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Audit Committee, Audit Quality and Financial Statement Fraud Mitigation in Listed Nigerian Oil and Gas Companies

Sylvester Onyekachi ADEMU*[1], A.A. Zik-Rullahi[2], Kamaluddeen F.A. Ibrahim[3]

[1, 2 & 3] *Department of Accounting; University of Abuja, Nigeria*
sylvester.ademu@uniabuja.edu.ng

ABSTRACT

This study examines 'Audit committee, audit quality, and financial statement fraud mitigation in listed Nigerian oil and gas companies'. The moderating variable which are the Big Four audit firms are used as proxy for audit quality. The study employed ex-post facto research design. The population of the study represents also the sample size which is all the nine (9) oil and gas companies listed on the floor of Nigerian Exchange Group (NGX) as at December, 2024, resulting to census sampling techniques. The scope was from 2020 to 2024 (5 years) arising from the COVID-19 pandemic effects on various sectors and industries. Secondary data were obtained from annual reports and accounts of the listed oil and gas companies. The obtained data were run with the aid of STATA version 14. Moderating Regression Analysis (MRA) was employed as a tool of analysis due the presence of the moderating variable (BIG4). The statistical results reveal that the appointment of BIG 4 firms: Fairly moderates the effect of audit committee meeting frequency on financial statement fraud(FINSFRUD)mitigation; Does moderate positively on the nexus between audit committee independence and FINSFRUD mitigation in listed Nigerian oil and gas firms; Does not moderate the nexus between audit committee's financial expertise and FINSFRUD mitigation, but rather revealed insignificant negative moderation; Significantly and negatively moderates the nexus between audit committee tenure and FINSFRUD mitigation; Moderates negatively and insignificantly on the nexus between audit committee size and FINSFRUD mitigation; Is of significant negative moderation on how the audit committee gender diversity influence FINSFRUD mitigation. Based on these findings, the study recommends that the oil and gas companies should enhance their audit committee qualities so as to strengthen their impact on the FINSFRUD mitigation, but still retain the appointment of BIG4 as it may lead to joint audit for high efficacy.

Key words: *Audit committee, audit quality, financial statement fraud mitigation, Big four firms, M-Score.*

1.0 Introduction

1.1 Background to the Study

Audit committees enhance investor confidence by ensuring strong corporate governance (Manafa, 2024). Their role includes monitoring financial statement integrity, assessing business risks, overseeing risk management, and ensuring compliance (Audit Committee approval reference, 2024).

Financial statement fraud is a global concern, with auditors playing a key role in detecting and preventing it, especially in developing countries like Nigeria, where weak regulations enable fraud (Yousefi Nejad, Sarwar Khan, & Othman, 2024). Such fraud threatens financial market integrity, investor confidence, and economic stability (Bii & Kinuthia, 2024; Jaswadi et al., 2022). Financial statements must therefore be presented with integrity, and any deviation may indicate fraud (Darwis et al., 2022).

Audit quality moderates the relationship between the audit committee, auditor independence, and financial statement quality. A high-quality audit enhances the positive impact of these factors, improving error detection and ensuring more reliable financial statements (Dwi & Rahayu, 2024).

The M-Score, a forensic accounting tool, can be useful for both detecting and preventing financial statement fraud (Purwiyanti & Laksito (2022). Owing to this, financial statement fraud in this study will be measured using the Beneish M-Score formula.

This study concentrates on the oil and gas companies listed on Nigeria exchange group as at the time of this study due to the peculiarity of their activities and availability of data. Their total was nine.

1.2 Statement of the Problems

The moderating role of audit quality, particularly from companies audited by Big Four (BIG4) firms, on the nexus between audit committees, audit independence, and financial statement quality has not been thoroughly examined (Dwi & Rahayu, 2024; AL-Qatamin & Salleh, 2020; Masmoudi, 2024).

one of the immerging areas that requires more 'contribution to knowledge' is the inclusion of moderating variable (Allie et al., 2024; Fwadzi, 2024; Hakim et al., 2024; Irom et al., 2023; Masmoudi, 2024; Mardessi, 2023; Ningsih & Reskino, 2023) especially where the initial results do not meet up with a priori expectation. The moderating variables among others that the aforementioned scholars used are: audit committee (Allie et al., 2024; Hakim et al., 2024), Institutional ownership (Fwadzi, 2024; Mardessi, 2023), Audit committee expertise (Irom et al., 2023), International Financial Reporting Standards, IFRS (Khan et al., 2023), Company size (Ningsih & Reskino, 2023), Audit Quality (Masmoudi, 2024).

The moderating role of audit quality, particularly from firms audited by Big Four firms, on the nexus between audit committee characteristics, and financial statement fraud mitigation especially in Nigerian oil and gas companies has not been exhaustively studied. Since this area still experiences some level of diversity and material paucity, it has aroused the interest for this study. On the bases of the above, this study opts to employ audit quality as a moderating variable using the BIG4 as measurement variable.

1.3 Objectives of the Study

The main objective of this study is to investigate the nexus between audit committee qualities and financial statement fraud mitigation in listed Nigerian oil and gas companies. The specific objectives are to:

i. Investigate the effect of audit committee meeting frequency on financial statement fraud mitigation in listed Nigerian oil and gas companies;

ii. Examine the impact of audit committee independence on financial statement fraud mitigation in listed Nigerian oil and gas companies;

iii. Assess the extent of nexus between audit committee's financial expertise and financial statement fraud mitigation in listed Nigerian oil and gas companies;

iv. Determine the extent of nexus between audit committee tenure and financial statement fraud mitigation in listed Nigerian oil and gas companies;

v. Examine the extent to which audit committee size affect financial statement fraud mitigation in listed Nigerian oil and gas companies;

vi. Evaluate the influence of audit committee gender diversity on financial statement fraud mitigation in listed Nigerian oil and gas companies;

1.5 Significance of the study

This research benefits various stakeholders: practitioners such as forensic accountants, policy analysts, investors, government, researchers and policy makers. **Forensic Accountants**: Experts, including forensic auditors, can use the M-Score as a forensic accounting tool to detect and prevent fraudulent activities in organizations. **Policy Analysts** can use the findings to support decision-making and policy creation. **Investors** can assess company legitimacy, helping existing shareholders decide whether to retain or sell their shares and guiding potential investors in their decisions. **The Government** may use insights to amend regulatory provisions and enhance tax compliance. **Academics** can leverage the study for scholarly work, fraud detection research, and future studies in accounting.

1.6 Plan of the study

The study follows an institutionally approved five-section structure whereby section one takes care one introduction. This covers research problem, objectives, questions, significance, scope, and organization of the study.

Section two is on Literature Review and Hypotheses. It explores conceptual framework, theoretical and empirical reviews, gaps in literature, and hypotheses formulation.

Section three does justice to Methodology. This discusses research design, population, sampling techniques, data collection methods, analysis techniques, and variable definitions.

The forth section dwells on Data Analysis and Findings. This includes descriptive statistics, correlation, regression, hypothesis testing, model evaluation, findings discussion, and policy implications.

