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## Article

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# Corporate governance practices and sustainability reporting quality: evidence from the Nigerian listed financial institution

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## ABSTRACT

This study ascertains whether a composite corporate governance (CCG) index is related to the sustainability reporting quality of listed banks in Nigeria. We posit that, for a company to report adequately on sustainability initiatives, there must be a strong corporate governance mechanism. Using a balanced set of panel data with 190 observations from 19 quoted banks for a period of ten years (2012–2021), this study investigates the relationship between the corporate governance index and sustainability reporting quality. Categorical data were obtained using a scale of 0–6 and dichotomous data were obtained using a binary dummy. Our results show that corporate governance mechanisms have a statistically significant influence on the quality of sustainability reporting. We establish that banks with diluted ownership, greater board independence, a high level of audit committee financial expertise, and greater shareholder rights and protection are likely to have higher SRQ. Our results provide empirical support for resource-based theory which emphasizes the internal capabilities of a firm as a source of competitive advantage. In this context, effective CG can be a strategic resource that will help position the firm for sustainable performance. This study highlights the corporate governance mechanisms that banks should focus on towards achieve quality sustainability reporting, which includes diluted ownership, board independence, financial expertise in the audit committee, board diversity, shareholders' rights, and protection. In addition, it establishes that adequate sustainability practices enhance stakeholders' confidence in the performance of listed companies.

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## 1. Introduction

Given the current state of global economic disruptions including climate change, and economic melt-down, there is growing demand for firms to become more transparent. With current developments, traditional corporate financial reporting is no longer sufficient (Hamad et al., 2020).

Oladele and Oyewole (2020) noted that given the limitations of general-purpose financial reporting, the need to enhance trust in the financial reporting framework calls for unconventional forms of reporting such as narrative reporting, dialogic accounting, innovation accounting, confidence accounting, integrated reporting, and the transnational convergence of financial reporting. There is significant agreement in the literature for a more robust reporting framework that captures the social and environmental impacts of firms' activities as well as their economic performance (Girón et al., 2020; Moses et al., 2020).

Firms do not operate in isolation: their activities affect and are affected by the environment in which they operate (Uwuigbe, 2018). As part of a larger ecosystem comprising stakeholders and key actors

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(suppliers, customers, financiers, policy and regulations, supports, and institutions), they interact in dynamic ways to create a surviving and sustainable venture (Maroufkhani et al., 2018; Raposo et al., 2021). Consequently, many actors are interested in what firms do, how, when, and why they do so. Their perception of these actions potentially triggers certain reactions (favourable or unfavourable) (Girón et al., 2020; Jamaliah et al., 2023). Sustainability reporting is therefore essential in growing and developing security markets in which the annual financial statement is the most credible source of information for investors. Disclosure of the company's commitment to a sustainable global economy will enable investors and other stakeholders to understand, measure, and assess a firm's social, economic, governance, and environmental performance, and their set goals, as well as strategies for managing environmental change more effectively.

Adequate disclosure enables management to be transparent about the risks and opportunities confronting them, giving stakeholders better insight into performance beyond the bottom line. However, while developing economies encourage the practice of sustainability reporting, the impetus to report on sustainability is still largely voluntary (Alatawi et al., 2023; Isa, 2014) as there are currently no mandatory requirements for reporting the social and environmental implications of a firm's operation in Nigeria (Oyewumi et al., 2018; Sanyaolu et al., 2023). Although reporting on the economic performance (which is also a dimension of sustainability) of a firm is mandatory and there are specific guidelines such as those provided by the International Financial Reporting Standards (IFRS) (Lawal et al., 2020), reporting on the social and environmental dimensions of sustainability remains voluntary. Consequently, few firms have reported sustainability in Nigeria (Osemene & Fagbemi, 2019). Therefore, adequate sustainability disclosure is a function of internal governance mechanisms and other institutional factors (Oyerogba, 2021).

In this study, we ascertain whether a composite corporate governance (CCG) index influences sustainability reporting quality, represented by the three major components (economic, environmental, and social) of sustainability reporting.

Previous studies have adopted legitimacy, signaling, and stakeholder theories to explain the relationship between corporate governance and sustainability reporting (Erin et al., 2022; Gao, 2010; Greek, 2011; Hassink et al., 2010; Ijewereme, 2015; Manetti & Toccafondi, 2012; Shamil et al., 2014). These authors asserted that organizations report sustainability activities to signal quality information, seek legitimacy, and meet stakeholder expectations. Similarly, Haniffa and Cooke (2005) reported that firms engage stakeholders by promoting higher corporate disclosure, including sustainability information. Meanwhile, many studies on sustainability reporting have used data from developed countries compared to developing African countries, such as Nigeria. The sustainability reporting literature in emerging countries focuses on the influence of social responsibility on financial performance, determinants of disclosure, the extent of disclosures, and international comparisons of reporting practices (Boiral & Henri, 2017; Erin et al 2022; Jian et al., 2017), and only a few studies have investigated the quality of sustainability reporting (Girón et al., 2020; Kamarudin et al., 2022; Moses et al., 2020). Concerning African countries such as Nigeria, apart from the work of Erin et al (2022) and Oluwagbemiga (2021), little has been said about sustainability reporting quality. Hence, it is important to investigate how corporate governance mechanisms influence sustainability reporting quality in Nigeria.

Prior studies (Erin et al., 2022, Ogungbade & Oyerogba, 2020; Al-Shaer and Zaman 2016) have assessed sustainability quality on a scale of 0-4. The scores are as follow: SRQ = 0, where there is no sustainability report; SRQ = 1, where a sustainability report exists without a sustainability committee and assurance provision; SRQ = 2, where a sustainability report exists and went through scrutiny by the board oversight committee; SRQ = 3, where sustainability report exists and assurance is provided by the non-Big 4 audit committee; SRQ = 4, where sustainability report exists through assurance by one of the Big 4 audit firms. This approach satisfies the demand of the Global Reporting Initiatives (GRI, 2015) guidelines for voluntary sustainability reporting (Adwally, 2015; Phiri et al., 2021). However, following the development of GRI G4 in 2016, this approach represents a narrow measurement of SRQ as it fails to incorporate the disclosure of quantitative information into the measurement of SRQ, which is one of the principal foci of GRI G4. The GRI G4 framework is GRI's 4th generation of SRQ guidelines (Girón et al., 2020). It is designed for universal applicability to different forms of organizations, especially in the industrial sector, across different nations (Maroufkhani et al., 2018; Osemene & Fagbemi, 2019; Raposo et al., 2021).

