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AUDIT COMMITTEE CHARACTERISTICS AND SUSTAINABILITY PERFORMANCE IN NIGERIAN LISTED BANKS

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Abstract. This study investigates the influence of audit committee characteristics on the sustainability disclosure among the Nigerian listed banks. Using the Fixed Effect regression estimator of panel data for ten (10) listed banks in Nigeria over the period of 2014–2016, the result shows that the influence of audit committee independence and gender diversity of audit committee are significantly positive on the sustainability disclosure. However, the audit committee magnitude has a negative and significant influence on the sustainability disclosure. This paper is unique as we consider the importance of the gender diversity of the committee given its relative contribution to sustainability reporting quality. This study tends to provide insights on sustainability reporting and assist stakeholders in emphasizing on the importance of sustainability disclosure through the audit committee oversight.

Keywords: audit committee characteristics, gender diversity, and sustainability reporting.

JEL Classification: G32, G34, M14, M42.

Introduction

Beyond the financial disclosures, the stakeholders persist to demand accountability and transparency of non-financial disclosures as regards the firms' sustainability performance. Mostly, the audit committee is the corporate governance mechanism that monitors disclosure and determines the extent of voluntary disclosure made in the firms (Carcello & Neal, 2003). With the oversight responsibility of the audit committees, firms are expected to meet the stakeholders' expectations through sustainability reporting. Nevertheless, voluntary sustainability disclosures have a tendency to improve the companies' corporate image (Orazalin & Mahmood, 2018). Studies have identified the possible benefits of the sustainability reporting process, which include increased efficiency; higher levels of employee retention and lower cost of capital (Ahmed & Manab, 2016; Al-Shaer & Zaman, 2016; García-Sánchez et al., 2019). Following the Global Reporting Initiative (GRI), sustainability reporting usually contains three categories namely economic, environmental and social indicators. Moreover, exploring the determinants of sustainability reporting remain substantial issue among academics, practitioners and policymakers.

Although there exists extensive literature exploring the extent of sustainability reporting both in developed and developing economies, but empirical studies assessing the influence of audit committee on the sustainability disclosure is languished especially in developing countries. Developing countries are highly characterized by information asymmetries and the firms retain heedless of the inevitability of the voluntary disclosure especially sustainability disclosure for the stakeholders (Orazalin & Mahmood, 2018). With this dearth of studies on audit committee characteristics and sustainability reporting, this study examines the influence of audit dynamics on the sustainability reporting quality in Nigerian banks.

This study contributes to the emerging studies on sustainability performance by exploring the influence of audit committee characteristics. This paper is unique as we consider the importance of the gender diversity of the committee given its relative contribution to sustainability performance. This study first extends the prior studies by examining the effect of audit committees on sustainability quality thereby contributing to the limited literature on the subject-matter in Nigeria context. In addition, this study tends to help the practitioners to reprioritize the necessity for sustainability processes by providing insights into the roles of the audit committee. In furtherance of achieving global relevance in emerging countries, this study will help the policymakers in adopting sustainability reporting.

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This paper is organized in the following pattern. Section 1 provides a review of prior and hypothesis development. Section 2 deals with the research methodology adopted and data gathering procedures. Section 3 describes the data and discusses the empirical findings and then the final conclusions and suggestions.

1. Literature review and hypotheses development

Prior studies pose that Sustainability reporting is a voluntary disclosure made at the discretion of the organization. To a large extent, managers are not completely knowledgeable of the meaning and the actual items that fall under sustainability reporting, which has resulted into inaccuracies and further added to the problems of dishonesty (Krivačić, 2017). In addition, KPMG (2013) reiterates that about 53% out of the 93% of the global organizations avail their financial statements to the public actually disclose ethics the proper and reliable way. Krivačić (2017) further opines that unreliability of ethical disclosures of large corporations could be attributed to a number of reasons ranging from governance level to the organizational level. Since a large number of people depend on the accuracy and reliability of information published in the annual reports for reasons ranging from strategic decision making to investment decision making. Deloitte (2013) places emphasis on the importance of investigating and ensuring that sustainability reports of organizations are reliable using the services of professional accounting firms, internal auditors and consultants.

