

RISK MANAGEMENT, BOARD CONTROL AND EARNINGS QUALITY OF LISTED NON-FINANCIAL FIRMS IN NIGERIA

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ABSTRACT

The study investigates the moderating impact of board control on the relationship between risk management and earnings quality of non-financial firms listed on the Nigeria exchange group from 2013 to 2022. 43 listed non-financial firms in Nigeria form the sample size. Ex-post facto research design, earnings quality was the dependent variable, risk management as the independent variable while board control is the moderating variable. The findings of study indicate that board control significantly moderate impact of board risk management committee, risk appetite and audit committee significantly improve earnings quality. However, the study found that the interaction of board control and risk culture weakened the influence of risk culture in mitigating earnings management. The study concluded that board risk management committee, risk appetite, audit committee, and board control are necessary yardstick for improving the quality of reported earnings. The study therefore, recommends that shareholders of listed non-financial firms in Nigeria should pay more attention in appointment of board of directors, since board control substantially aid risk management in mitigating earnings manipulations. The results contribute to corporate governance and risk management debates in an emerging economy such as Nigeria and have policy implications on regulators and shareholders in refining the effectiveness of the risk management policies.

Keywords: Risk management, real earnings management, audit committee, board composition

INTRODUCTION

Financial health of every organization is ascertained from the financial information that usually communicated by the financial officer of every organization. Accounting earnings is one of the key variables of the financial information that stakeholders used as parameters for making effective decision regarding investment, lending, regulation and all other financial decisions. Hence this necessitates regulators to mandate all listed companies to publish its annual report as means of interacting to its stakeholders on the organization's financial performance. The quality of the accounting earnings guarantees useful information and gives value to the information and enthuse assurance on the credibility of the report being free of errors, subjectivity and ambiguity to the users (Farouk et al., 2019). Thus, this justify the demand for greater corporate transparency by all stakeholders, since all business decisions are anchored on financial reporting.

The advent of global financial scandals that engulf major corporations around the globe that is still prevalent in recent times such as the financial scandal of Samsung 2018, Kraft Heinz company 2021, Americanas SA 2023, and Sam bankman fried 2024 (Americanas, 2023; Bloomberg, 2024; Espinoza, 2023). Nigeria as a country was not spared from the corporate accounting and financial scandals that affected both the financial and non-financial sector: Lever brothers PLC the financial report overstatement discovered by PricewaterhouseCoopers (PWC), Oando Plc 2017, Sky bank 2018 and Diamond bank 2019, Nigeria National Petroleum Corporation 2018, Oando Plc 2021 financial crises in recent years (Madu & Shehu, 2021). These reveals the adverse effect of erroneous financial reporting to corporations and the resulted mishap to shareholders. The financial scandal has been attributed to weak corporate governance mechanisms and earnings management through earnings manipulations, where managers employ discriminating judgment in the choice of accounting policies (Healy & Wahlen, 1999; Gontarek, 2016).

The extent of the earnings management within published reports differs from company to company based on the firm's governance and internal control efficacy mechanisms instituted and monitored. Researchers have postulated that the swiftness in the global corporate environment, the complexity of financial dealings, volatility in exchange rate and the dynamic high-tech nature of risk management are serious concern to all organization as business practice can be overtaken by the convolution of reality (Emblemsvag, 2020; Olayinka et al., 2020). As such, risk management has become a critical and urgent issue in the modern day Business environment (Luthfiyanti & Dahlia, 2020; Yang Liu, 2019). Hence, it is expedient for organizations to take a cogent look at whether the risk management approach employed can effectively curtail the risk affecting the overall organization strategy. (COSO, 2017; Hsu & Yang, 2022; Organization of Economic Co-operation and Development OECD, 2014) has emphasize the vital role of board of directors in provide monitoring responsibility regarding risk governance and culture; information and communications; strategy and setting an objective; the review and modification of practices to enhance financial reporting processes. Risk management and earnings quality has attracted academic attention in prior studies conducted such as: ASEAN (Karyani, 2019; Khuong et al., 2022), Indonesia (Ningtyas & Adhariani, 2019), Nigeria (Olayinka, 2019; Otekunrin et al., 2021) among others, these studies