The fifth section which is the last caps it up. This considers conclusion and recommendations. It summarizes the key findings, contributions to knowledge, study limitations, and suggestions for future research.

2.0 Literature Review and Hypotheses Formulation

2.1.1 Financial Statement Fraud

Financial statement fraud involves the omission, misstatement, or manipulation of financial data to deceive users as stated by Association of Certified Fraud Examiners (ACFE, 2024). It is a strategy used by executives or representatives to conceal a company's true financial status and inflate profits (Fauzi & Horri, 2024). Such intentional errors misrepresent financial information, preventing accurate disclosure (Allie et al., 2024; Anshor & Witono, 2024).

2.1.2 Audit Committee

The Sarbanes-Oxley (SOX) Act mandates that an audit committee be formed by a company's board of directors, consisting of independent members, with at least one financial expert. S.O.X. aims to protect shareholders and the public from accounting fraud by enhancing the accuracy of corporate disclosures. The Sarbanes-Oxley (SOX) Act was driven by major financial scandals like Enron and WorldCom. It established compliance deadlines and regulatory requirements to enhance corporate accountability. Raza et al. (2023) align with this by defining the audit committee as a body formed by and accountable to the Board of Commissioners, assisting in its duties and functions.

2.1.3 Effect of ACMFREQ on financial statement fraud

According to the Companies and Allied Matters Act (CAMA, 2020), audit committees must meet at least quarterly to uphold good corporate governance. The revised clause suggests a minimum of four meetings per year, with no more than four months between meetings. The frequency of these meetings is crucial in strengthening financial oversight and reducing the risk of financial statement fraud (Thi et al., 2023).

Frequent audit committee meetings enhance financial oversight by ensuring that potential red flags are quickly identified, investigated, and resolved. This proactive approach deters fraud by increasing the likelihood of detection. Regular meetings also promote a culture of accountability and transparency within organizations (Aronmwan & Emife, 2022; Purwiyanti & Laksito, 2022; Mardessi, 2021). Based on the above, the following null hypothesis was tested for assertion:

H_{O1}: Audit Committee Meeting Frequency does not have any significant effect on FINSFRUDM in listed Nigerian oil and gas companies.

2.1.4 Audit Committee Independence and FINSFRUDM

Audit committee independence is crucial in combating financial statement fraud. Independent members, free from conflicts of interest, objectively assess financial practices and challenge management decisions. Their presence reduces the risk of collusion between management and auditors, strengthening the committee's role in preventing fraudulent financial reporting (Fwadzi, 2024; Bii & Kinuthia, 2024; Masmoudi, 2021). Based on these empirical claims, the study proposes the following null hypothesis for testing.

H_{O2}: Audit committee independence does not have any significant impact on FINSFRUDM in listed Nigerian oil and gas companies**.**

2.1.5 Nexus between Audit Committee Financial Expertise and FINSFRUDM

Audit Committee Financial Expertise refers to the number of audit committee members with an accounting or finance background. It signifies the competency of individuals possessing relevant qualifications to perform financial oversight roles (Yawuri et al., 2024; Ehigie & Isenmilia, 2022).

The concept has been classified into broad and narrow definitions, with the broad view encompassing a wider range of financial expertise (Abernathy et al., 2014). Recent scholars define it as the percentage of audit committee members with financial expertise, measured by the ratio of experts to total committee members (Özer & Merter, 2023; Azam & Wang, 2021).

Prior research highlights financial expertise as a key factor in audit committee effectiveness (Kristilestari & Andesto, 2023; Abubakar et al., 2021; Ngo & Le, 2021). Based on this literature, the following hypothesis is proposed.

H_{o3}: Audit Committee Financial Expertise does not have any significant nexus with FINSFRUDM in listed Nigerian oil and gas companies**.**

2.1.6 Nexus between Audit committee tenure and FINSFRUDM in listed Nigerian oil and gas companies

Audit committee tenure refers to the number of uninterrupted years a specific auditor or audit firm is engaged with a client (Raza et al., 2023). The duration of this engagement can influence audit quality, with prolonged tenure potentially compromising auditor independence due to excessive familiarity (Darwis et al., 2022).

Researchers measure tenure using a dummy variable, assigning a value of '1' if at least one audit committee member has three or more years of experience and '0' otherwise (Özer & Merter, 2023; Damayanti & Triyanto, 2020). Extended tenure may lead to reduced objectivity in reviewing internal and external audits, increasing the risk of bias (Ekundayo & Ilori, n.d.). Based on these findings, the following hypothesis is proposed for empirical testing.

H_{O4}: Audit committee tenure does not have any significant nexus with FINSFRUDM in listed Nigerian oil and gas companies.

2.1.7 Audit Committee Size and FINSFRUDM

Audit committee size refers to the total number of members appointed by governing bodies (Sani et al., 2023; Olagunju et al., 2022). According to the listing rules of the New York Stock Exchange (NYSE) and National Association of Securities Dealers Automated Quotations (NASDAQ), an audit committee must have at least three directors, with most committees comprising three to five members. Additionally, all members must be independent and possess financial literacy.

According to CAMA 2020, the audit committee of a public company should consist of five members—three shareholders and two non-executive directors—with at least one member belonging to a professional accounting body in Nigeria. Section 359(6) of CAMA mandates a maximum of six members, equally divided between shareholders and directors (Ogunsuyi & Ogundele, 2022). A larger audit committee improves oversight and enhances FINSFRUDM (Sani et al., 2023; Olagunju et al., 2022).

Studies show that audit committee size and meeting frequency positively correlate with financial statement fraud risk (FSR), whereas financial expertise and gender diversity reduce FSR (Ibrahim, et al., 2025; Alqatamin & Alqatamin, 2024; Nyamumbo, 2024; Purwiyanti & Laksito, 2022). Based on these findings, a null hypothesis was formulated for testing.

H_{O5}: Audit committee size does not significantly affect FINSFRUDM in listed Nigerian oil and gas companies.

2.1.8 Audit committee gender diversity and FINSFRUDM in listed Nigerian oil and gas companies:

Gender diversity in audit committees refers to the inclusion of both male and female members, contributing to a broader range of perspectives, expertise, and decision-making styles (Bii & Kinuthia, 2024; Swartz & Firer, 2023). A diverse audit committee enhances financial oversight, strengthens fraud prevention, and promotes accountability in organizations (Alkebsee et al., 2021). In listed companies, particularly in sectors like oil and gas, greater gender diversity can deter fraudulent financial reporting by fostering ethical decision-making and improved governance (Chijoke-Mgbame et al., 2020; Fwadzi,2024).

Research suggests that women generally demonstrate stronger ethical decision-making and risk aversion, reducing the likelihood of fraudulent practices (Kaituko et al., 2023). Additionally, companies with greater gender diversity tend to cultivate transparent and accountable cultures, further minimizing financial fraud (Bii & Kinuthia, 2024). Gender diversity in audit committees is often measured as the ratio of female to male members, a method supported by multiple studies (Swartz & Firer, 2023; Fwadzi, 2024; Meah et al., 2021). These findings form the basis for further hypothesis testing:

H_{O6}: Audit committee gender diversity does not have any significant influence on FINSFRUDM in listed Nigerian oil and gas companies.