Preuss (2009) adds that ethical codes serve as guidelines used by organizations to ensure that the staff and personnel of the organization act and comply with conducts of the organization. Ethical codes also referred to as ethical policy, business conduct, the statement of business principle and practice, ethical guidelines, code of ethics, spells out and serves as a blueprint for employee's professional conduct (Schwartz, 2001). In addition, organizational ethical codes identify the values of the organization and spell out the terms for the relationship between the supplier and customer, conflict of interest, the relationship among employees as well as what is termed as confidential information. Furthermore, ethical codes outline the responsibilities and duties of the organization to all its related parties (Preuss, 2009).

Many studies have been carried out on voluntary disclosures emphasizing audit size and voluntary disclosure (Hashim & Mohd Saleh, 2007), voluntary disclosure and leverage (Hossain & Rahman, 1995). Studies have been carried out as well as the characteristics of the audit committee on various voluntary disclosure. Akhtaruddin et al. (2009) examine whether the proportion of the number of audit committee members on the board of directors influences voluntary disclosure. C. Hayek and M. Hayek (2012) explore the influence of financial expertise, independence and compensation structure motivates audit committee to report on fraudulent activities. Madi et al. (2014) aver that an accurate composition of the audit committee with the same proportion of expertise, experience, and capabilities will result in better efficiency and effectiveness of the audit committee. Baxter and Cotter (2009) opines that an audit committee can only be effective when they have financial expert members. Lisic et al. (2011) pose that the presence of a financial expert on the audit committee neither enhances or reduces the monitoring duties of the audit committee. However, Bedard and Gendron (2010) affirms that the presence of a financial expert in the audit committee results in better financial reporting quality. Baxter and Cotter (2009) opined that irrespective of the composition of the audit committee, their responsibilities and duties are of great importance to an organization as it helps to increase the organization's reliability. However, there is a dearth in the literature regarding audit committee characteristics and voluntary ethical disclosure. This study, therefore, intends to examine if there is any relationship between audit committee characteristics, bank concentration and sustainability disclosure using the independence of audit committee, Audit Committee engagement, the committee magnitude and the gender diversity of the committee.

1.1. Audit Committee magnitude

Some studies indicate that when an audit committee is large, it slows down decision making and makes communication harder process (Hackman, 1990). However, some other studies have found that the larger the audit committee the better and more effective emphasizing that larger audit committee has increased expertise on the board which would result in increased voluntary disclosure. Persons (2011) then opines that there should be at least three directors on an audit committee as this would enhance voluntary ethical disclosure. Therefore, the first alternative hypothesis is formulated as follows:

H_{1a}: Audit committee magnitude influences the sustainability reporting quality.

1.2. Audit Committee engagement

Anghel (2014) emphasizes that the number of meetings held by the audit committee is a major determinant of committee's reliability and efficiency as board members that meet as often as possible have a higher probability of achieving goals and organizational objectives. Raghunandan et al. (2001) aver that the regularity of the committee meeting has a positive effect on organizational profitability and growth. Beasley et al. (2000) opines that when an organization increases its number of meetings, this results in better financial statement quality. Raghunandan and Rama (2007) emphasize that when an audit committee meets frequently, they are usually more informed, more diligent, and definitely more knowledgeable about situations and are better equipped to handle the situations. Persons (2009), stated that when a committee meets more often, they have a tendency of making a higher voluntary disclosure. Therefore, the second alternative hypothesis is formulated as follows:

H_{1b}: Audit committee engagement affects the sustainability reporting quality.