focused on enterprise risk management and risk governance on earnings volatility and financial performance, such studies include Whereas this research intend to examine the moderating impact of board control and risk management on earnings quality. There are few researches on risk management on earnings quality namely: Abubakar et al. (2022); Almarayeh et al. (2022); Galal et al. (2022) Madu and Shehu (2021); Madu and Shehu (2023); Muiyiwa et al. (2024); (2018); Yamen (2021). Most of this aforementioned, recorded mixed and inconclusive which could be attributed to variables section, different domain, methodology or economic development. The mixed findings propose the need to introduce an interactive variable that can moderate the association between risk management and earnings quality. Evidence from empirical studies suggest that board control can enhance earnings quality, this assertion is backed by Jeroh and Efeyunmi (2022); Thomas and Ogboin (2022); Olaoye & Adewumi (2020); Egbunike and Odum (2018). Owing to these issues raised above, the major question ask is what is the moderating impact of board control on the nexus between risk management and earnings quality of listed non-financial firms in Nigeria.

Objective of the Study

In the with the question raised the specific objective of the study are as follows:

- i. To examine the impact of risk management (risk management committee, risk appetite, risk culture, and audit committee) on earnings quality of listed non-financial firms in Nigeria.
- ii. To ascertain the moderating impact of board control on the relationship between risk management committee and earnings quality of listed non- financial firms in Nigeria.
- iii. To ascertain the moderating impact of board control on the relationship between risk appetite and earnings quality of listed non- financial firms in Nigeria.
- iv. To determine the moderating impact of board control on the association between risk culture and earnings quality of listed non- financial firms in Nigeria.
- v. To investigate the moderating impact of board control on the connection between audit committee and earnings quality of listed non- financial firms in Nigeria.

Hypothesis of the Study

In sequel to the objective of the study, hypotheses were formulated in null form.

- Ho1. Risk management (risk management committee, risk appetite, risk culture, and audit committee) has no significant impact on earnings quality of listed non- financial firms in Nigeria.
- Ho2. Board control has no significant impact on the relationship between Risk management committee and earnings quality of listed non- financial firms in Nigeria.
- Ho3. Board control has no significant impact on the relationship between Risk appetite and earnings quality of listed non- financial firms in Nigeria.
- Ho4. Board control has no significant impact on the association between Risk culture and earnings quality of listed non- financial firms in Nigeria.
- Ho5. Board control has no significant impact on the connection between Audit committee and earnings quality of listed non- financial firms in Nigeria.

REVIEW OF EMPIRICAL STUDIES AND THEORETICAL FRAMEWORK

Empirical literature of the between risk Management constructs, earnings quality and board control as well as relevant theories are reviewed in this section.

Risk Management and Earnings Quality

Marzuki et al. (2024) examines the consequences of risk management practice on potential fraudulent financial reporting, the study used 43 firms in Malaysia, secondary data was used and the data was collected for the span of five (6) from 2012 to 2017. Risk management were proxied by risk management activities and risk committee. The finding from the study reveals that risk management activities has negative significant effect on potential fraudulent financial reporting, as the risk committee was insignificant. This study is very current, however, it was centered on firms in Malaysia, while, the present study seeks to consider firms in an emerging economy like Nigeria with different economic environment.

Similarly, Muyiwa et al. (2024) investigated the impact of risk management committee and earnings quality. The study covers the period of 12 years 2012 to 2023. 12 insurance firms form the sample size. Risk committee was proxy by size, gender diversity, meeting and independence, while earnings quality was measured by accrual base model. Findings from the study shows that risk committee size and gender diversity have negative significant effect on earnings quality, however, risk committee meeting and independence has positive significant effect. this study though conducted in Nigeria was only limited to accrual base earnings management, a similar study considering real earnings manipulation could produce a different result.

Alruwaili (2024) investigated the influence of audit committee attributes on earnings management in insurance companies quoted on Saudi stock exchange. 27 insurance firms form the sample and data the was extracted from 2014 to 2021. The result from the study revealed that audit committee commitment, audit committee size, audit committee independence and audit committee meetings have negative significant influence discretionary accruals, while audit committee expertise did not reveal any relationship. this aforementioned though relevant, examine only firms listed in Saudi Arabia, a similar study in listed non-financial firms in Nigeria exchange group could produce a different result.