2.2 Audit Quality

AL-Qatamin and Salleh (2020) conducted an investigation on 'Audit Quality: A Literature Overview and Research Synthesis'. The study reviewed past research on audit quality from years 1981 to 2020, using keywords related to definitions, processes, inputs, evidence, and influencing factors. It found no universal definition of audit quality, as definitions vary among authors. The authors developed an audit quality framework and summarized key indicators, noting that both local and international jurisdictions shape practice. Indicators, such as professional skepticism, are vital for assessing and enhancing audit quality.

It is therefore worthy of note that professional skepticism as mentioned is more pronounced with external auditors and not with internal auditors and/or audit committees.

2.2.1 The Moderating Effect of Audit Quality

With regards to the moderating effect of audit quality proxied by Big4, the following hypotheses were further formulated:

Ho_7: The appointment of BIG4 firms does not moderate the effect of audit committee meeting frequency on FINSFRUDM in listed Nigerian oil and gas companies.

Ho_8: The appointment of BIG 4 firms does not impact audit committee independence on FINSFRUDM in listed Nigerian oil and gas firms

Ho_9: The appointment of BIG 4 firms does not moderate the nexus between audit committee's financial expertise and FINSFRUDM in listed Nigerian oil and gas firms

Ho_{10}: The appointment of BIG 4 firms does not moderate the nexus between audit committee tenure and FINSFRUDM in listed Nigerian oil and gas firms

Ho_{11}: The appointment of BIG 4 firms does not moderate the effect of the between audit committee size and FINSFRUDM in listed Nigerian oil and gas firms

Ho_{12}: The appointment of BIG 4 firms does not moderate how the audit committee gender diversity influence FINSFRUDM in listed Nigerian oil and gas firms

2.3 Gaps in the Literature

Based on the review of the literature on audit committee characteristics and FINSFRUDM, the following gaps can be identified:

The study addresses a gap in research on how audit committee characteristics affect fraud mitigation in listed Nigerian oil and gas firms, an industry with unique reporting and regulatory features. It examines factors such as meeting frequency, independence, financial expertise, tenure, size, and diversity, noting that prior studies' findings (Dwi & Rahayu, 2024; Nyamumbo, 2024; Alqatamin & Alqatamin, 2024; Allie et al., 2024; Fwadzi, 2024; Hakim et al., 2024; Masmoudi, 2024; Mardessi, 2023; Ningsih & Reskino, 2023 Irom et al., 2023; (Bii & Kinuthia, 2023; AL-Qatamin & Salleh, 2020) are mixed and mostly from other contexts. Using Big Four auditor appointment as a moderating variable, the study employs descriptive statistics, correlation, multiple regression, multicollinearity checks, and model fitness tests to provide empirical evidence within Nigeria's regulatory environment.

2.4 Theoretical Review

A crucial part of the literature review is the examination of relevant theories. It is essential to identify and discuss appropriate theories that align with the study. The following theories (Agency Theory, Stewardship theory, Broken Trust theory) are reviewed accordingly:

2.4.1 Agency Theory

Agency theory, first introduced by Stephen Ross and Barry Mitnick (1975) and later expanded by Jensen & Meckling (1976), explains the nexus between a principal (e.g., shareholders) and an agent (e.g., executives). It highlights the agency problem, which arises when the agent, acting on behalf of the principal, pursues personal interests that may conflict with the principal's goals. This theory assumes that agents may act opportunistically, potentially leading to issues such as executive fraud (Davis et al., 1997).

A key limitation of agency theory is its overly simplistic assumption that shareholders and managers are rational actors with clear objectives. It also overlooks the influence of other stakeholders, such as employees and customers, who can significantly impact organizational performance.

2.4.2 Stewardship theory

Stewardship theory is based on psychology, views corporate executives as trustworthy stewards who prioritize stockholders' interests over personal gain (Donaldson & Davis 1991; Sundaramurthy & Lewis 2003). Unlike agency theory, it assumes executives act in the best interests of shareholders, allowing the board to focus on empowerment rather than control. The theory emphasizes alignment between executives and stockholders.

A key weakness of Stewardship Theory is its inability to account for the complex behavior of executives, particularly whether they may break trust and engage in fraud.

2.4.3 Broken Trust theory

The Broken Trust Theory, introduced by Albrecht et al. (2004), explains corporate executive fraud by integrating Agency Theory and Stewardship Theory with the Fraud Triangle concept. It highlights that both theories involve a transfer of trust from shareholders to executives, which is broken when fraud occurs.

However, the theory has two main limitations: -It assumes that Agency and Stewardship theories can explain fraud in both fraudulent and non-fraudulent companies, despite limited evidence supporting this claim. It aligns well with the Pressure and Opportunity aspects of the Fraud triangle but lacks a clear explanation of how executives rationalize their fraudulent behavior.

2.4 Theoretical Framework

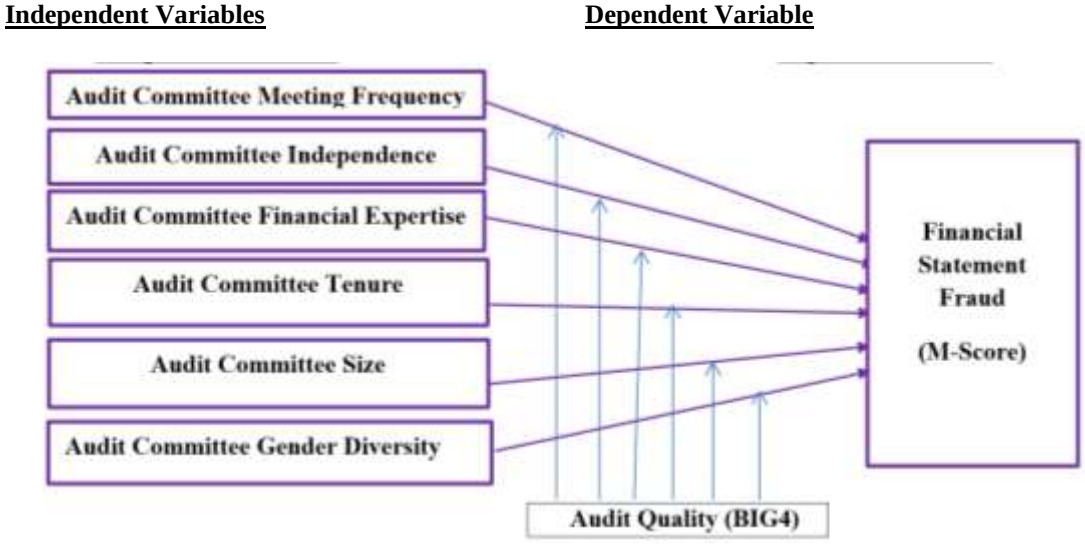
Considering the fact that the agency theory highlights the agency problem, which arises when the agent, acting on behalf of the principal, pursues personal interests that may conflict with the principal's goals, whereas stewardship theory assumes that executives act in the best interests of shareholders, allowing the board to focus on empowerment rather than control, the theory emphasizes alignment between executives and stockholders.