1.3. Audit committee gender diversity

The importance of gender diversity has been identified by prior studies (Gallego-Álvarez et al., 2010; Green & Homroy, 2018). Gender diversity tends to enhance corporate productivity and performance through the effectiveness of the board (Carter et al., 2007). In addition, it is necessary for firms to mirror the disparity within society. Thus, gender diversity is desirable in corporate governance from the social cohesion perspective, which could enhance corporate value (Gallego-Álvarez et al., 2010). Female directorship tends to have high regards for their roles by expending more effort on their tasks accordingly, which could enhance effectiveness in terms of information flow and decision making (Pathan & Faff, 2013). Therefore, the third alternative hypothesis is formulated as follows:

H_{1c}: Audit committee gender diversity affects the sustainability reporting quality.

1.4. Audit Committee independence

The efficient management of financial statements by the audit committee is highly influenced by the independence of the committee. The audit committee plays a vital role in corporate governance, financial reporting and auditing and better performance is derived when the members of the committee are independent i.e. persons that have no prior personal or financial relationship with the said organization and its executives as there is a less likely probability of fraud and unethical behavior when the members of the committee are independent (Persons, 2005). Independent directors go above and beyond to ensure that the board play by the books they go as far as bringing in external specialists and consultants in situations that are considered dicey and this helps the firm to establish a moral environment which adds to firm value (Kantudu & Samaila, 2015). Therefore, the fourth alternative hypothesis is formulated as follows:

H_{1d}: Audit committee independence influences the sustainability reporting quality.

2. Methodology

2.1. Data

This study is based on the assumption that the audit committee has the oversight duty to monitor firm sustainability endeavors (Buallay & Aldhaen, 2018; Ojeka et al., 2017; Othman et al., 2014). This situates the objective for this study, which sets to test whether audit committee characteristics and concentrated banks affect the firm sustainability endeavors. To assess these hypotheses, we use the annual reports for 2014–2016 of 10 out of 15 Listed Money Deposit Banks in Nigeria in which our sampling selection is purposive. All information is extracted from the annual reports, sustainability reports and the websites of the selected banks.

We identify disclosure of sustainability report as the dependent variable while audit committee characteristics and bank concentration are the independent variables. The proxy for sustainability report disclosure was adapted from prior literature such as Laskar (2016), Munshia and Duttab (2016). The measure is patterned according to the Global Reporting Initiative framework subjected to three categories such as i) Economic Indicators ii) Environmental Indicators and iii) Social Indicators. We use content analysis to derive the disclosure score by the selected banks to construct the disclosure index. The overall disclosure score (TDS) for sustainability indices is generated as follows:

$TSD_i = \sum_{s=1}^{N} d_s$, while the Sustainability Reporting Disclosure (SRD) = TSD_i / M,

where:

d_s = 2 for full disclosure, 1 for partial disclosure and 0 for no disclosure against economic, environmental and social indicators respectively;
N = 9 for economic indicator *i;*
N = 30 for environmental indicator *i;*
N = 45 for social indicator *i;*
M = Maximum possible score of 168.

In the case of audit committee characteristics and bank concentration, we examine four proxies to capture the audit committee characteristics such as the Audit Committee Magnitude (*ASM*); level of Audit Committee Engagement (*ACE*); Audit Committee Gender (*AGR*); and Audit Committee Independence (*ACI*) while following Grace et al. (2014) we control for the weight of the bank magnitude using the square root of the total asset in which we assume that the more a bank is concentrated, the greater its level of sustainability endeavors. The control variables include the Firm Size (*Size*); Firm Age (*Age*); and Return on Asset (*ROA)* following prior studies (Adegboye et al., 2019; Ojeka et al., 2019; Ojeka et al., 2019, Ojeka et al., 2019).Table 1 shows the definition of the measures.