In another literature: Hillebrink (2023) investigated the role of age and gender diversity on risk appetite in corporate boardrooms, the study considered 227 firms listed on the S&P Europe. The study covers the span of eighteen (18) years from 2005 to 2022. The finding of the study indicates that gender diversity reduces risk Appetite, while age on the other hand increase risk appetite. This study though, covers a substantial number of years and a large sample size. However, it concentrated on risk appetite in relation to gender diversity and age. A similar study, considering the relationship of risk appetite on earnings quality in an emerging economy like Nigeria, may proffer a different result.

Madu and Shehu (2023), investigated the if risk governance improves financial reporting quality. The study covers the period of ten (10) years from 2010- 2019. 74 listed non-financial firms in Nigeria constitute the sample firms. the study used two step regression. The findings from the study shows that risk appetite and risk culture significantly influence the quality of the financial report. This study is relevant, it considered the non-financial firms in Nigeria,

with a long period of ten years. However, the current study will further include moderating effect of board control on the relationship of risk appetite, risk culture and earnings quality to ascertain if a more valuable and overwhelming result could be documented.

Similarly, Azwari et al. (2023) examined the influence enterprise culture on financial reporting quality and good governance in Islamic financial firms in Indonesia. Thirty- seven (37) financial institution in the province of capital special region Daerah khusus ibukotu. the study is a qualitative study and data was collected through the use of questionnaire, the result from the study reveals that enterprise culture significantly improve financial reporting quality. This study is relevant, having considered factors that improve financial reporting quality, however, the study concentrated on the entire organizational culture in financial firms. thus, this present study, on risk culture and earnings quality could present a different result.

In an alternative study, Abubakar et al. (2022) studied the effect of risk management committee, institutional ownership and real earnings management. Secondary data was collected from listed financial firms on the Nigeria, constituting banks and other financial institutions for the period of five (5) years from 2015 to 2019. Findings from the study revealed that risk committee significantly and negatively influence real earnings management. This study was conducted in Nigeria on earnings management in financial firm, nonetheless, the study period considered is short for the finding to be relied upon, hence, the current study intends to cover a longer period of ten years.

Nevertheless, Almarayeh et al. (2022) examined the role of audit committees in mitigating earnings management. This study data was extracted from the 51 industrial good firms listed in Amman stock exchange Jordan for nine (9) years from 2012 to 2020, findings from the study showed that audit independence has negatively and significantly impacted earnings management. This study though pertinent yet it's limited to firms in Jordan. Therefore, this current study is carried on firms operating in Nigeria.

Similarly, Galal et al. (2022) examined the impact of audit committee characteristic on earnings management with evidence from firms listed on the Egyptian stock exchange. The sample size eighty (80) non-financial firms and data was collected for eight (8) years from 2012 to 2019. The findings from the study reveals that audit gender, size and expertise are negatively significant to earnings management, audit committee independence has positive

significance and audit committee meeting has an insignificant result. This study though conducted in the non-financial sector in Egypt, however this current study concentrated on firms listed in the Nigeria exchange group.

Yet , Yamen et al. (2021) provided empirical evidence on culture, institutional quality and earnings management. The study sample thirty-eight (38) countries. The study was conducts for the span of five (5) years 2015 to 2019. The findings of the study reveal that culture recorded a significance influence on accruals earnings management, however the association of culture and real earnings management was insignificant. This is an appropriate study, impact of culture not just on accruals earnings management but also on real earnings management, the study also examined a large sample making the findings robust. Nonetheless, the work concentrated on culture generally, an examination of the impact of risk culture specifically on earnings quality could reveal a different result.

Board Control, Risk Management and Earnings Quality

Researchers in recent times have considered the moderating impact of various board attributes on studies related to earnings quality, some of these studies among others include: Yami et al. (2023) examined the moderating effect of board quality on the between female directors and earnings management, this study sample constitute of 848 non- financial firms from the S&P composite 1500 index. For seven (7) years from 2000 to 2016. Findings from the study reveal that board quality enhances the relationship between female directors and earnings management. However, female directors in firm with less powerful CEOs are not able to deter EM practice. This study though relevant has concentrated only on female directors' impact, whereas, this present study considered risk management on earnings quality.

In another study, Usaini and Hooy (2023) investigated the moderating effect of CEO competency on corporate governance and earnings management. This study was conducted in Nigeria financial institutions. Data was collected from thirty-seven (37) firms listed on the Nigeria stock exchange from 2010 to 2019. It was discovered that CEO competence was only able to moderate the relationship between audit committee and earnings management. This

research was conducted in Nigeria on earnings management but dwell on the financial institution, a similar study on non- financial firms can produce a different result.

