

BOARD INDEPENDENCE AND AUDIT QUALITY: THE MODERATING EFFECT OF INFORMATION TECHNOLOGY ON LISTED DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

The persistent financial scandals in the Nigerian banking sector and globally have raised concerns about the effectiveness of corporate governance mechanisms. While corporate governance is essential in curbing financial misconduct, its impact is significantly enhanced by high audit quality and IT-driven processes. This study investigates the relationship between corporate governance and audit quality, with a particular focus on the moderating role of board IT expertise. Using a panel data approach, the study analyzed data from listed deposit money banks in Nigeria between 2014 and 2023. Key corporate governance variables considered include board independence, board audit committee, and board IT expertise. Findings reveal that board independence, and board audit committees show no significant impact on audit quality. The study further establishes that board IT expertise significantly moderates the relationship between board independence with audit quality. These findings underscore the importance of integrating IT expertise in corporate governance structures to strengthen financial reporting and oversight functions. The study recommends that deposit money banks enhance their board composition by incorporating IT-skilled professionals to improve audit quality and overall governance effectiveness. Policymakers and regulators should revise existing guidelines to mandate that at least one independent non-executive director on the board possesses IT expertise. Failure to comply should be considered a regulatory infraction, ensuring stricter enforcement of IT governance practices within board structures to enhance transparency, accountability, and financial stability in the banking sector.

1. INTRODUCTION

Listed deposit money banks (DMBs) in Nigeria play a critical role in the country's economic development, serving as the backbone of financial intermediation for economic growth (Magaji, Abdulkarim, Okolo and Ibrahim (2020). However, the persistent corporate financial scandals in the Nigerian banking sector and around the world has in no doubt changed the perception of various stakeholders on the effective status of corporate governance in these institutions and raised great concern around sustainability. Enang, Etim, Ekpo and Akpan (2022) revealed that the recurring corporate scandal in the Nigerian banking system and the consequences thereafter on the Nation's economy has paved way for public discuss and scholarly debates and passion on governance structures of banks in Nigeria. As a result, the effectiveness of corporate governance mechanisms within these institutions and their influence on audit quality remain significant areas of interest for both academicians and practitioners. Corporate governance (CG) is regarded as essential ingredients for the success of corporate

entities as well as performance of the overall economy of a nation (Alhababsah 2018). Nigerian banks have been facing challenges over the years due to issues associated with quality and reliability of financial reporting of the concerned banks. For instance, in the year 2013, Intercontinental Bank merged with Access Bank, incorporating all its assets. Afribank was sold to Mainstreet Bank in 2011, which was later acquired by Skye Bank in 2014. Skye Bank itself was taken over by Polaris Bank in 2016.

Similarly, Access Bank and Diamond Bank merged under a new brand on April 1, 2019, highlighting serious concerns about their financial reporting quality, despite previously being issued a clean bill of financial health. The issue was further underscored in 2015 when the Financial Reporting Council of Nigeria suspended the CEO, Chairman, and two other directors of Stanbic IBTC Bank for filing false financial statements during 2013-2014, signaling a stronger regulatory focus on financial reporting integrity.

In addition, the collapse of Bank PHB, Spring Bank Plc, Oceanic Bank Plc, Intercontinental Bank Plc, African Petroleum Plc, Lever Brothers, and Cadbury Plc—was traced to deep-rooted financial reporting issues and managerial misconduct. Investigations revealed widespread deficiencies in financial statement preparation and intentional misrepresentations by executives. This led to the dismissal of eight bank CEOs by the Governor of the Central Bank of Nigeria and raised concerns about the effectiveness of financial monitoring and managerial oversight in the banking sector and effective status of corporate governance as well. (Aroyewun and Gwamna, 2022).

Information technology has generally revolutionized the banking services in Nigeria and around the world, it has transformed the traditional processes and paved way for new method for enhanced efficiency, transparency, and risk management. In the view of Otonne and Ige (2023) Financial industry is undergoing ever-fast development and witnessed innovation with financial technology playing the leading role owing to the rapid development in information technology.

Therefore, the impact of IT expertise on audit quality has been primarily examined in developed nations, where technological infrastructure and regulatory environments differ significantly from that of Nigeria. This raises questions about the generalization of existing findings and the need for localized research. Moreover, the interaction between IT expertise and corporate governance is often treated as a given, without sufficient empirical evidence to support its moderating role.