Broken Trust theory highlights that both theories above involve a transfer of trust from shareholders to executives, which is broken when fraud occurs. On bases of the above premises, the theory which underpins this study is trust broken theory.

2.5 Conceptual Model:

A conceptual model illustrates the expected nexus between the autonomous and dependent surrogates. The conceptual model for this study is based on the variables shown in Figure 2.5.1:

Figure 2.5.1 Conceptual Model of the Study



Source: Adapted Model from the Studies of Dwi and Rahayu (2024);Masmoudi (2021); Atieno (2017).

The above does describe the interactions between the independent variables and the dependent variable, Financial Statement Fraud (FINSFRUD) substituted as MSCORE as surrogate for financial statements fraud mitigation. The independent variables are the six (6) surrogates by the left hand sides of the above conceptual model, whereas the single variable (Financial Statement Fraud) at the right hand side represents the dependent variable. The measurements of the independent and dependable variables are as explained in the many works by academics.

It is worthy of note that whereas Dwi and Rahayu (2024) examined two (2) variables with a moderator (audit quality), Atieno (2017)'s study assessed five (5) variables, this study investigated additional one (1) autonomous variable making it six (6) independent variables. Whereas Atieno (2017) scope in terms of number of years is three (3) years (2013-2015), this study investigated five years (2020-2024).

3.0 METHODOLOGY

3.1 Research Design

This study does employ ex-post facto research design. This is on the grounds that the said data collected for the respective variables are already available on the firms' annual reports and accounts.

3.2 Population of the study

The population of this study comprises of the nine (9) listed oil and gas companies on NGX 31st December, 2024.

3.2.1 Sample Size and Sampling Techniques

The sample size of nine (9) companies which is also the population was fully utilized because the entire population is small in size (<30).

Table 3:1 Population of NGX listed Oil and Gas companies in Nigeria

S/N	Company	Ticker	Year listed	Year incorporated
1	Aradel Holdings Plc.	ARADEL	Oct.14, 2024	March 25, 1992
2	Capital Oil Plc.	CAPOIL	-	Aug.29, 1985
3	Conoil Plc.	CONOIL	-	June 30, 1970
4	Eterna Plc.	ETERNA	-	Jan.13, 1989
5	Japaul Gold & Ventures Plc.	JAPAUL GOLD	Aug.10, 2005	June 29, 1994
6	MRS Oil Nigeria Plc.	MRS	-	Aug.12, 1969
7	Oando Plc.	OANDO	Feb.24, 1992	Aug.25, 1969
8	Seplat Energy Plc.	SEPLAT	-	June 17, 2009
9	Totalenergies Marketing Plc.	TOTAL	-	Jan.6, 1956

Source: NGX (2024). https://ngxgroup.com/exchange/trade/equities/listed-companies/

3.3 Method of Data Collection

The study utilized secondary data sources for data collection. The data were obtained from twelve monthly reports of the listed O&G companies, NGX, and NBS, covering a five-year period from 2020 to 2024 (five years) arising from the COVID-19 pandemic effects on various sectors and industries. And 2024 is the latest audited annual reports and accounts as at the time of this study. The use of secondary sources was deemed appropriate since the necessary data were already available in the annual reports and financial statements of the examined firms. Additionally, this approach aligned with the ex-post-facto research design employed in the study.

3.4 Techniques of Data Analysis

This study employed Moderating Regression Analysis (MRA) and a variety of statistical techniques to comprehensively analyze the data. Moderating Regression Analysis (MRA) is an analysis model when the research has a moderating variable in addition to the independent variable and the dependent variable (Pasar, Di, Efek, & Bei, 2010) in Dwi and Rahayu (2024).

Descriptive statistical methods were utilized to summarize key characteristics of the dataset, including measures such as the minimum and maximum values, mean, standard deviation, skewness, and kurtosis, which provide insights into the distribution and variability of the data. Furthermore, a correlation matrix was applied to examine the relationships between variables and identify potential associations.

For inferential analysis, multiple regression techniques were employed to assess the impact of independent variables on the dependent variable, enabling a deeper understanding of underlying patterns. Additionally, tests for multicollinearity were conducted using the variance inflation

factor (V.I.F.) to ensure that predictor variables were not highly correlated, thereby improving the reliability of the regression results. All statistical analyses were performed using STATA version 14.0, ensuring accuracy and efficiency in data processing.

The Moderating Regression Analysis (MRA) equation in this study is as stated under 3.5 (Model Specification) below:

3.5 Model Specification

This study adapted some authors originally models stated below:

1. Atieno(2017):

$Yit=\alpha it+b1X1+b2X2+b3X3+b4X4+b5X5+$ uit……. (i)

2. Dwi and Rahayu (2024)

$QFS=\alpha+\beta1AC+\beta2AI+\beta3AC*AQ+\beta4AI*AQ+e$…… (ii)

3. Modified in form of Masmoudi (2021) in order to suit this study's variables and data as follows:

4. $FINSFRUDit=\alpha i+\beta_1ACMFREQ+\beta_2ACINDEP+\beta_3ACOFEX+\beta_4ATENUR+\beta_5AUDSIZ+\beta_6AGEDIV+\beta_7Big4*ACMFREQ+\beta_8Big4*ACINDEP+\beta_9Big4*ACOFEX+\beta_{10}Big4*ATENUR+\beta_{11}Big4*AUDSIZ+\beta_{12}Big4*AGEDIV+u_{it}$……..…….... (iv)

Where:

FINSFRUD= Financial Statement Fraud Mitigation; ACMFREQ= Audit Committee Meeting Frequency

ACINDEP= Audit Committee Independence; ACOFEX= Audit Committee Financial Expertise

ATENUR= Audit Committee Tenure; AUDSIZ= Audit Committee Size

α_{it} = constant; b1……b7 = coefficients; U_{it} = error term

3.6 Definition and Measurement of Variables

3.6.1 Operational Definition of Variables and Measurement

S/N	Variable	Definition	Measurement	Authors and Date	Apriori expectation
1	Audit Committee Meetings Frequency (ACMFREQ)	Frequency of audit committee meetings in twelve months.	Number of meetings for one year	(Altassa, 2023; Al-Jalahm, 2022).	+
2	Audit Committee Independence (ACINDEP)	Fellows are independent if their terms as a board participant do not go beyond five years, they are not ex-workers of their firms or connected to high-ranking managements, they are not professionals, solicitors, or financial consultants, & they are not involved in any reciprocal interlocks	The ratio of independent (non-executive) directors in the audit committee to total committee members. Percentage of independent directors on the audit committee.	(Shamsuddin & Alshahri, 2022; Azam & Wang (2021)	+
3	Audit Committee Financial expertise (ACOFEX)	Percents of member of audit committee with accounting and Finance background. -	Number of audit committee members who are experts in accounting and finance /Aggregate number of audit committee memberships	(Yawuri et al., 2024; Irom et al., 2023; Özer & Merter, 2023; Azam and Wang, 2021)	+ -
4	Audit Committee Tenure (ATENUR)	Number of uninterrupted years the clientele engaged a specific audit organization.	Dummy variables 1 for three and above years and ‘0’ if not.	(Özer & Merter, 2023; Raza et al., 2023; Damayanti & Triyanto, 2020)	+ -
5	Audit Committee Size (AUDSIZ)	Aggregate numbers of participants in the auditing committee	Number of audit committee members	(Ibrahim, et al., 2025; Altassa, 2023; Al-Jalahm, 2022).	+ -