In a related study, Boachie and Mensah (2022) used corporate governance quality to moderate the effect of earnings management on firm performance. The study covered the period of 3 years from 2007 to 2009, data was extracted from non-financial companies listed on the Alglophone stock exchange in sub-saharan African countries. The findings of the study provided significant evidence that Corporate Governance quality moderate the relationship between earnings management and financial performance. However, this present study seeks to examine the moderating impact of board control on risk management on earnings quality.

Similarly, Kemboi (2020) examined the moderating effect of board size on the relationship between risk committee and financial performance of commercial banks in Kenya. The study sample constituted 42 active commercial licensed and regulated by the Central Bank of Kenya, data was extracted for 5 years, 2013 – 2017. The study shows that board size has a moderating influence on the relationship between the risk committee and the financial performance. This is relevant though it was on performance, while this current study indeed to use board control as a moderator on risk management and earnings quality.

Ningtyas and Adhariani (2019) examined the moderating impact of audit committee and audit quality on the relationship between enterprise risk management and earnings volatility in Indonesia. The study covers the period of five years from 2012 to 2016 and data was collected from 116 companies. The study reveals that, audit committee effectiveness was found to strengthen the association between the effectiveness of ERM implementation and earnings volatility, whereas no moderating effect was recorded on audit quality and the association of ERM implementation and earnings volatility. Therefore, this present study examines the moderating effect of board control on risk management and earnings quality in Nigeria.

The paradigm of agency theory was first proposed in 1932 and has since evolved. by Jensen and Meckling (1976). Agency theory discuss issues of principal and agent and its implications in organisational development. Principal- agent relation is focused on articulating the ownership-control separation issue. In some situations, the extent of risk the manager is willing to take and the shareholders is not in tandem. High risk appetite indicates increase

investment and more debt; thus, debt holders would have control over the firm managers and reporting, thereby, persuading the firms in to manipulating financial statement. As a result of this agency problem the owners suffers from information asymmetry (Fama & Jensen, 1983). Hendrastuti and Harahap (2023) suggested that an effective corporate governance mechanism will reduce managers' opportunistic behaviour because of the increase monitoring activities so as to safe guide shareholder's wealth and produce reliable financial report (Ishak et al, 2016).

Audit committee is one of the internal corporate governance monitoring mechanisms propose to ensure that managers function align with the interest of the stockholders, thereby reducing agency problems. Bensaid et al, (2021); Cohen et al, (2017) suggested that risk management reduce the monitoring cost by providing better insight about risk matters that confront an organization, therefore reducing agency cost, information asymmetric and enhance transparency in the financial reports. Board Risk Management Committee (BRMC), risk appetite and Audit committee has been found to exhibit positive relationship with Earnings Quality (Abubakar et al., 2022; Almarayeh et al.,2022; Galai et al., 2022; Madu & Shehu, 2023; Marzuki et al., 2024). Therefore, earning quality in this study is a function of board risk management committee, risk appetite and Audit committee. This relationship can be presented as follows:

$$EQ = F (BRMC, RKAP, AUC) \dots\dots\dots (i)$$

The organizational culture theory propounded by Schein (2010). Organizational culture theory is analyzed from three perspective, basic underlying assumptions which are embedded on beliefs and organizational attitude of the members, two Espoused belief and values, which indicate public, values and belief of an organization statement, thirdly, artefacts which are the tangible objective process and product in an organization. Owing to the observable indicators of organizational culture in risk management, hence risk culture of an has been considered significant to organizational risk management: Zhivitskaya and Power (2016) and Demortain (2016). Risk culture has been found to minimized earnings management and enhance earnings quality (Yamen et al., 2021) Hence, this study hypothesized that earnings quality is a function of risk culture. This can be represented as a follow:

$$EQ = F (RKCL) \dots\dots\dots (ii)$$

Resource dependence theory was first birthed by Pfeffer (1973) there after the model was modified by the joined work of Salancik and Pfeffer (1978). The emphasis of the theory is on the important role played by the board of directors by bringing resources that will improve organizational performance, link firms to the outside environment and create suitable business environment to confront adverse external shocks (Baran & Wilson, 2018). This study hypothesize that earnings quality is a function of board control as measured by non-executive and independent directors. Board control has been found to enhance earnings quality (Jeroh and Efeyumi, 2022; Olayinka et al., 2019). This can be presented as follows:

$$EQ = F(BC) \dots \dots \dots iii.$$

Three theoretical explanations have been reviewed to establish the relationship between earnings quality and risk management. Agency theory, organizational culture theory and resource dependency theory. Therefore, BRMC, RKAP, RKCL and AUC form risk management proxies that represent the explanatory variables, while, BC represent the moderating variable of the study. Since earnings quality is hypothesized to be the function of risk management in equation one and two and board control in equation three. Hence, this can be represented economically as follows:

$$EQ_{it} = \beta_0 + \beta_1 BRMC_{it} + \beta_2 RKAP_{it} + \beta_3 RKCL_{it} + \beta_4 AUC_{it} + \beta_5 BC_{it} + \epsilon_{it} \dots \dots \dots iv$$

Finally, the inclusion of board control compose of non- executive and independent directors is expected to improve the capability of the board in checking unethical practice hence increase the quality of the reported earnings.

RESEARCH METHODOLOGY

This study adopted ex-post facto and correlational research design which is a proxy of quasi- experimental research design, this is owed to the fact that the study is conducted within the horizon of quantitative research approach with a philosophical paradigm of positivism, which reality is observed through the eyes of the researcher. This mirrors the aim of the current study, the moderating impact of board control on the relationship between risk management and earnings quality. The population for this study encompasses 105 non-financial firms that are listed and actively trading on the Nigerian Exchange Group as at December 31, 2022. The study sample size was derived from the population of the study. In

other to achieve a feasible sample size, availability of data required for the study is paramount. Purposive sampling technique was employed using a two-point filter employed; one, for a firm to be included it must have been listed before 31 December 2012. And two, any firm without complete data for the variables of the study was excluded. Hence, (17) firms were listed after 31 December 2012, while a total of forty-four (45) firms were excluded as a result of non-availability of complete data. Finally, a total of forty-three (43) firms was used as the sample size, this constitutes 40.96%. Secondary data was collected from the annual report and accounts of the sampled firms for the period 10 years from 2013 to 2022. Feasible Generalized Least Squares (FGLS) was used.

Variable Measurement

The variable of the study is grouped in to four: the independent, moderating, dependent and control variables. Table 1 and 2 below shows the names, code, type and measurement of the variables as well as the source(s) of the measurement.

Table 1 Risk Culture Index

S/N	ITEMS
1	Having a stand-alone risk committee
2	Having one or more members of risk committee in audit committee
3	Chief risk officer/head of risk management being a senior manager
4	Risk management/financial experience of chief risk officer/head of risk management
5	Disclosure of organisational risk framework or policy in the annual report
6	Presence of risk management in goal/mission statement of the firm
7	Presence of whistle blower policy in the organisation
8	Assurance on the effectiveness of organisation risk management procedure by internal or external audit function.
9	Compliance with at list two applicable laws and regulation related to risk management

Table 2. Variable Measurement

Variable Name	Code	Variable Measurement	Sources
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Dependant Variable

Earnings quality	EQ	Represented as real earnings management (REM), measured by the residuals of cohort-adjusted measure (2019). abnormal cash flow model	Srivastava, 2019)
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Independent Variable

Board risk management committee	BRMC	Proportion of risk committee members on the board	Nguyen & Dang (2022) Madu and Shehu (2023)
Risk appetite	RKAP	Debt -to-equity ratio	Hillebrink (2023). Fritz-Morgenthal et al (2015) NCCG
Risk culture	RKCL	Measured using risk culture index, a ratio of the total items discloses	(2018), Madu and Shehu (2023)
Audit committee	AUC	Measured by (ACGS) derived from 5 audit committee characteristics	Shehu, (2011), Madu and Shehu (2023)

Control Variable

Firm size	FS	Measured as natural log of total asset	Efenyumi & Okoye (2022)
Leverage	LEV	Total Liabilities divided by total assets	Isah et al (2022)
Audit firm Size	AFS	If the firm is audited by a big4 audit firm 1 if otherwise 0	Ibrahim (2017)

Moderating variable

Board control The ratio of non-executive directors plus independent directors on the board Egbunike & Odum, (2018) Thomas & Ogboin (2022) Researchers Design (2025)