The moderating effect of IT expertise on the relationship between corporate governance and audit quality has received limited scholarly attention, particularly in developing economies. Several studies have examined the potential impact of IT tools on audit processes, such as Artificial Intelligence (AI), Enterprise Resource Planning (ERP) systems, and audit analytics. The work of Aroyewun and Gwamna (2022) centered on the effect of audit quality and financial reporting quality of listed deposit money banks in Nigeria. Muawanah and Gunadi (2018) focused on information technology adoption, corporate governance and performance of banks.

2. HYPOTHESIS DEVELOPMENT

the rapid increase in internet users in Nigeria has resulted to unintended consequences, notably the rise of cybercrime, which remains a significant challenge in the country. Cybercrime accounted for over 43% of recorded fraud cases in 2016 (Umar, 2019). Between July and September 2020 alone, Nigerian banks lost N3.5 billion to internet fraud in just one quarter (Business Day, 2024). Similarly, approximately N1.9 billion is lost annually to cybercrime, with losses reaching N15 billion in 2018 (Patience, 2021). Alarming, Nigeria's Consumer Awareness and Financial Enlightenment Initiative (CAFEi) projected that cybercrime-related losses could reach \$6 trillion by 2030, both within and beyond Nigeria (The Guardian Newspaper, 2022).

Despite these staggering figures, gaps in audit quality may be exacerbating the menace, as weak or ineffective auditing fails to detect and address vulnerabilities in banks' cybersecurity frameworks. Poor audit oversight can lead to inadequate risk assessments, weak internal controls, and ineffective fraud detection mechanisms, thereby enabling cybercriminals to exploit systemic weaknesses. Strengthening audit quality is essential to improving cybersecurity governance, ensuring compliance with regulatory frameworks, and mitigating financial losses caused by cyber fraud.

From the regulatory perspective, the Central Bank of Nigeria (CBN) Codes (2023) mandate the inclusion of at least two Non-Executive Directors (NEDs) on the boards of banks, with one of them designated as an Independent Non-Executive Director (INED) possessing expertise in Information Technology (IT). This policy underscores CBN's recognition of the critical role that technological advancements play in the financial sector and the necessity of integrating IT knowledge within banking governance structures. This research will examine the extent of IT exposure among INEDs on banking boards and evaluate the adequacy of appointing IT-savvy INEDs. By analyzing their influence on decision-making related to technology-driven banking services, the study will assess whether banks are effectively complying with corporate governance policies and how such compliance impacts the financial performance of Nigeria's Deposit Money Banks (DMBs). A crucial dimension of this study is the role of audit quality in reinforcing governance effectiveness. High audit quality ensures transparency, mitigates risks associated with IT-driven financial decisions, and enhances the reliability of board oversight. The presence of IT-competent INEDs, coupled with rigorous audit practices, can strengthen corporate governance by improving risk assessment, regulatory compliance, and strategic IT investments. In contrast, poor audit quality may obscure governance deficiencies, reducing the effectiveness of IT oversight and potentially undermining financial stability.

2.1 Research Questions

- i. How does board independence affect quality of audit of listed DMBs in Nigeria?
- ii. How does board IT expertise affect audit quality of DMBs in Nigeria
- iii. How does Board IT expertise moderate the relationship between board independence and quality of audit of listed DMBs in Nigeria?

3. CONCEPTUAL REVIEW

3.1 Concept of Corporate Governance

The concept of corporate governance, more especially the task of the board of directors, has been generating overwhelming public attention particularly after the collapse of large corporations in the USA, and the 2007/2008 Global Financial Crisis (Oloniluyi, Akode & Osasona, 2023). Corporate governance practice has been rapidly growing worldwide and adopted even by countries with no prior established regulations and this leads to widespread acceptance and adoption of the concept due to its focus on establishing a structured operational framework for organizations (Castrillon, 2021). Ele and Michael, 2024 view corporate governance as an established system with defined rules, procedures, practices and ethics through which corporate entities are governed which is capable of assuring investors and stakeholders of earning good return on their investment. It entails the development of leveled playing ground in the aspect of meeting the needs of company directors, chief executives, senior management officials, creditors, consumer, government and research institutions and other relevant stakeholders (Banda and Mwange, 2023). According to Abdulazeez and Ndibe (2016) is a grasp of the fundamental principles, structures, and mechanisms that direct the relationship between various stakeholders in an entity which involves a set of principles, practices, and processes that guide how entities are directed, controlled, and managed to achieve organizational objectives in the atmosphere of fairness, transparency and accountability. Additionally, the view of Banda and Mwange (2023) see corporate governance as initiative covering all spheres management ranging from action plan to internal processes evaluation of performance to attain desired transparency for the collective achievement of entities goals.