Literature have been very scarce in measuring company SRQ based on a quantitative disclosure approach in the developing economy, particularly, the Nigeria context (Tran et al., 2021; Oyewumi et al., 2018). Having identified this research gap, we propose a new measurement for SRQ. Consistent with Phiri et al (2021), we incorporate the disclosure of quantitative information into the measurement of SRQ on a scale of 0–6 (details can be found in the methodology section). This study can be considered a pioneer comprehensive study focusing on the assessment of sustainability reporting quality from quantitative and qualitative disclosures, with the inclusion of oversight and assurance provisions in Nigeria. This approach is fundamental to achieving transparency and assists stakeholders in conducting sound and objective assessments of a firm's performance and taking appropriate actions (Elmghamez et al., 2023; Inua & Emeni, 2019; Osemene & Fagbemi, 2019). Subsequently, this study applied the scale to assess the quality of sustainability reports published by listed banks in Nigeria.

Nigeria banks were chosen as a sample for many unique and important reasons. Nigeria is recognized as the second largest stock market in sub-Saharan Africa (World Bank, 2017). The country is classified as a middle-income developing African Nation (International Monetary Fund (IMF), 2016; KPMG, 2014). Nigerian companies are not impervious to the global heaves of sustainability reporting because of global competition (Adwally, 2015). Again, the nation has witnessed several reforms of accounting regulations and corporate governance frameworks in Nigeria with particular attention to corporate reporting: involving sustainability practices and reporting. The Security and Exchange Commission (SEC) issued a revised code of corporate governance on the 1st of April 2018 to improve the quality of information reported in the annual financial statement of the companies listed in Nigeria (Oyerogba, 2018; Oti & Mbu-Ogar, 2018). Similarly, the Sustainable Banking Principles introduced in 2011 by the Central Bank of Nigeria (CBN) ensure that financial institutions take sustainability practices beyond social responsibility. The 2021 framework of the Financial Reporting Council of Nigeria (FRCN) itemizes important areas of corporate governance, corporate reporting, and accounting practices for all listed companies in Nigeria. All regulatory frameworks have provisions regarding diluted ownership, board independence, audit committee financial expertise, board diversity, shareholder rights and protection. In Nigeria, sustainability reporting is still voluntary; hence, it is important to analyze the quality of sustainability reports. The choice of Nigerian banks is also strengthened by their uniqueness because of the weak and lapses in enforcing regulations such as the Companies and Allied Matters Act (CAMA 2020), weak governance, and corruption (Oluwagbemiga, 2021; Oyerogba, 2021; Syder et al., 2020).

Using a sample size of 19 quoted banks in the Nigerian Capital Market (NCM), we document a significant positive influence of the corporate governance index on sustainability reporting. The results highlight significant improvements in information disclosure on sustainability for banks that have embraced full compliance with the provisions in the code of corporate governance, specifically regarding diluted ownership, board independence, financial expertise in the audit committee, board diversity, shareholder rights and protection. Other variables that negatively influence sustainability reporting are family ownership, audit quality, capital gearing, firm size, and firm profitability. Finally, the study shows that the higher the number of foreign nationals on the board, the better is sustainability reporting.

This study offers insightful contributions to the existing literature on sustainability practices and reporting. First, this study introduces a new measurement based on quantitative and qualitative disclosures to improve the reliability and quality of sustainability disclosure. Second, based on the presumption that no single corporate governance mechanism can significantly influence sustainability reporting, except for the totality of corporate governance mechanisms, this study developed a composite corporate governance index using 48 items. The use of certain corporate governance mechanisms, such as board size, number of board meetings, executive compensation, board independence, and CEO duality to represent the entire corporate governance practices offers a narrow assessment of corporate governance practices (Black et al., 2017; Boyd et al., 2017). Third, the CG index and SRQ measurement developed in this study provide a new platform for future studies to examine not only quantity, but also quality aspects of sustainability reporting.

The remainder of the paper is organized as follows: Section 2 reviews the literature. The methodology of the study is explained in Section 3. The highlights of the results are presented in Section 4. Finally, conclusions are presented in Section 5, along with areas for future studies.

## 2. Background

The concept of sustainability reporting is a topic of debate globally, particularly with the introduction and implementation of the United Nations Sustainable Development Goals (UN-SDGs) in 2015 (Hashim et al., 2015). With the adoption of the SDGs, companies were recognized as critical partners and active participants and in advancing the global sustainable development agenda (Inua & Emeni, 2019). As a panacea to economic development, the banking sector is should be positioned to support the global and the country specific sustainable development goals (Lawal et al., 2020). As contained in the 2018 Global Progress Report on sustainable banking, achieving the climate targets and SDGs requires about \$70 trillion of financing by 2030 (SEC, 2018). In response to this call, the launch of the Sustainable Banking Network (SBN) commenced in order to foster guidelines, national policies, principles, and road-maps on sustainable banking in eighteen emerging countries (Okoye et al., 2020, Oladele & Oyewole, 2020).

The thrust of sustainable banking entails a system that aligns profit maximization with environmental and social concerns in the operations, investment decision and credit risk management for positive value creation in the economy (Raposo et al., 2021; Oyerogba, 2018). While remaining profitable to the owners of the company, it focuses on the doctrine of shared value, responsible business practices, and the triple bottom line of governance, environmental, and social factors to mitigate negative footprints and contribute to the economic transformation (Almoneef & Samontaray, 2019; Akinleye et al., 2019; Chin et al., 2023). In Nigeria, the Sustainable Banking Principles (NSBPs) birthed in 2012 mark a unique drive in corporate sustainability reporting where banks are expected to do measurably more to drive gains in the market, human, and environmental development (Dong & Wongvanichtawee, 2023; Elaigwu, et al., 2022; Oyerogba, 2021). The issues of concern are whether the sustainable banking principles turning the tide on major economy, social, and environmental issues in Nigeria? What factors are responsible for quality sustainable practices and reporting?

In this study, we consider corporate governance practices as one of the key drivers of sustainability reporting quality in the banking sector and explore its influence on sustainability reporting quality. Being the life wire of any economy, the bank plays an important role in accelerating economic growth for sustainable development. The banking sector in Nigeria is dominated by commercial banks, known as Deposit Money Banks (DMBs), which provides the foundation for the development of the nation's financial system (Moses et al., 2020). In 2019, the sector witnessed the merger of Diamond Bank with Access Bank and the establishment of additional three banks: Titan Trust Bank Ltd, Globus Bank Ltd, and TAJ Bank. The report from the Central Bank of Nigeria (CBN) shows that Globus and Titan Trust Bank were licensed to operate as commercial lenders while TAJ Bank Limited obtained a license to operate as a non-interest bank. This brings the total number of licensed commercial banks in Nigeria to 23.