Model specification the amended model by Srivastava, (2019) is presented and specified as thus; $CFO_{it}/TAt-1 = \alpha_0 + \alpha_1 TAt-1 + \alpha_2 SL_{it}/TAt-1 + \alpha_3 \Delta SL_{it}/TAt-1 + \alpha_4 \Delta SL_{it-1}/TAt-1 + \alpha_5 \text{LogMarketValue}_{it} + \alpha_6 \text{LagROA}_{it} + \alpha_7 M/B_{it} + \alpha_8 SL_{it+1}/TAt-1 + \alpha_9 CFO_{it-1}/TAt-1 + \mu_{it}$ --- -- i

Where:

CFO = Current year cash flow from operations $\alpha^*(1/At-1)$ = Scaled intercept, TAt-1 = Total assets of the previous year, α_0 = Intercept, $\alpha_1, - \alpha_9$, = Parameters for estimating normal cash flow, SLt = Sales at present year, ΔSL_t = Change in sales, Market value = Market value of equity, ROA = Return on assets, M/B = Market-to-book ratio, CFO-1 = Lagged value of operating cashflow, μ_t = Residuals

$$EQ_{it} = \beta_0 it + \beta_1 BRMC_{it} + \beta_2 RKAP_{it} + \beta_3 RKCI_{it} + \beta_4 AUC_{it} + \beta_5 BC_{it} + \beta_6 BRMC_{it} * BC_{it} + \beta_7 RKAP_{it} * BC_{it} + \beta_8 RKCI_{it} * BC_{it} + \beta_9 AUC_{it} * BC_{it} + \beta_{10} FS_{it} + \beta_{11} LEV_{it} + \beta_{12} AFS_{it} + \epsilon_i \dots \dots \dots v$$

$\beta_0 it$ = Intercept, $\beta_1 - \beta_9$ = parameters, i t= firm i in time t, BRMC= Board, risk management committee, RKAP= Risk Appetite, RKCI = Risk Culture, AUC =Audit committee, FS = Firm size LEV = Leverage, AFS= Audit firm size, BC= Board control, $\epsilon = e$

RESULT AND DISCUSSIONS

In section the result of the data collected for the study is presented, analysed and discussed. This section also provide conclusion and recommendations based on the findings of the study. The descriptive statistic, correlation matrices and regression result are presented below:

Table. 3 Descriptive statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
EQ	430	0.1501544	0.1422518	0.0006955	0.8830233
BRMC	430	0.487736	0.2065291	0	8889

RKAP	430	1.789214	2,803197	-17.21712	25.18325
RKCL	430	0.4977674	0.1982056	0.000000	0.88
AUC	430	0.692093	0.2207907	0.000000	1
BC	430	0.658479	0.1262531	0.25	0.8888889
FS	430	17.41656	1.851756	14.36926	23.40533
LEV	430	0.5983427	0.2815393	0.0394277	2.0299
AFS	430	0.672093	0.4699976	0	1

Source: Authors' computation from annual reports of the companies using STATA

Table 3, earnings quality shows a mean value of 0.1501544, minimum 0.0006955 and maximum of 0.8830233. These imply that the average earnings quality of non-financial firms in Nigeria during the period is 15%. The mean of Board Risk Management Committee (BRMC) shows a mean value of 0.487736 which implies that on an average the ratio of risk management committee members on the board of listed non-financial firms in Nigeria is 49%. Risk Appetite (KRAP) has a mean of 1.789214 and a standard deviation of 2.803197 and indicating a wide variation from the mean. Table 3, also shows that Risk Culture (RKCL) has an average value of 0.4977674 and the standard deviation of 0.1982056 indicate a wide variation of 19% from the mean of 49.7%. The minimum and maximum are 0 and 0.88 respectively. The minimum value of 0% implied that some of the non-financial firms in Nigeria, do not have risk culture practice at all, while the maximum of 88% indicates a high-risk culture practice by some of the firm. Audit Committee (AUC) has a mean value of 0.692093 indicating 69%, and a standard deviation of 0.2207907 representing 22%. This result implied that there is a wide variation in audit committee compliance to code of corporate governance among non-financial firms in Nigeria. The maximum of 100% showed that some firms comply fully with the code, while, minimum of 0% indicated non-compliance. Table 3 also shows that Board Control (BC) has a mean of 0.658479, standard deviation of 0.1262531 representing 66% and 12% respectively. This implied a wide variation among the firms. firm size and leverage and audit firm size has mean of 17.41656, 0.5983427 and 0.672093 respectively.