3.2 Board Independence (BI)

Board independence is seen as the situation of having independent directors on the board of an entity. Independence in this circumstance means that directors are free from any conflicts of interest that could compromise their ability to make objective and impartial decisions in the best interest of the corporation and its stakeholders. An independent director is someone who does not perform management duties and does not possess direct interest in the entity he or she supervises (Pichet, 2017). Independent directors are performing higher profile tasks by balancing the interest of the management and that of the shareholders hence they are appointed to the board to express objective views that are not internally oriented to serve interest of the management (Maheshwari, 2020).

The literature suggests that the composition of the board, including the presence of independent directors, plays a pivotal role in mitigating agency problems within banks. Independent directors are seen as instrumental in providing unbiased perspectives and safeguarding the interests of minority shareholders. The presence of a proportionate number of independent directors is often considered a governance best practice to ensure checks and balances.

Independent directors are taken as the ideal epitome of board independence whose absence jeopardizes the objectivity of wealth maximization and safeguard of shareholders' interest and

they are expected to exhibit unbiased perspective to the decision-making process and provide oversight to ensure entities are managed in a more responsible and ethical manner Bakare (2019). Going by the agency theory perspective, independent non-directors are very effective in managing the affairs of entity through monitoring and control as check on excess of corporate executives, thus they represent a check and balance mechanism to enhance board's effectiveness (Adebayo, Olusola & Abiodun, 2013). Independent non-directors are to monitor activities of corporate executives for the objective of promoting corporate transparency (Afolabi, Bosede, Ruth & Kehinde, 2017).

3.3 Board Information Technology Expertise (BITEX)

This refers to the collective knowledge, skills, experience and competence related to information technology that members of a company's board of directors possess. In this rapidly evolving technological era, having board members with IT expertise has not only become extremely important but also mandatory as it constitutes regulatory requirement, failure of which is sanctionable, this is in the drive to achieve effective governance. Nwanne (2020) opined that board member qualification and skill do influence financial performance of a corporate entity and concluded that increase in board size can significantly affect the financial performance of the entity under study where such additional member comes along with his/her unique experience and competence.

Board members with advanced IT knowledge are acquainted with the technology trends in the industry and offer advice on strategic initiatives that lead to achievement of advanced technology (Matta, Vijayaraghavan & Cavusoglu, 2019). The presence of IT expertise on the board empowers it to make informed decisions, manage risks effectively, drive innovation, and navigate the complexities of the digital age, ultimately contributing to the long-term success and sustainability of the banking business.

The mandatory requirement for the presence of IT expertise on the boards of banks in Nigeria, as stipulated in the CBN's Code of Corporate Governance (2023) reflects a recognition of the critical role that technology plays in the banking sector. The specific provision, which mandates at least two Non-Executive Directors (NEDs), with one being an Independent Non-Executive Director (INED), possesses requisite knowledge and experience in innovative financial technology, Information Communication Technology (ICT), and/or cybersecurity, underscores the importance of aligning corporate governance with the evolving digital finance.

3.4 Audit Quality

The promotion of good corporate governance in DMBs relies on the accurate and transparent presentation of financial statements by the board of directors to stakeholders, which is fundamentally dependent on the quality of the audit process (Musa, Maihankali, Kubuza and Polycarp, 2021). Audit quality possesses the features of reliability, accuracy, and completeness of financial statements as assessed by auditors. Alhababsah (2018) submitted that audit quality as part of corporate governance system, plays crucial closing existing gap between management who are responsible for the preparation of financial reports and shareholders who are users of the financial reports.

A poor audit report or low audit quality poses a significant threat to the reputation and prospects of the corporate entities involved. It can undermine investor confidence, weaken stakeholder trust, and raise concerns about the reliability of financial statements. Furthermore, inadequate audit quality may lead to regulatory scrutiny, legal consequences, and financial instability, ultimately affecting the long-term sustainability of the organization. Ensuring high audit quality is therefore essential for maintaining transparency, enhancing corporate governance, and safeguarding the credibility of financial reporting. In the submission of Almaqtari, Farahn, Alahdal, Hashim and Ibrahim, (2024) absence of transparency in financial reporting has led to increased investment requirements and regulatory scrutiny, making it more difficult for management and investors to establish effective governance mechanisms which has consequently compelled stakeholders to express concerns on the accuracy and integrity of corporate entity's financial reporting, thus poses doubt on quality of the audit conducted.