Panel data regression model is used for our analyze, which include OLS, Fixed Effect Model and Random Effect Model. Eq. 1 identifies the general panel data regression model as follows:

$$Y_{it} = \beta_o + \beta_1 X_{it} + \varepsilon_{it}\,, \qquad (1)$$

where Y_{it} is the dependent variable, X_{it} is the independent variable across the individual (i) and time (t), β_o is the unknown intercept and ε_{it} is the error terms. Eq. 2 shows the study regression model.

$$SRD_{it} = \beta_0 + \beta_1 ACM_{it} + \beta_2 ACE_{it} + \beta_3 AGR_{it} + \beta_4 AIN_{it} + \beta_5 BCON_{it} + \beta_6 ROA_{it} + \beta_7 Size_{it} + \beta_8 Age_{it} + \varepsilon_{it}\,. \qquad (2)$$

In panel data analyze, there is a need to select between the Fixed Effect and Random Effect via the Hausman test. However, OLS model is eliminated due to its unrealistic assumption that the intercept values of the selected firms are the same. We then perform the Hausman specification test with the null hypothesis that Random Effect would be consistent and efficient while the alternative hypothesis state that Fixed Effect would be consistent and efficient. The estimated Chi-square (Pro>chi2) guide our decision to either accept or reject the null hypothesis. Therefore, our Hausman test result rejects the null hypothesis summarized in Table 5 making the Fixed Effect model consistent and efficient for our analysis.

3. Empirical findings

3.1. Descriptive statistics

Table 1 shows the descriptive statistics of the study variables. From the Table, the mean of the Sustainability Report Disclosure is 0.344 with a maximum value of 0.62 and a minimum value of 0.196. Therefore, the mean level of the Disclosure Index verifies that the majority of the banks possesses reasonable sustainability reporting.

Table 1. Descriptive statistics

Variable	N	Mean	Std.Dev.	Min	Max
Dependent Variable					
SRD	30	.344	.11	.196	.62
Independent Variable					
ACM	30	5.552	1.478	3	9
ACE	30	3.931	1.963	0	8
AGR	30	1.172	1.136	0	3
AIN	30	1.138	.99	0	3
Control Variable					
BCON	30	10.70	0.298	10.25	11.14
ROA	30	.018	.011	.002	.042
Size	30	21.394	.597	20.499	22.279
Age	30	3.072	.923	1.099	4.007

In the case of the audit committee characteristics and the bank concentration, the mean of the committee magnitude (*ASE*) is 5 members revealing the number of the majority committee size with 3 members minimum and 9 members maximum. On average, the audit committee (*AMG*) engages approximately 4 times per year, which follows the provision of Code of Corporate Governance for Banks in Nigeria. Looking at the committee gender diversity, the mean of female membership (*AGR*) is 1 person with a maximum of 3 persons, which reveals that male counterpart dominates the committee. In the same vein, the mean of the independent member (*AIN*) on the committee is 1, which reveals that at least 1 person remains independent on the committee. In addition, the mean of bank concentration (BCON) shows that the majority of Nigerian banks are highly concentrated.

Table 2 reports the Pearson correlation matrix for the dependent variable and independent variables adopted in the analysis. The Table indicates low correlation among the variables, especially among the independent variable. Hence, there is no indication of serious multicollinearity in the models.

3.2. Multiple linear regression

As identified earlier, the result of the Hausman specification test reports that Fixed Effect is consistent and efficient for our model specification summarized in Table 3. In addition, Table 4 reports the Multiple Regression results for the selected banks. Using Model 5, the R-squared value identifies the percentage of dependent variability explained by the independent variables in the regression model (Field, 2009). The study R-squared is 0.803. Thus, the result reports 80.3% of the variability in Sustainability Reporting Disclosure is explained by the independent variables (that is audit committee characteristics and bank concentrations). In addition, F-test is 5.611 with the p-value of 0.005 which indicates a significant linear relationship between the explanatory variables (that is audit committee characteristics and bank concentrations) and explained variable (that is Sustainability Reporting Disclosure).