From the banking sector, the country's Gross Domestic Product (GDP) was 3.37% in 2017 and 3.31% in the second quarter of 2018 (SEC, 2018). The aggregate nominal GDP contribution of the banking industry was 3.23% in the first quarter of 2019, indicating a slight reduction from the 3.76% contributed to the preceding year, but significantly higher than the 2.84% recorded in the first quarter of 2020. In a report by the Nigeria Deposit Insurance Corporation (NDIC) 2021, the banking sector non-performing loans (NPLs) witnessed a reduction to the tune of 25.15% from N2.36 trillion in 2017 to 1.79 trillion in 2018. In the same report, the overall health of Deposit Money Banks in 2018 to 2020 was relatively sound and stable based on an analysis of their asset's quality, capital adequacy, liquidity ratio, earnings quality, and market risk sensitivity. All these are clear indications that Nigerian banks are beginning to wake up to the need to conduct their businesses in a sustainable manner (Oluwagbemiga, 2021).

Although, sustainability reporting is still a voluntary disclosure, the regulatory agencies appear to be stepping up the campaign for sustainable practices and owners and managers of Nigerian banks have intensified efforts at improving their sustainability activities in line with the SDG goals (Erin et al., 2022). The banks have supported causes and government initiatives across different regions and sectors in Nigeria. The government efforts toward improving life expectancy were complemented with the banking sector health intervention programs, while the capacity of relevant government agencies to address crime and promote public peace was strengthened with the banks investment in security infrastructure. Endowments, donations, and sponsorships in favor of institutions of learning represents massive support for teaching and learning, while sports and youth development initiatives provided opportunities for



many young people to pursue their dreams (SEC, 2018). It is pertinent to investigate the extent to which these efforts have yielded the desired result in terms of quality sustainability report.

### 3. Theoretical literature review

A number of theories have been found in the literature that have been used to explain the relationship between CG and sustainability including the stewardship theory (Aras & Crowther, 2008; Mahmood et al., 2018; Okoye et al., 2020), resource based view (Hashim et al., 2015), agency theory (Omolade & Tony, 2014); stakeholder theory (Gangi et al., 2018) and the legitimacy theory (Oyewumi et al., 2018; Thomsen, 2013). Stewardship theory originates from sociology and psychology (Fanta et al., 2013). Donaldson and Davis (1991) propounded stewardship theory. This theory examines the relationship between managers and shareholders (Okoye et al., 2020). One way to view corporate performance is from the perspective of stewardship. In the context of sustainability, management is concerned with the stewardship of a firm's internal and environmental resources (Aras & Crowther, 2008). Hence, management acts as custodians of the firms' resources and is concerned with managing the resources outside the organization. The theory assumes that the relationship between the principal and steward explains changes in the performance of the organization.

Barney's (1991) resource-based view emphasizes a firm's internal capabilities as a source of competitive advantage. In this context, effective CG can be a strategic resource that can help position the firm for sustainable performance (Hashim et al., 2015). Agency theory advocates that corporate ownership should be separated from controls. In turn, the agents (managers) are expected to act in the interests of the principals (shareholders). This theory prioritizes maximizing shareholder wealth. Stakeholder theory was propounded by Freeman (1984). The theory sees an organization as accountable to more than the shareholders of a company. The theory argues that firms are expected to serve the interests of various stakeholders who are affected or can affect a firm's performance.

Legitimacy theory is closely related to stakeholder theory (Oyewumi et al., 2018) although Moses et al. (2020) argue otherwise. Fundamentally, the premise of the theory is that organizations can signal their legitimacy (Oyewumi et al., 2018) using the legitimacy device- annual report (Uwuigbe, 2018). The theory attempts to explain a firm's effort to bridge any perceived legitimacy gap in a bid to avoid situations that could threaten its survival or attract sanctions of any kind. According to this theory, business operations are based on express and implied social contracts (Uwuigbe, 2018) which determine the growth and survival of a business (Oyewumi et al., 2018).

### 4. Empirical literature review and hypothesis development

This study assesses how corporate governance (CG) impacts sustainability reporting across three dimensions (financial, social, and environmental). From an empirical perspective, this robust focus stems from concerns raised by Aras and Crowther (2008) and Mahmood et al. (2018). Their study called for empirical research on sustainability reporting, particularly in relation to CG. This study therefore appears to represent an attempt to take a robust look at the effect of CG on sustainability reporting.

As one of the contemporary issues in business, the issue of CG and sustainability reporting has received substantial attention in the literature. However, the two phenomena have mostly been studied independently (Mahmood et al., 2018; Syder et al., 2020) or in relation to financial performance (Akinleye et al., 2019; Okoye et al., 2020). Hence, few studies provide linkages between these two in developing economies (Girón et al., 2020; Masud et al., 2018), fewer in Nigerian literature (Anazonwu et al., 2018; Inua & Emeni, 2019). Corporate governance- board of directors (executive and non-executive)- protect the interests of shareholders and attempt to satisfy the expectations of other stakeholders by taking charge of major decisions and actions of organizations, including reporting (Anazonwu et al., 2018; Hamad et al., 2020). Therefore, researchers have studied how the characteristics and functions of boards shape the level of sustainability reporting (Anazonwu et al., 2018). The literature is replete with CG and sustainability reporting issues focusing on board characteristics such as size, independence, diversity, and member nationality (Aliyu, 2019; Anazonwu et al., 2018; Mahmood et al., 2018; Osemene & Fagbemi,

2019), board committees such as risk management, corporate social responsibility, and audit committees (Aliyu, 2019; Hamad et al., 2020; Mahmood et al., 2018) and CEO characteristics such as duality, compensation, and tenure (Inua & Emeni, 2019; Osemene & Fagbemi, 2019) amongst others. There are only a handful of studies linking the two phenomena in Nigeria, such as Anazonwu et al. (2018) for the manufacturing industry; Osemene and Fagbemi (2019) for consumer goods companies; Adeniyi and Fadipe (2018) in the food and beverage industry; Aliyu (2019) for industrial goods, oil and gas, and natural resources, as well as the study of Inua and Emeni (2019) which captured all firms quoted on the NGX. Moreover, most highlighted studies focused on one or two dimensions of sustainability reporting. This is not to mention the lack of consistency in the past empirical literature (Lyndon & Otuya, 2018; Masud et al., 2018). Consequently, the relationship between CG and corporate sustainability reporting remains unclear (Mahmood et al., 2018) particularly in developing economies (Girón et al., 2020).