Therefore, maintaining audit quality requires strong governance, ethical auditing practices, and rigorous regulatory oversight. External auditors must exercise professional skepticism, thoroughly assess risk, and apply appropriate audit procedures to detect irregularities. Additionally, organizations play a role in audit quality by ensuring transparent communication, providing necessary documentation, and fostering a culture of accountability. Regulatory bodies and audit oversight committees further enhance audit quality by setting standards, conducting inspections, and enforcing disciplinary actions when necessary. Ultimately, high audit quality strengthens financial markets, protects stakeholders, and promotes trust in the integrity of financial reporting.

4. METHODOLOGY

4.1 Research Design

For this study, ex post facto research design was adopted. The reason behind the adoption of this type of research design is because, the data investigated are published data readily available from annual reports, financial statements, and corporate governance reports of listed DMBs in Nigeria from 2014 to 2023.

4.2 Population of the study

Population of this study comprises of all listed deposit money banks in Nigeria. Numerically, population of the listed deposit money banks on the Nigerian Exchange Group was 13 at the end of 2023. The entire population was considered as the it adopts longitudinal panel design on the listed deposit money banks on the Nigerian exchange group over a period of 10 years (2014-2023). The population is strictly based on data availability at the time of data gathering and extraction. Data were collected from the financial statement of all listed deposit money banks to the exclusion of firms with certainty of missing data due to various issues such as delisted firms, nationalized or absorbed firms as well as firms that have ceased operation during the period covered under this study. Samples were drawn from the sample frame based on the available financial statements as well as the availability of financial reporting metrics needed to proxy the research variables.

4.3 Audit Quality Measure

This study adopts the Beaver and Engel (1996) model to measure audit quality. The model estimates accruals with allowances for loan losses. Beaver and Engel's (1996) Model is particularly adopted for studies on financial firms due to the specificity of its components to the components of the financial statements of financial firms. It estimates discretionary portion of loan losses as a set of variables including written off loans, outstanding loans and non-performing loans. Therefore, four models estimated to derive proxies for audit quality are specified as follows:

4.4 Beaver and Engel (1996) Model

$$ALL_{it} = NALL_{it} + DALL_{it} \quad (4.1)$$

$$ALL_{it} = \alpha_0 + \alpha_1 CO_{it} + \alpha_2 LOAN_{it} + \alpha_3 NPA_{it} + \alpha_4 \Delta NPA_{it+1} + \varepsilon_{it} \quad (4.2)$$

Where $\varepsilon_{it} = DALL_{it} + z_{it}$

NALL is therefore estimated by regressing the ALL on the explanatory variables in Eq. (4.1) with the residual eventually taken to be an estimate of DALL with error and hence audit quality of financial firms.

NALL = Allowance for loan losses

ALL = Allowance for loan losses

DALL = discretionary portion of the allowance account

CO = Charge-Offs

LOAN = Loan Outstanding

NPA = Non-Performing Assets

Econometric Models for Testing Hypotheses

To align with the objectives of this study, the model was adapted to suit our hypotheses.

Model for Testing Hypothesis I – Board independence does not significantly affect audit quality of deposit money banks listed on the Nigerian exchange group.

$$AQ = \beta_0 + \beta_1 BI_{it} + \beta_2 FS_{it} + \beta_3 Lev_{it} + \beta_4 MTK_{it} + \varepsilon \quad (4.2)$$

Model for Testing Hypothesis II – Board Information technology Expertise does not significantly affect audit quality of deposit money banks listed on the Nigerian exchange group.

$$AQ = \beta_0 + \beta_1 BITEX_{it} + \beta_2 FS_{it} + \beta_3 Lev_{it} + \beta_4 MTK_{it} + \varepsilon \quad (4.3)$$

Model for Testing Hypothesis IV – Board Information technology Expertise does not significantly moderate the effect of Board Independence on the audit quality of deposit money banks listed on the Nigerian exchange group.