S/N	Variable	Definition	Measurement	Authors and Date	Apriori expectation
6	Audit committee gender diversity (AGEDIV)	Gender composition of the Audit Committee	The Ratio of the aggregate of female colleagues to male committee members.	Fwadzi (2024); Swartz and Firer (2023); Field and Keys (2021).	+ -
7.	Audit Quality	K.A.P.Big Four,1,0, if not K.A.P. Big Four: •Ernsti and Young (E.Y.) •Deloittei Touche Tohmatsu •Price Waterhouse Coopers (P.W.C.) • K.P.M.G. Peat Marwick	Audit Quality = 1 is assigned, if the company is audited by Public Accounting firms (KAP) Big Four, if not is 0 (Dummy Variables)	(Dwi & Rahayu, 2024); Nejad et al., 2024. (Altass,2023); Elmashtawy, et al., 2023; Mardessi,2021)	+
8	**<u>Dependent Variable:</u>** Financial Statement Fraud (FINSFRUD) Mitigation	Beneish M-Score Model	Measured using Sales Growth Index (SGI), Days in Sales Receivable Index (DSRI),Asset Quality Index (A.Q.I.), Depreciation Index (DI), Gross Margin-Index (G.M.I.), Leverage Index (L.I.), Total Accrual to Total Asset (T.A.T.A.) and Sales, General and Admin Expenditures Index (S.G.A.I.). For M-values > -1.78, the figure of 1 is apportioned (identified manipulator).For M-value < -1.78 the figure of 0 is assigned (identified non-manipulator).	Hakim et al. (2024); Adoboe-Mensah et al. (2023); Boni et al.(2023); Ngerebo-A & Osita (2023)	+

Source: Variable Definitions by Various Scholars

3.7 Justification for choice Techniques

This study utilizes Moderating Regression Analysis (MRA) with multiple regression analysis techniques, including descriptive statistics, correlation matrix, multiple regression, and Variable Inflation Factor (VIF) for multicollinearity testing. Multiple Linear Regression (MLR) is used to predict an outcome based on multiple explanatory variables. Unlike simple regression (OLS), which uses only one explanatory variable and has limitations in drawing comprehensive conclusions, MLR incorporates multiple variables to provide a more robust analysis of how independent variables influence the dependent variable.

4.0 DATA PRESENTATION AND ANALYSIS

4.1 Descriptive Statistics of the Variables

The table 4:1 showcases the descriptive statistics of both the dependent and independent variables in this study work.

Table 4.1.1: Descriptive Statistics

Variables	Obs	Min	Maxi	Mean	Std. Dev.	Skewness	Kurtosis
MSCORE	45	0.00	1.00	0.69	0.47	-0.84	-1.35
ACMFREQ	45	0.00	6.00	3.47	1.75	-1.16	0.40
ACIDEP	45	0.00	1.00	0.29	0.46	0.96	-1.12
ACOFEX	45	0.00	1.00	0.20	0.19	3.37	13.23
ATENUR	45	0.00	1.00	0.82	0.39	-1.74	1.09
AUDSIZ	45	0.00	8.00	4.89	2.04	-1.36	1.59
AGEDIV	45	0.00	0.67	0.16	0.17	1.10	1.46

Table 4.1.2: Descriptive Statistics Result with Moderator:

Variable	Obs	Min	Max	Mean	Std. Dev.	Skewness	Kurtosis
MSCORE	45	0.00	1.00	0.68	-0.84	-0.82	1.67
ACMFREQBIG4	45	0.00	6.00	2.66	-1.16	-0.23	1.43
ACIDEPBIG4	45	0.00	1.00	0.28	0.96	0.93	1.87
ACOFEXBIG4	45	0.00	1.00	0.15	3.37	2.92	12.66
ATENURBIG4	45	0.00	1.00	0.82	-1.74	-1.69	3.84
AUDSIZBIG4	45	0.00	8.00	3.64	-1.36	-0.59	1.57
AGEDIVBIG4	45	0.00	0.67	0.15	1.10	1.06	4.17

Source: Results from STATA 14.0 (2025).

4.2 Comparative Analysis of Table 4.1.1 (Descriptive Statistics) and Table 4.1.2 (Descriptive Statistics with Moderator - Big 4 Auditor Effect):

4.2.1 Mean Comparisons (Big 4 Effect on Audit Committee Characteristics)

MSCORE: Without Big 4: Mean = 0.69, With Big 4: Mean = 0.68. These imply a negligible decrease, suggesting that the presence of a Big 4 auditor does not significantly change the average FINSFRUDM.

ACMFREQ (ACMFREQ): Without Big 4: Mean = 3.47. With Big 4: Mean = 2.66. This implies that the average number of meetings decreases under Big 4 audits, indicating that Big 4 firms may require fewer meetings to ensure audit quality.

ACOFEX (Audit Committee Financial Expertise): Without Big 4: Mean = 0.20. With Big 4: Mean = 0.15. This implies that the presence of a Big 4 auditor corresponds with lower average financial expertise in the audit committee. This may suggest that Big 4 firms provide sufficient audit quality, reducing the reliance on in-house expertise.

AUDSIZ (Audit Committee Size): Without Big 4: Mean = 4.89. With Big 4: Mean = 3.64. This implies that the audit committee size decreases when a Big 4 auditor is involved, possibly implying that companies audited by Big 4 firms maintain smaller but more efficient audit committees.

Standard Deviation (Variability of Audit Committee Characteristics). Higher Standard Deviations in the original dataset suggest more variability in Audit Committee Characteristics. With Big 4 Moderation, most variables show reduced standard deviations, indicating greater uniformity in governance practices when a Big 4 auditor is present.

Skewness (Symmetry of Data Distribution). ACOFEX (Without Big 4=**3.37;** With Big 4=2.92) remains highly positively skewed, indicating that most companies have low audit committee financial expertise.

ATENUR (Without Big 4 was -1.74; With Big 4 is -1.69) remains highly negatively skewed, implying that most firms have longer auditor tenures. **AUDSIZ (**Without Big 4 was -1.36; Without Big 4 is -0.59) shows reduced skewness, indicating a more balanced distribution of audit committee size under Big 4 audits.