The existing literature on sustainability reporting has focused primarily on a certain set of individual factors influencing sustainability reporting in developed countries, with limited literatures in emerging countries. These studies documented significant relationships between sustainability reporting and firm-specific factors (Cohn, 2014; Seda & Kramer, 2014), regulatory factors (Achua, 2009; Adesola, 2008; Omar et al. 2013) and corporate governance-related factors (Agrawal & Chadha, 2015; Ghafran & Yasmin, 2017; Nehme et al., 2015; Sultana et al., 2015; Tauringana et al., 2008). Specifically, Ijewereme (2015) observed that research on the determinants of sustainability reporting places greater emphasis on firm-specific variables and other related factors. Christensen et al. posited that previous studies focused on regulatory factors (e.g., conceptual framework and International Financial Reporting Standards), and industry-related factors (e.g., risk exposure and recovery plan) (Oyerogba, 2021; Seda & Kramer, 2014).

In conclusion some research on corporate governance and sustainability reporting focuses on certain board characteristics (Mui & Mailley, 2015; Oyerogba et al., 2016; Ogungbade & Oyerogba, 2020) and audit committee effectiveness (Ibietan, 2013; Imhonopi & Urim, 2013; Kramer et al., 2017). Additionally, an appreciable number of studies have devoted efforts to investigating the combined effects of corporate governance mechanisms on sustainability reporting (Gao, 2010; Greek, 2011; Hassink et al., 2010; Ijewereme, 2015). Previous studies have presented mixed and contradictory findings on the link between corporate governance mechanisms and sustainability reporting. For example, Greek (2011) observed a significant negative relationship between board oversight function and sustainability reporting. However, Oyerogba et al., (2017) reported insignificant relationships between ownership structure, board oversight functions, and sustainability reporting. Based on the existing literature, this hypothesis is proposed

H<sub>1</sub>: Corporate governance practices have no statistically significant relationship with SRQ

## 5. Research design

### 5.1. Population and study sample

The study focused on the 23 banks quoted on the Nigeria Exchange Group (NEG) for a period of ten years from 2012 to 2021. Data were extracted from various sources, including audited annual reports and financial statements of the selected banks, stock exchange factbooks, Nigerian central banks statistical bulletins and other internet sources. The final sample consisted of balanced panel data comprising 190 firm-year observations for 19 quoted banks for the ten-year period. The details are listed in Table 1. As shown Table 1, two banks were removed from the sample because they were non-interest bank. Their

**Table 1.** Population and sample for the study.

	Number of Banks	Number of firm year Observations	% of the target population
Listed banks as at 31 <sup>st</sup> Dec, 2021	23	230	100
Less: Non-interest banks	(2)	(20)	(9)
Less: Regional banks	(2)	(20)	(9)
Listed Banks in the final sample	19	190	8



exclusion from the final sample was necessitated by the fact that their governance structure is not identical to that of other listed banks. The other two banks were removed because the banking reform of 2016 reduced them to regional status.

## 5.2. Computation of corporate governance index

The main explanatory variable in this study is the corporate governance index and its constituent components. The primary list of corporate governance mechanisms was developed from the following sources:

1. The revised OECD Code of Corporate Governance
2. The provisions of the 2018 SEC revised corporate governance code in Nigeria
3. The corporate governance provisions in the Companies and Allied Matters Act, 2020
4. The provisions in the Central Bank of Nigeria corporate governance codes for banks and other financial institutions operating in Nigeria
5. Other corporate governance items were borrowed from the existing literature (Black et al., 2017; Oluwagbemiga, 2021; Oyerogba, 2018)

From these sources, a comprehensive corporate governance index with 48 items was developed. For the final items to be included in the corporate governance index to be determined, the following procedures are followed:

- i. In previous studies, all variables that were found to be significant were selected. Hence, CG variables such as ownership structure, audit committee experience, board oversight functions, audit committee independence, board meetings and shareholders rights and protection have a consistent and significant relationship with sustainability reporting (Kramer et al., 2017; Ibietan, 2013; Imhonopi & Urim, 2013).
- ii. In line with Black et al. (2017), we performed a panel multivariate regression using 48 corporate governance mechanisms and sustainability to establish the significant corporate governance mechanisms (at the 5% significance level) for the selection of items to be included in the corporate governance index. The estimated model for this function is as follows;

$$SRQ_{it} = A - \alpha_0 + \beta_{ij} \sum_{t-j}^n CGM_{it} + \phi_i + \lambda_t + \varepsilon_t \quad (i)$$

where SRQ is the figure obtained the for-sustainability reporting quality of company i at time t, the specific corporate governance mechanism included in the corporate governance index is represented by CGM. Considering the observed heterogeneity in corporate governance practices among the 19 quoted banks in our sample, firm-year and cross-sectional controls were included in our model. The corporate governance mechanisms with significant results from the estimation model are diluted ownership, board independence, board diversity, audit committee financial expertise, shareholder rights and protection, and foreign national and family ownership. Considering the results from Steps (i) and (ii), the final corporate governance index consisting of seven commonly shared and statistically significant corporate governance characteristics was developed.

## 5.3. Measurement of sustainability reporting quality

To measure the SRQ, we rely of the provision from the following documents

- i. USEPA framework for sustainability indicators
- ii. Provisions from the Nigerian Sustainable Banking Principles (NSBP) issued by the Central Bank of Nigeria (CBN, 2012)

- iii. existing literature on sustainability reporting quality (Agrawal & Chadha, 2015; Ghafran & Yasmin, 2017; Nehme et al., 2015; Sultana et al., 2015)

These documents provide information on specific features that represent the quality of sustainability reporting. The features include the establishment of an oversight committee by the board to determine the volume of sustainability disclosure in the annual financial statement, a measure to ensure the consistency of the engagement process with the demand of different stakeholders (USEPA, 2012), disclosure of quantitative information including the cost-benefit analysis of the resources committed to the sustainability initiative of the firm (Ijewereme, 2015), the provision of an independent assurance report either by an audit firm or a non-audit, aimed at improving the quality of reporting and mitigating stakeholders' concerns (Al-Sheer, 2020; Al-Sheer & Zaman, 2016).

