS	0.802658	0.21251	3.78	0
R-SQUARE	Within 0.0179 Between 0.0023 Overall 0.0211			
WALD CHI ²	14.54 (0.0058)			

Source: Computed by the Author (STATA, 16)

Discussion of Findings

The analysis showed that governance, social and environmental disclosure have positive and significant effect on return on asset of listed non-financial companies in Nigeria while ESG disclosure has negative and significant effect on return on asset of listed non-financial companies in Nigeria. Hence, the null hypothesis which states that corporate sustainability disclosure does not have a significant effect on

return on asset of listed non-financial companies in Nigeria is rejected. This result is in line with the findings of Asuquo *et al.* (2018), Johari *et al.* (2019), Sanusi *et al.* (2019), Umar *et al.* (2021) but contrary to the findings of Memed *et al.* (2020), Putri and Puspawati (2023).

The regression result revealed that ESG disclosure has negative and significant effect; social and environmental disclosure have positive and significant effect while governance has positive but insignificant effect on the return on equity of listed non-financial companies in Nigeria. Therefore, the null hypothesis which states that corporate sustainability disclosure does not have a significant effect on return on equity of listed non-financial companies in Nigeria is rejected. This result is consistent with the findings of Johari *et al.* (2019), Nnamani *et al.* (2017), Oyedokun and Erinoso (2022); however, this result contradicts the findings of Memed *et al.* (2020), Polycarp (2019).

The regression results disclosed that ESG disclosure has negative and significant effect while governance, social and environmental disclosures have positive and significant effect on the Tobin's Q of listed non-financial companies in Nigeria. Hence, the null hypothesis which states that corporate sustainability disclosure does not have a significant effect on Tobin's Q of listed non-financial companies in Nigeria is rejected. The result of this study aligns with the findings of Gunarsih *et al.* (2018), Swarnapali *et al.* (2018), Tri *et al.* (2018). In the same vein, the results of Emeka-Nwokeji *et al.* (2019), Memed *et al.* (2020) is contrary to the result of this study.

The result of the analysis revealed that governance, social and environmental disclosures have negative but insignificant effects while ESG disclosure has positive but insignificant effect on the economic value added of listed non-financial companies in Nigeria; therefore, the null hypothesis which states that corporate sustainability disclosure does not have a significant effect on economic value added of listed non-financial companies in Nigeria is accepted. The result of this study conforms to the findings of Tanjung *et al.* (2019) but is contrary to the result of Ndubuisi *et al.* (2018).

V. CONCLUSION AND RECOMMENDATIONS

The study examined the effect of corporate sustainability practices on the financial performance of listed non-financial companies in Nigeria. The focus of the study was corporate sustainability disclosure indexes (ESG disclosure index, social disclosure index, environmental disclosure index and governance disclosure index) and financial performance indicators (return on equity, return on asset, Tobin's Q, and economic value added) for a period of 10 years (2012-2021). The result of the analysis indicates that corporate sustainability disclosure has a significant effect on the return on assets (ROA), return on equity (ROE), and Tobin's Q of listed non-financial companies in Nigeria while corporate sustainability disclosure does not have a significant effect on the economic value added (EVA) of listed non-financial companies in Nigeria.

The study recommends that stakeholder engagement should be enhanced to gather information and feedback on how the

company can contribute to the sustainability of the various stakeholders.

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