Kurtosis (Peakedness of Distribution)

ACOFEX: Without BIG4=13.23; with BIG4=12.66, denoting **v**ery high kurtosis in both cases, suggests extreme values and a concentrated distribution. **ATENUR** (Without BIG4=1.09; with BIG4=3.84), suggesting Increased kurtosis under Big 4, indicating a more concentrated distribution of auditor tenure. **AGEDIV** (Without BIG4=1.46; with BIG4= 4.17): Higher kurtosis under Big 4, suggesting that most firms have similar levels of audit committee gender diversity in this subset.

4.2 Correlation Matrix

Table 4.2.1: Correlation Matrix

Variable	Mscore	Acmfreq	Acidep	acofex	atenur	Audsiz	Agediv
Mscore	1.0000						
Acmfreq	-0.0960	1.0000					
Acidep	0.4283	0.0547	1.0000				
acofex	0.0809	0.4848	0.2051	1.0000			
atenur	-0.1869	0.5276	0.2964	0.1466	1.0000		

Variable	**Mscore**	**Acmfreq**	**Acidep**	**acofex**	**atenur**	**Audsiz**	**Agediv**
Audsiz	-0.2040	0.5497	-0.0379	0.1331	0.3207	1.0000	
Agediv	-0.0697	0.3714	0.4330	0.2264	0.0609	0.1695	1.0000

Table 4.2.2: Relationships with Audit Quality:

VARIABLE	Mscore	acmfreq*big 4	acidep*big4	acofex*big4	atenur*big 4	audsiz*big4	agediv*big4
Mscore	1.0000						
acmfreq*big 4	0.2949	1.0000					
acidep*big4	0.4283	0.2786	1.0000				
acofex*big4	0.2819	0.6224	0.3112	1.0000			
atenur*big4	-0.1869	0.2499	0.2964	0.1014	1.0000		
audsiz*big4	0.3127	0.7686	0.2592	0.3765	0.1293	1.0000	
agediv*big4	-0.0697	0.4374	0.4330	0.2652	0.0609	0.2568	1.0000

Source: STATA Version 14 Results (2025).

The first table (Table 4.2.1: Correlation Matrix) presents correlations between various governance and audit-related variables. The second table (Table 4.2.2: Relationships with Audit Quality) introduces the influence of a moderating factor, "Big4" (suggesting the involvement of a Big 4 audit firm), showing how these relationships change when interacting with Big 4 auditors.

Impact of Big 4 on Correlations:

Audit Committee Frequency (acmfreq): Initial correlation with mscore: -0.0960 (negative), Adjusted for Big 4: 0.2949 (positive). This suggests that when Big 4 auditors are involved, frequent audit committee meetings are associated with higher FINSFRUDM.

Audit Committee Independence (acidep): Unadjusted correlation with mscore: 0.4283. Adjusted correlation remains 0.4283, meaning Big 4 presence does not alter this relationship.

Audit Committee Financial Expertise (acofex): Audit Committee Financial Expertise (acofex): The original correlation with m-score is 0.0809. After the moderation by Big 4, this increases to 0.2819, indicating that financial expertise in the audit committee has a stronger positive impact on audit quality when a Big 4 firm conducts the audit. Similarly, the correlation between acofex and acmfreq rises from 0.4848 to 0.6224 under Big 4 audits, suggesting that these firms place greater emphasis on financial expertise in conjunction with frequent audit committee meetings.

Audit Tenure (atenur): Correlation with mscore remains -0.1869 in both cases, implying no change due to Big 4 involvement. This is because there is no identified discrepancy.

Audit Size (audsiz): Originally, audsiz has a negative correlation with M-score (-0.2040), suggesting larger audit firms might be associated with lower FINSFRUDM. After adjusting for Big 4, this correlation turns positive (0.3127), indicating that when a Big 4 firm is involved, audit size improves audit quality.

Audit committee gender diversity (agediv): No change in correlation with m-score (-0.0697 in both cases), indicating that Big 4 presence does not influence this variable's effect.

From the above, it may summarily be said that:

Big 4 auditors significantly strengthen positive relationships between financial expertise, Audit committee ethnic diversity, audit committee frequency, and FINSFRUDM.

Negative correlations (e.g., audit tenure and audit quality) remain unchanged, indicating that auditor tenure may not be influenced by Big 4 involvement.

Audit size shifts from negative to positive correlation with audit quality, suggesting that larger audits are more effective when conducted by a Big 4 firm.

4.3.Multiple Regression Results

Table: 4.3.1 Multiple Regression Results

MSCORE	**Coeff.**	**Std. Error**	**T-value**	**P-value**	**With Audit Quality**	**Coeff.**	**Std. Error**	**T-value**	**P-value**
ACMFREQ	0.111	0.052	2.117	0.041	**ACMFREQ*BIG4**	0.102	0.0505	2.02	0.050
ACIDEP	0.717	0.153	4.675	0.000	**ACIDEP*BIG4**	0.663	0.1391	4.77	0.000
ACOFEX	-0.213	0.327	-0.653	0.518	**ACOFEX*BIG4**	-0.197	0.3368	-0.59	0.562
ATENUR	-0.747	0.183	-4.090	0.000	**ATENUR*BIG4**	-0.613	0.1475	-4.15	0.000
AUDSIZ	-0.047	0.031	-1.507	0.140	**AUDSIZ*BIG4**	-0.022	0.0316	-0.68	0.500
AGEDIV	-1.268	0.392	-3.233	0.003	**AGEDIV*BIG4**	-1.318	0.3877	-3.40	0.002
(Constant)	1.031	0.156	6.608	0.000	**_cons**	0.959	0.1396	6.87	0.000

Source: STATA Version 14 Results (2025).

The table 4.3 above depicting the results of the nexus between AC and FINSFRUD mitigation reveals that, both the ACMFREQ has significant positive effect on FINSFRUD mitigation. The same positive influence ensues in the relationship between ACIDEP and FINSFRUD mitigation**.**

As for the ACOFEX, it reveals insignificant negative effect on FINSFRUD mitigation. ATENUR depicts significant negative impact on the FINSFRUD mitigation. AUDSIZ shows insignificant negative nexus with FINSFRUD mitigation. AGEDIV proves to be of significant negative influence on FINSFRUD mitigation.

The influence of Frequent Audit Committee Meetings on audit quality weakens slightly when the auditor is a Big 4 firm. As for Audit Committee Independence, it remains a strong predictor of audit quality, but the effect weakens slightly under Big 4 firms.

Audit Committee Financial Expertise does not significantly impact MSCORE in either model.

Longer audit tenure negatively affects audit quality, but Big 4 firms slightly mitigate this negative effect. More so, Audit Committee Size does not have a meaningful impact on MSCORE, and its influence diminishes further under Big 4 firms.

Audit Committee Gender Diversity reduces MSCORE, meaning it is associated with better audit quality. This effect is even stronger under Big 4 firms. As for Audit Committee Ethnic Diversity, it improves audit quality in general, but this effect disappears when the auditor is a Big 4 firm.

The overall audit quality slightly improves under Big 4 firms as seen in the decrease in the constant term.