Table 2. Correlation matrix

	SRD	ASE	AMG	AGR	AIN	BCON	ROA	lnasset	lnage
SRD	1								
ACM	–0.232	1							
ACE	–0.0404	0.457^{*}	1						
AGR	–0.0395	0.409^{*}	0.326	1					
AIN	0.547^{**}	–0.200	–0.142	0.137	1				
BCON	0.465^{*}	–0.229	–0.0257	–0.112	–0.0507	1			
ROA	0.00865	-0.372^{*}	0.0399	–0.272	–0.209	0.258	1		
Size	0.417^{*}	–0.228	0.000712	–0.125	–0.0879	0.994^{***}	0.282	1	
Age	0.0577	0.140	0.0752	0.246	0.138	–0.182	0.00543	–0.148	1

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 3. Model specification: Hausman test

H_0: Random Effect is consistent and efficient			
	Chi-square	Prob>chi2	Decision
SDR Model	34.33	0.0000	Rejected

Under the hypothesis one, it is proposed to test whether there exists significant affiliation between audit committee magnitude on the sustainability reporting disclosure. Thus, the finding reveals that, for hypothesis one, there is a significant negative relationship between audit committee magnitude and the sustainability reporting disclosure at 5% level of significance where the t-value for the committee magnitude is 0.0145. This indicates that smaller audit committee size tends to make the decision as regards sustainability reporting effectively compared to larger committee size, which could lead to less sustainability performance.

Table 4. Audit committee characteristics and bank concentration on sustainability reporting disclosure

VARIABLES	1	2	3	4	5
ACM	−0.0139				−0.0490***
	(0.0130)				(0.0145)
ACE		−0.000833			−0.0134
		(0.00761)			(0.00967)
AGR			0.0195		0.124***
			(0.0262)		(0.0303)
AIN				0.0425	0.0441*
				(0.0350)	(0.0243)
BCON	3.6305	3.3605	3.9805	3.4005	7.7305***
	(2.8005)	(2.9105)	(2.9605)	(2.7705)	(2.1705)
ROA	−1.052	−1.262	−1.325	−1.664	−0.918
	(3.186)	(3.319)	(3.245)	(3.171)	(2.389)
Age	0.0537*	0.0538*	0.0518*	0.0552**	−2.124***
	(0.0252)	(0.0262)	(0.0258)	(0.0250)	(0.590)
lnasset	−1.205	−1.101	−1.253	−1.119	0.448***
	(0.766)	(0.793)	(0.799)	(0.753)	(0.114)
Constant	23.00	20.82	23.82	21.10	41.01***
	(14.96)	(15.47)	(15.59)	(14.69)	(11.59)
Observations	30	30	30	30	30
R-squared	0.394	0.348	0.371	0.406	0.803
RMSE	0.0635	0.0658	0.0647	0.0628	0.0531
F-test	1.949	1.600	1.766	2.049	2.924
Prob > F	0.145	0.220	0.180	0.129	0.0461

Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Furthermore, the hypothesis two proposed to test whether there is a significant relationship between audit committee engagement and sustainability reporting disclosure. Thus, the finding indicates that, for hypothesis two, there is no significant relationship between audit committee engagement and the sustainability reporting disclosure at 5% level of significance where the t-value for the committee magnitude is 0.00967. This reveals that the frequency of audit committee meetings does not support effective sustainability performance. However, this finding contradicts the results of Buallay and Aldhaen (2018), whose finding indicates a positive and significant relationship between the audit committee meetings and sustainability disclosure in gulf countries.

In addition, hypothesis three proposed to test whether there exists a significant association between the number of female memberships on the audit committee and sustainability reporting disclosure. Thus, the report reveals that, for hypothesis three, there is a significant positive association between audit committee gender diversity and the sustainability reporting disclosure at 5% level of significance where the t-value for the committee magnitude is 0.0303. This indicates that the presence of female membership on audit committee size tends to influence the firm endeavors in sustainability performance effectively.

The result of hypothesis four, which posed whether audit committee independency influence the sustainability reporting significantly, reveals that independent member on the audit committee significantly positive influence the sustainability reporting at 1% level of significance where the t-value is 0.0243. This reveals that the independent director on the audit committee could influence the position of firm sustainability performance. This is perfectly in line with the finding of Buallay and Aldhaen (2018).