Consistent with previous studies on sustainability reporting quality (Agrawal & Chadha, 2015; Ghafran & Yasmin, 2017; Sultana et al., 2015), we obtained categorical data based on these benchmarks. This benchmark assigns a score of 0–6 for the assessment of SR quality. An SRQ score of 0=no sustainability report in the bank; 1=sustainability report exists with inadequate information; 2=report provides information on the three elements of SRQ; 3=there is quantitative information in the sustainability report; 4=sustainability report exists and the bank has an oversight committee regulating the activities; 5=existence of sustainability report with assurance from a non-audit firm; 6=existence of sustainability report with assurance from an audit firm. Scores of 0–6 are used to assess the quality of the sustainability activities of the banks reported in their sustainability disclosure. The details are presented in Table 2. We performed several robustness analyses in this study. First, two alternative measures were used for the SRQ using a dichotomous variable. To achieve this, the assurance level was investigated based on whether an audit firm verified the sustainability report. We also verified whether an oversight committee exists to regulate the bank's sustainability. Second, we replaced the control variables with plausible alternatives. The original model measures bank profitability with ROCE and firm size by using the natural logarithms of net assets. We replaced ROCE with ROA and logarithms of net assets with natural logarithms of a number of branches.

**Table 2.** Measurement of sustainability reporting quality.

Score	Measurement	Interpretation	Result
0	There is no existence of SR	There was no mention of SR activities Of the company in the report	Poor
1	There is existence of SR	It was briefly mention in the chairman's Report without detail information	Low
2	There is existence of separate SR	Report provides information on the three Elements (Economic, Social and Environmental) of sustainability	Fair
3	There is existence of separate SR	There is quantitative data on what the Bank committed to sustainability in Addition to reporting on Economic, Social & Environmental sustainability	Moderate
4	There is existence of separate SR	There is quantitative data on what the Bank committed to sustainability in Addition to reporting on Economic, Social & Environmental sustainability With an oversight committee	Good
5	There is existence of separate SR	There is quantitative data on what the Bank committed to sustainability in Addition to reporting on Economic, Social & Environmental sustainability firm provided assurance on the report	High
6	With an oversight committee. A non-audit There is existence of separate SR	There is quantitative data on what the Bank committed to sustainability in Addition to reporting on Economic, Social & Environmental sustainability With an oversight committee. An audit Firm provided assurance on the report	Excellent

**Table 3.** Variable measurement and definitions.

Variable type	Definition	Measurement
Dependent Variable SRQ	Sustainability reporting quality	Measured using a scale of 0–6
Independent Variable CG-Index	Corporate Governance Index	Actual corporate governance score Scaled by the maximum obtainable CG mechanisms in the CG-Index
Control Variables		
PROF	Return on capital employed	PBIT/CE
FGRW	Firm growth	% change in sales revenue
CGEAR	Firm gearing ratio	Debt/Equity ratio
AQUA	Audit quality	=1 if audit by big, 0 if otherwise
FSIZ	Size of the company assets	natural logarithms of net assets

To ensure the reliability of the data obtained from the above process, we compute an inter-rater reliability test using Krippendorff's alpha. Krippendorff's alpha is a statistical tool that measures the agreement attained when a set of units of analysis are coded in the form of the value of the variable (Anwer et al., 2013). Krippendorff's alpha is applicable to multiple coding units, where each unit is meant to assign a value to the unit of analysis. Thus, it preferred above other reliability tests such as interclass correlation, Cohen's Kappa and Fleiss kappa, which may be suitable in certain instances but are not applicable to the particulars of the data generated for subsequent analysis.

#### 5.4. Estimation model

Considering the SRQ indices used in this study, it is important to state that using OLS for a variable with binary or categorical data- may produce a linear probability model. However, the errors (residuals) arising from such a linear probability model undermine the normality and homoscedasticity assumptions, which are basic assumptions of classical OLS regression. This eventually produces invalid standard errors and spurious regression estimates (Ogunbade & Oyerogba, 2020). Hence, we opted for an ordered logistic regression model to estimate the relationship between the CG index and the sustainability reporting quality of the quoted banks in Nigeria. We adopted a seven-point ordinal scale to evaluate SRQ (i.e. Poor, Low, fair, moderate, good, high, and excellent.), which indicates the SRQ level.

The dependent variable for this study is SRQ molded as a function of the CG Index score among a set of firm-specific variables adopted from existing literature. The details of these variables are listed in Table 3. To ascertain the influence of the CG-Index on SRQ, we used the following model;

$$SRQ = \beta_0 + \beta_1 CGI_{it} + \beta_{2it} PROF + \beta_3 FGRW_{it} + \beta_4 CGEAR_{it} + \beta_5 AQUA_{it} + \beta_6 FSIZ_{it} + \varepsilon_{it} \quad (ii)$$

where SRQ represents sustainability reporting quality of firm *i* at time *t*; CGI is the corporate governance index, PROF is firm profitability, FGRW represents firm growth, CGEAR is capital gearing, AQUA denotes audit quality, and FSIZ denotes firm size.

## 6. Empirical results and discussion

### 6.1. Descriptive statistics

Table 4 presents descriptive statistics of the study variables. The descriptive statistics include the frequency, mean, minimum, and maximum values, standard deviation, and number of observations. Panel A shows that a relatively low proportion of listed banks had satisfactory sustainability reporting quality in terms of the frequency and percentage of categorical data. Specifically, 36 (18.9%) of the banks had low reports, indicating that although there is availability of sustainability reports, it does not contain all the vital information needed to assess the sustainability efforts of the banks. In addition, 81 (42.6%) had a fair report. Only 30 (15.8%) observations provided quantitative information on what has been committed to sustainability activities by the company, while 26 (13.7%) observations reported sustainability activities that were regulated by a board oversight committee. There were 11 (5.8%) observations with sustainability report reviewed by non-audit firms, while 6 (3.2%) observations had sustainability reports

**Table 4.** Descriptive statistics results.

Scale	0	1	2	3	4	5	6
Panel A: Frequency and Percentage for Sustainability Reporting Quality using Categorical Data							
SRQ		– 36(18.9%)	81(42.6%)	30(15.8%)	26(13.7%)	11(5.8%)	6(3.2%)
Panel B: Binary Data							
Oversight Com		147(77.4%)	43 (22.6%)				
Assurance		11(64.7%)	6(35.3%)				
Panel C: All variables							
Variable		Mean	Min		Max	SD	OBS
Dependent							
SRQ		2.69	1.00		6.00	1.17	190
Oversight Com		1.35	1.00		6.00	1.92	190
Assurance		5.35	5.00		6.00	0.45	17
Specific Test Variables							
Diluted Ownership		3.26	1.93		4.78	0.76	190
Board Ind.		20.69	12.5		33.3	2.75	190
Audit Com Exp		13.37	8.05		21.9	1.95	190
Board Diversity		5.92	0.98		8.25	0.18	190
Shareholders' R/P		0.75	0.00		2.00	0.61	190
Family Ownership		3.98	3.50		4.81	0.09	190
Composite Test Variable							
CG Index		0.58	0.43		0.98	0.26	190
Control Variables							
ROCE		5.93	2.65		8.28	3.61	190
FGRW		3.04	0.18		8.75	1.86	190
CGEAR		0.19	0.14		0.27	0.89	190
AQUA		0.96	0.00		1.00	0.02	190
FSIZE		0.68	0.53		0.95	0.11	190

with assurance from audit firms. The report in panel B shows that 147 (77.4%) observations do not benefit from the board oversight functions, while only 43 (22.6%) observations were regulated by the oversight committee of the board. With regard to the level of assurance, the result shows that only 17 observations had their report verified, with 11 (64.7%) done by non-audit firms and 6(35.3%) done by audit firms.