Table 4: Correlation Matrix of the Variables

	EQ	BRMC	RKAP	RKCL	AUC	BC	FS	LEV	AFS
EQ	1.0000								

BRMC	0.1251***	1.0000						
	0.0094							
RKAP	0.1491***	0.0024	1.0000					
	0.0019	0.960						
RKCL	-0.1633***	-0.0895	0.0401	1.0000				
	0.0007	0.0636	0.4065					
AUC	0.0543	-0.0633	-0.0109	0.2872***	1.0000			
	0.2611	0.1900	0.8217	0.0000				
BC	0.0318	0.1044**	-0.0241	-0.0321	-0.0482	1.0000		
	0.5110	0.0304	0.6180	0.5062	0.3184			
FS	0.1750***	-0.0775	0.3475***	0.0591	-0.0271	-0.0127	1.0000	
	0.0003	0.1087	0.0000	0.2213	0.5750	0.7933		
LEV	-0.1482***	0.0466	-0.0063	-0.0461	-0.0043	0.0222	-0.0626	1.0000
	0.0021	0.3347	0.8962	0.3399	0.9290	0.6462	0.195	
AFS	0.1143**	0.0666	0.0740	0.2278***	0.2131***	0.0750	0.1753***	-0.1062**
	1.0000							
	0.0177	0.1680	0.1257	0.0000	0.0000	0.1203	0.0003	0.0277

Note: ** = 5% sig, and *** 1% sig

Source: Author's computation from annual report of the companies suing stata.

Table 4 shows how the explain variable relates with explanatory variables, as well as how the explanatory variables relate among themselves The sign of the correlation coefficient specifies the direction of the relationship (negative or positive).Correlation coefficients in table 4 reveal that there are no high correlation among the variables, since the lowest coefficient is 0.0024 between RKAP and BRMC and the highest is 0.3475, between FS and RKAP this is in line with the suggestion of (Gujarati & Porter, 2009), that all variables with less than 0.70 correlation coefficients are not highly correlated and therefore considered safe for inclusion in the same regression model.

Table.5 Summary of Regression Results

EQ	Coef.	Std. Err.	Z	P>z
BRMC	0.1077666	0.0273378	3.94	0.000

RKAP	0.0001921	0.0000515	3.73	0.000
RKCL	-0.1812802	0.0371268	-4.88	0.000
AUC	0.0214295	0.0318535	0.67	0.501
BC	0.0117024	0.0510196	0.23	0.819
BRMCBC	-0.070666	0.0225166	-3.14	0.002
RKAPBC	-0.0001639	0.0000527	-3.11	0.002
RKCLBC	0.0679528	0.0184304	3.69	0.000
AUCBC	-0.0242327	0.0119404	-2.03	0.042
FS	0.0095314	0.0032129	2.97	0.003
LEV	-0.0025264	0.0007937	-3.18	0.001
AFS	0.0342989	0.0142984	2.40	0.016
CON	-0.008159	0.0735321	-0.11	0.912
Statistic	coefficient	p- value		
Wald Chi2	90.10	0.0000		
VIF Mean	1.10			
Hetest	921.86	0.0000		

Source: Authors' computation of outcome of the data collected

Table 5, shows the Feasible Generalized Least Squares regression results of the study, which was necessitated from the outcome of the robustness tests conducted. To check for the presence of multicollinearity among the variables of the study, the Variance Inflation Factor (VIF) test was

Conducted the highest is 1.19 which does not exceed the stipulated limit of 10, hence, there is absence of multicollinearity as suggested by Hair et al. (2014) and Shrestha (2020). Hence, the presence of heteroskedasticity for the model of the study was tested using the modified Wald test for groupwise heteroskedasticity in fixed effect regression mode the result was significant indicating the presence of heteroskedasticity. Fixed and random effect regression was also conducted and to suggest a suitable model for the study, the hausman specification test selected random effect with a p-value of 0.5622. In a bit to further verify if there is a significant difference between the random effect and the ordinary least square regression (OLS), lagrangian multiplier test found a p.value of 0.0000 which suggest that there

is a significance difference between the OLS and the random as such the random is selected but since there is the presence of heteroskedasticity, Feasible Generalized Least Squares (FGLS) was adopted to correct it. The result from table 4 shows that the model is fitted as evidence by the wald statistic of 90.10 which is significant at 1% level of significant from the p.value 0.0000.