ACMFREQ without BIG4 has coefficient of 0.111, with P-value = 0.041 (significant). However, with BIG4, it reveals coefficient of 0.102, P-value=0.050 (borderline significant), Change in Effect takes place which results to slight decrease in effect with BIG4.

ACIDEP without BIG4 shows coefficient of 0.717, P-value= 0.000 (highly significant), whereas with BIG4, it shows coefficient of 0.663 with P-value= 0.000 (highly significant), which the resultant figure leads to slight decrease in effect with BIG4

ACOFEX initially displays coefficient value of -0.213 with p-value of 0.518 (not significant), but with Big4 it shows coefficient value of -0.197. The significant value is 0.562 (not significant), connoting that there is no meaningful effect change.

ATENUR originally produced coefficient of -0.747 alongside p-value of 0.000 (highly significant). Its interaction with big4 gave birth to coefficient value of -0.613 0.000 (highly significant) which led to slight decrease in negative effect with big4.

AUDSIZ displayed result originally with coefficient value of -0.047 and p-value of 0.140 (not significant). Its interaction with Big4 metamorphosed to coefficient of -0.022. Whereas p-value is 0.500, is not significant. This Effect weakens significantly with BIG4.

AGEDIV indicated that the coefficient without interaction with Big4 was -1.268; p-value shows 0.003 (significant). As for appointment of Big4, the outcome reveals coefficient of -1.318, and p-value of 0.002 (significant) implying stronger negative effects with BIG4.

4.4 Test of Hypotheses

Table 4.4.1: Test of Hypotheses

Hypotheses	**Coeff.**	**P-value**	**Decision**
Ho1: ACMFREQ does not have any significant effect on FINSFRUDM in listed Nigerian O & G firms.	0.11	0.04	Reject
Ho2: Audit committee independence does not have any significant impact on FINSFRUDM in listed Nigerian oil and gas firms.	0.72	0.00	Reject

Hypotheses	**Coeff.**	**P-value**	**Decision**
H_O3: Audit committee Financial expertise does not have any significant nexus with FINSFRUDM in listed Nigerian O & G firms.	-0.21	0.52	Accept
H_O4: Audit committee tenure does not have any significant nexus on FINSFRUDM in listed Nigerian O & G firms.	-0.75	0.00	Reject
Ho5: Audit committee size does not significantly affect FINSFRUDM in listed O & G firms.	-0.05	0.14	Accept
H_O6: Audit committee gender diversity does not have any significant influence on FINSFRUDM in listed Nigerian O & G firms.	0.32	0.01	Reject

4.5. Test of Null Hypotheses of the Moderating Effect of Audit Quality

Ho_7: The appointment of BIG 4 firms does not moderate the effect of ACMFREQ on FINSFRUDM in listed Nigerian O & G firms.	0.102	0.050	Don/t reject
Ho_8: The appointment of BIG 4 firms does not impact audit committee independence on financial statement O & G firms	0.663	0.000	Reject
Ho_9: The appointment of BIG 4 firms does not moderate the nexus between audit committee's financial expertise and FINSFRUDM in listed O & G firms	-0.197	0.562	Reject
Ho_{10}: The appointment of BIG 4 firms does not moderate the nexus between audit committee tenure and FINSFRUDM in listed Nigerian O & G firms	-0.613	0.000	Accept
Ho_{11}: The appointment of BIG 4 firms does not moderate the effect of the between audit committee size and FINSFRUDM in listed Nigerian O & G firms	-0.022	0.500	Reject
Ho_{12}: The appointment of BIG 4 firms does not moderate how the audit committee gender diversity influence FINSFRUDM in listed Nigerian O & G	-1.318	0.002	Accept

With regards to the moderating effect of audit quality proxied by Big 4, the following decisions were taken on the hypotheses based on the results of the findings above:

Ho_7: The study failed to reject this hypothesis which states that 'the appointment of BIG 4 firms does not moderate the effect of ACMFREQ on FINSFRUDM in listed Nigerian O & G because it reveals a weak significant positive effect (0.102; 0.050) which value is exactly 5%. .

Ho_8: The study rejected this hypothesis which states that the appointment of BIG 4 firms does not significantly impact audit committee independence on FINSFRUDM in listed Nigerian O & G (0.663; 0.000). This is because the results of the findings reveal that it has significant positive impact on FINSFRUDM.

Ho_9: The study accepted this hypothesis which states that the appointment of BIG 4 firms does not moderate the nexus between audit committee's financial expertise and FINSFRUDM in listed Nigerian O & G (-0.197; 0.562). This is because the results of the findings reveal that it has insignificant negative impact on FINSFRUDM.

Ho_{10}: The study rejected this hypothesis which states that the appointment of BIG 4 firms does not moderate the nexus between audit committee tenure and FINSFRUDM in listed Nigerian oil and gas firms (-0.613; 0.000). This is because the results of the findings reveal that it has significant positive impact on FINSFRUDM.

Ho_{11}: The study accepted this hypothesis which states that the appointment of BIG 4 firms does not moderate the effect of the between audit committee size and FINSFRUDM in listed Nigerian oil and gas firms (-0.022; 0.500). This is because the results of the findings reveal that it has insignificant negative impact on FINSFRUDM.

Ho_{12}: The study rejected this hypothesis which states that the appointment of BIG 4 firms does not moderate how the audit committee gender diversity influence FINSFRUDM in listed Nigerian oil and gas firms (-1.318; 0.002). This is because the results of the findings reveal that it has significant positive impact on FINSFRUDM.

4.5 Model Summary

Table 4.5.1: Model Summary

Model	**R**	**R^2**	**Adj.R^2**	**P>F**	Durbin-Watson	Root MSE
1	0.748	0.559	0.476	0.000	1.540	0.33899

Table 4.5.2: With Audit Quality

Model	**R**	**R^2**	**Adj.R^2**	**P>F**	Durbin-Watson	Root MSE
1	0.748	0.5676	0.4858	0.000	1.540	0.33573

Source: STATA Version 14 Results (2025).

Comparative Analysis of Table 4.5.1 (Model Summary without Big4) and Table 4.5.2 (Model Summary with Big 4):

1. Model Fit (R & R^2)

Table 4.5.1 (Without Audit Quality): The model explains 55.9% of the variance in the dependent variable. Table 4.5.2 (With Audit Quality): The model explains 56.76% of the variance when audit quality is included.

Comparison: The inclusion of audit quality slightly improves model fit (Without Audit Quality=0.559; With Audit Quality= 0.5676), suggesting that audit quality contributes modestly to explaining the dependent variable.

2. Adjusted R^2 (Model Generalizability)

Comparison: The slight increase in adjusted r-squared (Without Audit Quality=0.476; With Audit Quality= 0.4858) indicates that the improvement in model fit is not just due to adding another predictor but actually enhances model accuracy.

1. **Model Significance (P > F):** Both models have **P > F = 0.000**, meaning the overall models are statistically significant. This indicates that the independent variables collectively explain a significant proportion of the variance in the dependent variable, regardless of audit quality

2. **Root MSE:** Root MSE drops from 0.33899 to 0.33573**,** showing that including audit quality slightly improves prediction accuracy.