Panel C provides the descriptive statistics for the dependent, independent, and control variables. The mean SRQ score was 2.69. The results indicate that most banks in Nigeria perform below average in terms of sustainability reporting. However, the mean is higher than 1.535 reported by Erin et al. (2021) for listed firms in Nigeria in 2021 which implies that there might have been some improvement in sustainability reporting. Regarding the corporate governance index, the results revealed that, on average, a bank in Nigeria has implemented about 58% of the provision of the corporate governance code, indicating that the banks are well regulated. This score is greater than the 49 percent reported by Adwally (2015) for companies listed on the South African Security Market.

For the control variables, the banks in the sample obtained a mean score of 5.93 for ROCE which seems to be lower than the 6.31 obtained for listed companies in Kenya (Oyerogba, 2018). The results also reveal that banks in the sample demonstrate a relatively low growth rate of 3.04 percent with an average gearing ratio of 19 percent, which is lower than the acceptable 25% for the banking industry (Ogunbade & Oyerogba, 2020), indicating a low proportion of debt to equity in financing bank operations. The low gearing ratio may also explain the relatively low growth rate. Regarding audit quality, the results indicate that 96 percent of banks are audited by the Big 4 audit firm. This represents a significant increase in the 74 percent earlier reported by Adwally (2015). Lastly, on average, we obtain a natural logarithm of 0.68 for firm size with a standard deviation of 0.11, indicating that there is no significant variation in the size of banks in the sample for the study.

## 6.2. Correlation analysis results

The Spearman rank-order correlation coefficient results are presented in Table 5. From Table 5, SRQ seems to be positively correlated with all the variables in the study except for firm size. This indicates the possibility of poor sustainability reporting when banks are extremely large. A simple explanation for this result is that a large company seems to have branches in several locations which may make it difficult for the bank to take care of their social and environmental hazards (Ijewereme, 2015). For

**Table 5.** Rank order correlation matrix.

	SRQ	ROCE	FGRW	CGEAR	AQUA	FSIZE	CG-I	VIF
SRQ	1							1.842
ROCE	0.392	1						1.282
FGRW	0.535	0.475	1					1.776
CGEAR	0.476	0.226	0.349	1				1.525
AQUA	0.355	0.416	0.397	0.334	1			1.281
FSIZE	−0.318	0.433	0.294	0.217	0.257	1		1.637
CG-I	0.614	0.272	0.181	0.352	0.182	0.211	1	1.489

**Table 6.** Ordered logistic regression for CG-index and SRQ.

Variables	Baseline Reg	Categorical data for marginal effects					
		Low	Fair	Moderate	Good	High	Excellent
DOWS	0.426*** (0.139)						
BIND	0.311** (.318)						
ADFINE	0.637** (0.399)						
BDIV	−0.329** (0.181)						
SHRP	0.249** (0.115)						
FNAT	−0.572*** (0.105)						
FOWS	−0.662*** (0.214)						
CG-INDEX	0.837*** (0.384)	−0.073*** (0.066)	−0.157** (0.048)	0.443** (0.137)	0.213** (0.019)	0.175** (0.111)	0.112** (0.036)
ROCE	2.294*** (0.887)	−0.069*** (0.013)	−0.094** (0.041)	−0.221** (0.118)	0.185** (0.016)	0.099** (0.007)	0.008* (0.009)
FGRW	1.228** (0.745)	0.117*** (0.019)	0.078*** (0.031)	0.189** (0.052)	0.213*** (0.164)	0.052** (0.013)	0.047** (0.026)
CGEAR	0.652** (0.276)	0.555** (0.201)	0.611** (0.100)	−0.317** (0.225)	−0.240*** (0.289)	−0.138** (0.079)	−0.104** (0.059)
AQUA	0.085** (0.009)	−0.197** (0.068)	−0.294** (0.005)	0.526** (0.029)	0.159** (0.049)	0.041** (0.023)	0.009 (0.107)
FSIZE	−6.048*** (5.989)	1.085 (0.262)	−2.119** (0.144)	−2.235** (0.416)	−1.588** (0.393)	−1.138** (0.118)	−0.952** (0.031)

preliminary confirmation of the study objectives, the results indicate a positive and highly significant relationship between corporate governance mechanisms and sustainability reporting quality (coefficient 0.614,  $p=.001$ ). This underscores the significant contribution of the composite CG index to sustainability reporting quality. We confirmed the result for multicollinearity using the variance inflation factor. The VIF was lower than 2 for all variables in our regression models, thereby suggesting the absence of multicollinearity.

### 6.3. Estimation results

Table 6 presents the results of the regression analysis. As can be seen, this Table 6 contains seven columns. Column 1 presents the baseline regression results. In this regression, all variables are tested simultaneously, including the seven components of corporate governance mechanisms. As presented in Table 6, the results in column 1 may be explicitly interpreted from the signs of the beta coefficient based on the nature of the data collected for this study and the type of regression models adopted for the analysis. Column 2–7 presents the differential results showing the marginal effects of the categorical data for the study which allows the interpretation of the results in terms of the coefficients' sign together with the marginal effects at the mean, indicating the likelihood that sustainability reporting is of lesser or greater quality in line with the corporate governance index and firm specific variables.

According to the results in Column 1, SRQ is positively associated with all corporate governance mechanisms, with the exemption of board diversity, foreign nationals, and family ownership. Therefore, we establish that banks with diluted ownership, greater board independence, a high level of audit

committee financial expertise, and greater shareholder rights and protection are likely to have higher sustainability reporting quality. Similarly, banks with higher board diversity, larger foreign nationals, and a greater proportion of family ownership are less likely to report quality sustainability.