Table 5, results show that BRMC was perfectly moderated by BC with a negative significant impact on EQ as shown by the coefficient of -0.070666 and p.value of 0.002. This result is in deviance with hypotheses Ho2 which state that board control has no significant moderating impact on the relationship between BRMC and EQ. hence the null hypothesis is rejected. This finding implied that the more the interaction between BRMC and BC the lower the real earnings management practice by mangers. The findings align with the findings of Kemboi (2020) used board size to moderate the relationship between risk committee and financial performance, and Ahmed and Manab (2016) examine the moderating effect of board equity ownership in the relationship between enterprise risk management and financial performance. The findings also agree with the pustulation of agency theory.

RKAP was also perfectly moderated by BC with a negative significant impact on EQ as shown by the coefficient of 0.0001921 and a P.value of 0.000 which was significant at 1%. This result is nonconformity with hypotheses Ho3 which state that board control has no significant moderating impact on the relationship between RKAP and EQ. hence the null hypothesis is rejected. This finding implied that the more the interaction between RKAP and BC the lower the real earnings management practice by mangers. This finding concurs with Yami et al. (2023) who found that board quality significantly moderates the relationship between female directors and earnings management.

The moderating effect of BC on the association of RKCL and EQ shows a partial moderation with a coefficient of 0.0679528 and a P. value of 0.000 which is significant at 1%. This result is in contrast with Ho4 which state that board control has no significant moderating impact on the relationship between RKCL and EQ. Thus, the null hypothesis is rejected. These findings imply that the interaction between BC and RKCL increase real earnings manipulation on like the impact of RKCL alone. There is dearth of empirical evidence on the on the moderating effect of board control on risk culture and earnings quality. though, other scholars

such as Ahmed and Manab (2016) found that board equity ownership favorably moderate the relationship of enterprise risk management framework adoption on performance.

The interaction of AUC and BC on earnings quality show a perfect moderation effect, with a coefficient of -0.0242327 and a P. Value of 0.042 which is significant at 5%. This result provides satisfactory evidence to dismissed the null hypothesis Ho5 which states that board control has no significant moderating moderate impact on relationship between AUC and BC, thus Hypothesis is rejected. The finding is consistent with the study of Usaini and Hooy (2023) found that CEO significantly moderate the relationship between audit committee and earnings management and Shatnawi et al. (2019) who recorded that Enterprise risk management moderate the relationship between audit committee and corporate performance.

CONCLUSION

This study examines the moderating impact of board control (BC) on risk management and earnings quality of listed non-financial firms in Nigeria for ten (10) years 2013 to 2022. In line with the findings of the study, it is concluded that:

- i. Board control significantly improves the impact of risk management in enhancing quality reporting. Board control improve the monitoring function of risk management committee on the board there by mitigating real earnings manipulation activity in non- financial firms in Nigeria.
- ii. Board control also significantly moderate the risk appetite of managers by reducing the level of risk taken that can expose managers to manipulate earnings in other to present a favorable report among the listed non-financial firms in Nigeria.
- iii. Board control interaction with risk culture significantly motivates managers to manipulate earnings there by mitigate earnings quality.
- iv. Board control interaction with audit committee significantly enhance the monitoring activities of the audit committee hence, improve the quality of the reported earnings of non-financial firms listed on the Nigeria exchange group.

RECOMMENDATIONS

Based on the conclusions of the study the following recommendations are made:

- i. Shareholders should maintain higher number of non-executive/independent directors against executive directors it improves earnings quality also the board of directors should maintain the size of the board risk committee; the board risk committee should not be less than 48% of the total board. This can effectively constrain real earnings management.
- ii. Shareholders should continue to maintain the proportion of the non-executive plus independence exceeding the executive directors in other continue to checkmate risk appetite of top managers, thereby discouraged managers propensity to manipulate earnings, thus, increase earnings quality.
- iii. The study recommended that a well-articulated and structured risk culture should be put in place by non-financial firms' shareholder and directors as it minimizes earnings management. Risk culture reduce earnings management without any board control.
- iv. Shareholders of non-financial firms in Nigeria, should continue to stick to the requirement of Nigeria corporate governance code regarding the constitution of the board of director, by having more non-executive and independent directors against executive director as it enhances audit committee effectiveness and increase earnings quality.

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