Table 4.6.1: Multicollinearity Test Results

Variable	VIF	Tolerance (1/VIF)	Audit Quality (BIG4)	VIF	Tolerance (1/VIF)
ACMFREQ	3.24	0.31	ACMFREQ*BIG4	4.80	0.208
ATENUR	1.91	0.52	AUDSIZ*BIG4	3.06	0.327
ACIDEP	1.89	0.53	AGEDIV*BIG4	2.21	0.453
AGEDIV	1.75	0.57	ACOFEX*BIG4	1.93	0.518
AUDSIZ	1.51	0.66	AGEDIV*BIG4	1.74	0.574
ACOFEX	1.51	0.66	ACIDEP*BIG4	1.59	0.629
Mean VIF	1.87		MEAN VIF	2.37	

Source: STATA Version 14 Results (2025).

The table 4.6.1 above discloses the overall outcomes of the VIF grades of the six (6) independent variables (3.24, 1.91, 1.89, 1.75, 1.51, 1.51, and 1.30) in conjunction with their tolerance (computed with 1/V.I.F.) values. The average value of V.I.F. equals 1.87 which is not up to 2.0, but all greater than the threshold of 0.1.

As for this nexus with Audit Quality 4.8, 3.06, 2.21, 1.93, 1.74, 1.59, 1.27 with the average value, 2.37, while all the tolerance values are above 0.1. This infers that there are no multicollinearity problems. Multicollinearity occurs when the multiple linear regression analysis includes several variables that are significantly correlated not only with the dependent variable but also to each other. Multicollinearity makes some of the significant variables under study to be statistically insignificant (Ibrahim & Onyekachi, 2021; Shrestha, 2020).

The introduction of BIG4 interaction terms generally increased VIF values across variables. ACMFREQ saw the largest increase in VIF (1.56), indicating that the interaction term with BIG4 introduced notable collinearity. AUDSIZ also showed a significant jump (1.55 in VIF), suggesting a strong interaction effect with BIG4.

AGEDIV showed little to no change, meaning their interaction with BIG4 does not introduce significant collinearity. Tolerance values for these variables also remained relatively stable.

There is also a notable increase in Mean VIF from 1.87 to 2.37. The mean VIF increased by 0.50 points, signaling that overall multicollinearity has risen but remains below the critical threshold (VIF < 10). This suggests that while the BIG4 interaction terms introduce more multicollinearity, it is still at an acceptable level for most regression analyses.

4.7. Normality test

Table: 4.7.1 Normality test Results

With Audit Quality	**Obs**	**Z**	**Prob>Z**
MSCORE	45	0.665	0.2531
ACMFREQ*BIG4	45	3.278	0.5200
ACIDEP*BIG4	45	1.648	0.0749
ACOFEX*BIG4	45	5.735	0.1000
ATENUR*BIG4	45	3.750	0.9000
AUDSIZ*BIG4	45	3.280	0.5200
AGEDIV*BIG4	45	3.380	0.3600

Source: STATA Version 14 Results (2025).

The table 4.7.1, normality test results, it implies that all the study variables have p-values greater than 0.05, meaning that we should not reject any null hypothesis of normality. That is to that all eight variables this study are approximately normally distributed.

5.0 Summary, Conclusion and Recommendations

5.1. Summary

This study considers 'Effect of Audit Committee Characteristics on the FINSFRUDM with Audit Quality as a Moderating Variable'. The dependent variable of the study is FINSFRUDM proxied by MSCORE. The independent variables are: ACMFREQ, ACINDEP, ACOFEX, ATENUR, AUDSIZ, AGEDIV, and the moderator, BIG4.

The independent variables are: ACMFREQ, ACINDEP, ACOFEX, ATENUR, AUDSIZ, AGEDIV, and moderator, Audit Quality (BIG4).

The appointment of BIG 4 weakly moderates positively the effect of ACMFREQ on FINSFRUDM in listed Nigerian oil and gas firms.

The appointment of BIG 4 firms significantly and positively impacts ACINDEP on FINSFRUDM in listed Nigerian oil and gas firms.

The appointment of BIG 4 firms does not moderate the nexus between ACOFEX and FINSFRUDM in listed Nigerian oil and gas firms.

The appointment of BIG 4 firms moderates the nexus between ATENUR and financial statement fraud mitigation in listed Nigerian oil and gas firms.

The appointment of BIG 4 firms does not moderate the effect of the between audit committee

size and FINSFRUDM in listed Nigerian oil and gas firms.

The appointment of BIG 4 firms moderates the audit committee gender diversity influence FINSFRUDM in listed Nigerian oil and gas firms.

5.2 Conclusion

In respect to the results of the findings above, it can be deduced that the good number of variables evidenced that the appointment of the BIG 4 audit firms (audit quality) has ability to moderate the effect of audit committee characteristics on the FINSFRUDM**.** Notwithstanding, the initial results on effect of audit committee characteristics on the FINSFRUDM still reveal that any corporation with vibrant audit committee characteristics does not strictly require the appointment of the BIG 4 to detect and mitigate financial statement fraud in the organization.

5.3 Recommendations

The statistical results reveal that the appointment of BIG 4 firms:

i. The oil and gas firm companies should encourage the appointment of BIG4 firms since it fairly moderates the effect of audit committee meeting frequency on financial statement fraud (FINSFRUD) mitigation;

ii. The management should continually be employing the BIG4 insofar it does moderate positively on the nexus between audit committee independence and FINSFRUD mitigation;

iii. These companies should enhance the trainings of their audit committee since the appointment of BIG 4 firms does not moderate the nexus between audit committee's financial expertise and FINSFRUD mitigation, but rather revealed insignificant negative moderation;

iv. The audit committee tenure has to be critically looked into and not considered to be too lengthy since the appointment of BIG4 firms significantly and negatively moderates the nexus between audit committee tenure and FINSFRUD mitigation;

v. Since appointment of BIG4 firms moderates negatively and insignificantly on the nexus between audit committee size and FINSFRUD mitigation, this size should be reviewed in agreement with the CAMA 2020;

vi. Audit committee gender diversity is good, but the qualities need a review because owing to the fact that appointment of BIG4 shows significant negative moderation on how it influences FINSFRUD mitigation;

Overall, the study recommends that the oil and companies should enhance their audit committee qualities so as to strengthen their impact on the FINSFRUD mitigation, but still retain the appointment of BIG4 as it may lead to joint audit for higher efficacy**.**

5.4 Limitation

This study focused on oil and gas firms listed on NGX. The periodic scope is 2020 to 2024. M-score was used as proxy to measure FINSFRUDM.

5.5 Suggestion for Future studies

Since this study focused on oil and gas firms listed on NGX, which is one sector, future research should still expand on this area. Further studies should attempt cross sectional and sectorial dimension. The periodic scope is 2020 to 2024. This is five years. Further studies should find justifications in order to make their scope up to decade for the purpose of generalization and robustness. M-SCORE was used as proxy to measure FINSFRUDM. Other techniques should be attempted by prospected investigation.

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