Specifically, the results show that a unit increase in the spread of ownership may result in an approximately 42.6% increase in sustainability reporting quality. The findings allude to agency theory which posits that more freedom is exercised by the managers in using the company's resources and can invest in image building activities where ownership is diluted than they will be able to do where ownership is concentrated in which emphasis is placed on generating returns on investment (Oyerogba, 2018). This result aligns with Adwally (2015) who asserts that many shareholders will likely probe management activities and ensure investment in long-term benefits. However, contrary to Miguel et al. (2004), a firm with many shareholders may find it difficult to reach a consensus in most decision-making processes and hence find it difficult to provide strong oversight over managerial activities.

We report that higher board independence is associated with better SRQ (coefficient = 0.311,  $t=5.274$ ,  $p=.000$ ). The results suggest that independent boards are likely to be more transparent than non-independent boards. It also suggests that having a larger number of outside directors on the board ensures greater scrutiny of the financial reporting process, which may increase the quality of sustainability reporting. The findings reinforce the position of preparers of the International Financial Reporting Standards (IFRS), that the annual audited financial report should contain financial statements, management analysis, footnotes, management reports, and other information that will help stakeholders make informed decisions.

Next, it seems that the financial expertise of audit committee members helps compel management to be committed to sustainability initiatives. The coefficient and t-statistics for the audit committee financial expertise are 0.637 and 4.837 respectively, indicating that the audit's committee financial expertise is associated with higher sustainability reporting quality. This implies that financial experts take into account a strong concern for the future by creating sustainable value and helping companies achieve these values. They can also use their expert knowledge to let management to realize the long-term benefits of investment in sustainability activities, including reduction of risks, attraction of new investors and shareholders, and increasing the company's equity.

In the broadest sense, our findings reveal a positive and highly significant relationship between the composite CG-Index and SRQ (beta coefficient = 0.837,  $t$ -value 3.991). The positive and significant relationship between the corporate governance index and SRQ emphasizes the combined effects of corporate governance mechanisms on sustainability reporting quality. This finding implies that a granular approach to corporate governance mechanisms does not reflect the total (real) contribution of corporate governance to sustainability reporting quality. The findings thus provide empirical evidence of the need to investigate corporate governance in total when assessing its influence on sustainability reporting quality. This result mirrors the findings of Agrawal and Chadha (2015), who found a significant and positive relationship between the CG-index and SRQ.

Column 2–7 of Table 6 present the marginal effect at the mean for the model. Specifically, an increase in overall corporate governance practices (CG Index) may result in an approximately 7.3% less likelihood of low sustainability reporting quality, 15.7% less likelihood of fair sustainability reporting quality, 44.3% likelihood of moderate sustainability reporting quality, 21.3% likelihood of good sustainability reporting quality, 17.5% likelihood of high sustainability reporting quality, and 11.2% likelihood of excellent sustainability reporting quality. Conclusively and in confirmation of our main hypothesis, the result shows a significant relationship between CG-Index and SRQ.

With regard to the control variables, we find that banks with higher profitability in terms of return on capital employed have a likelihood of quality sustainability reporting ranging from moderate to high quality, but there is no evidence to support excellent quality at the 5% significance level. This result is consistent with that of Girón et al. (2020). We also observed a significant influence of firm growth on SRQ, and the result is consistent across all categories of sustainability reporting quality. This implies that although growth can trigger quality sustainability practices, it can also lead to poor sustainability reporting, depending on the strategy adopted by each company for its growth. Endogenous growth theory explicates that firm growth is generated internally and predicated on the firm's ability to manage resources (Adwally, 2015), hence managers that share this belief tend to commit few resources to sustainability activities.



**Table 7.** Binary logistic regression for CG-Index and SRQ.

Variables	1	2	3	4
	Baseline	Audit	Baseline	Oversight
CG-INDEX	0.825*** (0.283)	0.051** (0.104)	0.093** (1.007)	0.771** (0.137)
ROCE	2.317*** (0.415)	0.058** (0.228)	0.028** (0.666)	-0.865** (0.224)
FGRW	2.006** (0.185)	1.388*** (0.299)	0.075** (0.394)	0.253** (0.427)
CGEAR	0.554** (0.142)	0.555** (0.714)	0.081** (1.015)	-0.078** (0.015)
AQUA	0.298** (0.114)	-0.089** (0.110)	0.032** (0.938)	0.099** (0.138)
FSIZE	-5.096** 3.188	-1.215** (1.451)	0.087** (0.211)	-2.156** (0.696)

Our result further shows that a bank that is highly geared is associated with a 31.7% less likelihood of moderate sustainability reporting, there is a 24% less likelihood of good sustainability reporting, 13.8% less likelihood of high sustainability reporting, and 10.4% less likelihood of excellent sustainability reporting which is consistent with Gao (2010), Greek, (2011); Hassink et al. (2010), and Ijwereme (2015). The result further reinforces the submission of Gassen and Schwedler (2009), who assert that investors and lenders will pay more attention to the gearing ratio because a high gearing ratio indicates that an organization may find it difficult to meet its obligations if its business slows down. In view of this, companies are tempted to cover certain activities that require finances but do not directly influence earnings.

We further observed a significant correlation between audit quality and medium, good, and high sustainability reporting quality, and the result is consistent with Modugu and Anyaduba (2013). Lastly, we find that an increase in bank size weakens sustainability reporting quality.

## 6.4. Robustness analysis

### 6.4.1. Assurance level

Previous studies on SRQ have established that external verification of results is an important mechanism for enhancing the credibility of data being reported and improving environmental management. Consistent with Al-Shaer and Zaman (2016), we investigate the assurance level based on whether verification of sustainability report is done by an audit firm. We also verified whether an oversight committee exists to regulate the bank's sustainability activities. Hence, we conducted binary logistic regression using a dichotomous variable. The results reported in Table 7 are consistent with previous findings. Specifically, we obtained a positive correlation between the CG-Index and SRQ (coefficient = 0.825, 0.051, 0.771 for the baseline, audit, and oversight, respectively) establishing that banks with a quality corporate governance structure have a higher likelihood of better sustainability reporting through external assurance and oversight functions.

Column 2 reports that firms with higher return on capital employed have approximately 5.8% less likelihood of quality sustainability reporting. This result indicates that generating higher returns for shareholders management may require fewer resources for sustainability activities. Thus, rather than seeking credibility and long-term relationship with the entire stakeholder through sustainability initiative, they prioritize short-term benefits to the shareholders. This is largely different from the stakeholder theory, in which shareholders are generally regarded as one (but certainly not the only) stakeholder group (Anwer et al., 2013). Firm growth is significantly associated with an approximately 138% increase in sustainability reporting quality through external assurance, while firm size reduces sustainability reporting quality through external assurance by 121.5%, indicating that larger banks have a less likelihood of commitment to sustainability activities than smaller banks.