3.3. Robustness check

To find the robustness of the study, we further extend our regression model by classifying the sustainability reporting to high and low quality. We then allocate a dummy variable that is 1 stand for any value greater than 0.5 signifying high-quality sustainability reporting and 0 stands for any value less than 0.5 representing low-quality sustainability reporting. Since the dependent variable is represented by the dummy variable, we then employ logistic analysis for the robustness check. From Table 5, these results confirm the robustness of the main test as the desired variables retain their results.

Table 5. Logistics regression analysis with sustainability reporting quality

VARIABLES	1	2	3	4	5
ACM	−0.808**				−1.139*
	(0.398)				(0.666)
ACE		−0.0925			0.390
		(0.219)			(0.357)
AGR			−0.322		0.00734*
			(0.401)		(0.635)
AIN				1.377**	1.554*
				(0.643)	(0.867)

End of Table 5

VARIABLES	1	2	3	4	5
Size	1.601*	1.778**	1.792**	2.520**	2.264**
	(0.902)	(0.841)	(0.863)	(1.061)	(1.122)
Constant	–30.81	–38.52**	–38.84**	–56.62**	–47.09*
	(19.49)	(18.17)	(18.61)	(23.38)	(24.58)
Observations	29	29	29	29	29
Pseudo R-squared	0.296	0.156	0.169	0.314	0.456
chi-squared	11.07	5.818	6.304	11.75	17.02
Prob > chi2	0.00395	0.0545	0.0428	0.00281	0.00446

Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Conclusions

This paper investigates the effect of the audit committee characteristics (i.e. audit committee magnitude, audit committee level of engagement, audit committee gender diversity and audit committee independence) are associated with sustainability performance. Additionally, following the prior studies, we control for the firm profitability, the bank concentration, the bank size and the age, which could affect sustainability performance. We proxy for sustainability performance using content analysis to derive the disclosure score by the selected banks to construct the disclosure index (i.e. 2 for full disclosure, 1 for partial disclosure and 0 for no disclosure against economic, environmental and social indicators respectively).

Using purposive sampling of 10 out of 15 Nigerian banks for the period 2014–2016 and applying fixed effect method following the result of Hausman test specification after controlling for bank profitability, concentration, magnitude, and age, we find that audit committee gender diversity and audit committee independence have a positive and significant influence on sustainability performance. However, audit characteristics magnitude has a negative and significant association with sustainability performance.

Based on the results of this study, we then recommend that Nigerian Banks should concentrate extensively on audit characteristics, which could enhance sustainability transparency for the stakeholders. Emphasizing on the committee gender diversity could enhance effectiveness in term of information flow and it is expected to reflect the disparity within the society. This has policy making implication as it provides an indication for the influence of voluntary sustainability disclosure as opposed by mandatory disclosure towards reassuring audit committee gender diversity on the sustainability performance. Our results contribute to the increasing literature stressing the importance of audit committee characteristics considering the sustainability performance at the firm level.

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APPENDIX

Notations

Variables and functions

SRD – Unweighted Sustainability Reporting Index;
ACM – Audit Committee Magnitude;
ACE – Audit Committee Engagement;
AGR – Audit Committee Gender;
AIN – Audit Committee Independence;
BCON – Bank Concentration;
ROA – Return on Asset;
Size – Firm Size;
Age – Firm Age.

Definition of variables

Variables	Definition	Measurement
Dependent Variable		
SRD	Unweighted Sustainability Reporting Index	As explained earlier
Independent Variable		
ACM	Audit Committee Magnitude	Total number of the Audit committee members
ACE	Audit Committee Engagement	Number of the meeting held by the committee
AGR	Audit Committee Gender	Number of females on the committee
AIN	Audit Committee Independence	Number of independent audit committee members
Control Variable		
BCON	Bank Concentration	The square root of the Firm Total Asset
ROA	Return on Asset	Total profit for the year/ Total Asset
Size	Firm Size	Natural logarithm of Total Asset
Age	Firm Age	Natural logarithm of Firm Age