### 6.4.2. Replacement of control variables with plausible alternatives

The original model measures bank profitability using ROCE and firm size using the natural logarithms of net assets. We replace ROCE with ROA and logarithms of net assets with natural logarithms of the

**Table 8.** Ordered logistic regression for CG-Index and SRQ with alternative measures.

Variables	Baseline Reg	Categorical data for marginal effects					
		Low	Fair	Moderate	Good	High	Excellent
DOWS	0.426*** (0.139)						
BIND	0.311** (.318)						
ADFINE	0.637** (0.399)						
BDIV	−0.329** (0.181)						
SHRP	0.249** (0.115)						
FNAT	−0.572*** (0.105)						
FOWS	−0.662*** (0.214)						
CG-INDEX	0.791*** (0.384)	−0.076*** (0.066)	−0.159** (0.048)	0.438** (0.137)	0.207** (0.019)	0.179** (0.111)	0.093** (0.036)
ROA	1.995** (0.887)	−0.067** (0.013)	−0.091** (0.041)	−0.226** (0.118)	0.189** (0.016)	0.095** (0.007)	0.007* (0.009)
FGRW	1.228** (0.745)	0.117*** (0.019)	0.078*** (0.031)	0.189** (0.052)	0.213*** (0.164)	0.052** (0.013)	0.047** (0.026)
CGEAR	0.652** (0.276)	0.555** (0.201)	0.611** (0.100)	−0.317** (0.225)	−0.240*** (0.289)	−0.138** (0.079)	−0.104** (0.059)
AQUA	0.085** (0.009)	−0.197** (0.068)	−0.294** (0.005)	0.526** (0.029)	0.159** (0.049)	0.041** (0.023)	0.009 (0.107)
FSIZE	−4.048** 5.989	1.311** (0.262)	−2.126** (0.144)	−2.231** (0.416)	−1.574** (0.393)	−1.135** (0.118)	−0.951** (0.031)

number of branches. As can be seen in Table 8, the re-estimation produced a Beta Coefficient of 0.791 and t-statistics of 3.228, which is significant at 1% and 5% levels of significance. Except for the beta coefficients for ROA and FSIZE, the results for the control variables remain as previously reported. There is a minimal decrease in the reported beta coefficient for firm size. This decrease persisted for all the differential results. However, a negative sign was maintained, indicating a high degree of agreement with the baseline regression results.

## 7. Summary and conclusion

In this study, we ascertain whether a composite corporate governance (CCG) index has a relationship with the sustainability reporting quality (economic, environmental, and social). This study is motivated by the persistent call for adequate disclosure of sustainability activities from different stakeholders. We premised our argument on stakeholders' theory and state that for the full effect of corporate governance mechanisms to be felt on sustainability reporting quality, an examination of a full set of corporate governance mechanisms is warranted. Listed firms can focus on certain elements of corporate governance mechanisms, as established by previous studies with a view to enhancing the sustainability reporting quality. This leaves the question of whether the interests of all stakeholders are protected by the specific elements of corporate governance mechanisms. This also raises the question of which corporate governance elements are useful in enhancing sustainability reporting quality. How can a mix of corporate governance elements be achieved to ensure improved sustainability reporting quality. These questions motivated this study.

Considering the myriad of literature on the drivers of SRQ spanning three decades, we focus on more recent literature that investigates the link between corporate governance and SRQ. This resulted into a review of 39 recent articles on the variables under investigation. We measured SRQ using a scale of 0–6. The highest score is obtained when a sustainability report is objectively reviewed by an independent audit firm, whereas the lowest score represents the absence of sustainability reports in a bank. With a sample of 19 listed banks for a period of ten years (2012–2021), using the ordered probit and binary logistics regression methods, our results shows that corporate governance mechanisms have a statistically significant influence on sustainability reporting quality. Therefore, we establish that banks with diluted ownership, greater board independence, a high level of audit committee financial expertise and

greater shareholder rights and protection are likely to have higher sustainability practices and reporting quality. By contrast, banks with higher board diversity, larger foreign nationals and a greater proportion of family ownership are less likely to report quality sustainability. Our results provide empirical support for Barney's (1991) resource-based theory which emphasizes a firm's internal capabilities as a source of competitive advantage. In this context, effective CG can be a strategic resource that can help position the firm for sustainable performance (Hashim et al., 2015)

Further analysis reveals that external assurance is a useful tool for enhancing the quality of sustainability reporting. We also found that having a standing committee to provide oversight functions on sustainability activities contributes to an increase in sustainability reporting quality. The results are useful in determining corporate governance practices that contribute positively toward sustainability reporting quality and those that do not. It is essential for listed banks to consider which aspects of their governance structure could potentially improve their sustainability reporting quality and concentrate on them.

Our results highlight that external assurance and board oversight appear to be the principal instruments that promote higher SRQ levels. Therefore, it is essential for the board of directors to have a standing committee with the required expertise to regulate sustainability-related tasks. While it is recommended that boards of listed banks should ensure that sustainability reports are subjected to external review before publication, it is crucial for regulatory agencies such as the Central Bank of Nigeria, Security Exchange Group, and so on to enact law that will make provision of external assurance on sustainability reporting as a regulatory requirement. This will strengthen non-financial disclosure, which will ultimately enhance the credibility of corporate reporting in listed banks in Nigeria.

## 8. Limitation and areas for future research

Being the study of a single sector, the sample size could be considered as a limitation. However, it should be kept in mind that a rigorous and exhaustive search of all the corporate government mechanisms that have been found to have a significant influence on sustainability reporting quality in studies conducted using data from other sectors were included in the development of our corporate governance index. Future studies can consider using data from the entire listed companies with the exclusion of financial institutions. We are currently conducting a similar study on the manufacturing sector. Also, we employed secondary data in this paper. Although, most of the corporate governance attributes could be sourced from the audited annual reports and other reliable sources, it would be enriching to conduct primary interviews with the management and board members to obtain additional information on other unobservable drivers of sustainability reporting quality that are not usually captured in the annual reports.

## Authors contributions

Ezekiel Oluwgbemiga OYEROGBA: Conceptualization, Methodology, Data Analysis, Writing-Original Draft  
 Femi OLADELE: Validation, Data analysis, Writing – review and editing  
 Peace Ebunoluwa KOLAWOLE: Data curation, Methodology, Writing – review and editing.  
 Mofoluwake Adedamola ADEYEMO: Data curation, Interpretation of results, Writing – review and editing

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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## Data availability statement

Data for this study were extracted from the annual financial statements of the selected banks.

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