$$AQ = \beta_0 + \beta_1 BI_{it} + \beta_2 BITEX_{it} + \beta_3 Bitex * BI + \beta_4 FS_{it} + \beta_5 Lev_{it} + \beta_6 MTK_{it} + \varepsilon \quad (4.4)$$

Table 1: Definition of Variables

s/n	Variable	Proxy	Type of Variable	Definition/ Measurement	Source
i	Audit Quality	AQ1	Dependent Variable	Equations 3.5	Beaver and Engel
ii	Board Independence	BI	Independent Variable	Number Independent directors scaled by total number of directors	Aslam et al. (2021), Salami et al. (2020)
iv	Market Capitalization of the firm	Mcpt	Control Variable	The market capitalization of the firm in 2006, scaled by average total assets.	Ball, Tyler and Wells (2015)
v	Leverage of the firm	Lev	Control Variable	Leverage, measured as the ratio of the firm's total long-term debt to market value of equity	Ball, Tyler and Wells (2015)
vi	Firm Size	Fsz	Control Variable	Natural log of total assets	Alhababsah, (2019) Jiang, Habib and Zhou (2015)

Source: Author's Synthesis (2025).

4.5 Model Estimation Technique

Basically, the models specified were estimated with Panel Corrected Standard Errors (PCSE) and Pooled Ordinary Least Square Methods depending the on the outcome of diagnostics tests which include Hausman, Serial Correlation, Heteroscedasticity as well as Breusch and Pagan Lagrangian Multiplier tests. All models specified were run using the appropriate estimation technique using stataMP 15 statistical package.

5. RESULTS AND FINDINGS

5.1 Descriptive Statistics

Table 2: Descriptive Analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
ID	119	6.655462	3.703953	1	13
YEARS	119	2018.714	2.831849	2014	2023
AQ	119	-3.43E-16	1.072163	-2.242749	2.060586
BITEX	119	0.6386555	0.5482034	0	2
BI	119	2.344538	1.224309	0	7
FSIZE	119	12.35672	0.4554981	11.19453	13.42254
LEV	118	1.67E+07	1.82E+08	-2.951338	1.97E+09
MKT CAP	113	0.5630771	0.8637449	-0.0328199	7.041521

Source: computed by the researcher using STATA version 16

BITEX is another key variable that quantifies the number of independent non-executive directors (INEDs) on the board who possess IT knowledge or skills. This variable plays a crucial role in evaluating the influence of technological expertise within corporate governance structures.

As a discrete numerical variable, it measures the count of directors who meet the IT expertise criteria. A higher BITEX value may suggest stronger technological governance, which can potentially enhance audit quality. Notably, some banks within the study population incorporated IT expertise into their boards even before the revised regulations mandated at least one IT expert among INEDs.

Board Independence (BI) is also a critical component of the independent variable under study, characterized by its role in ensuring objectivity in the governance and decision-making processes of banks. BI represents the proportion or number of independent non-executive directors (INEDs) on the board relative to the total board size.

As a numerical variable, the highest of any bank's independent director under study for the cut-off period is nine (9). A higher level of board independence enhances oversight, reduces conflicts of interest, and strengthens corporate accountability, thereby contributing to improved financial reporting which has direct impact on audit quality.

BAC refers to the number of directors serving on the audit committee of a bank's board within the study period. It plays a vital role in overseeing financial reporting, internal controls, and compliance with regulatory requirements. BAC quantifies the size of the audit committee, which typically consists of independent and non-executive directors and has maximum of nine (9) within the period of the listed banks under study. A well-structured BAC enhances transparency, improves financial oversight, and strengthens corporate governance, ultimately influencing audit quality and investor confidence.

5.2 Correlation Analysis

Table 3: Correlation Analysis and Variance Inflation Factor

	bite	bitex	bi	bac	fsize	lev	mkt
bite	1						
bitex	0.9549	1					
bi	-0.0077	-0.1055	1				
bac	0.2865	0.2495	0.1871	1			
fsize	-0.1604	-0.1372	0.4907	0.0265	1		
lev	0.1113	0.0799	0.3591	0.0787	0.3181	1	
mkt	-0.3948	-0.3773	0.043	-0.3453	0.041	0.0103	1
VIF	14.33	13.81	1.86	1.44	1.56	1.25	1.33
1/VIF	0.069766	0.072418	0.536631	0.69578	0.641818	0.800495	0.752968

Source: computed by the researcher using STATA version 16

The correlation matrix using the Pearson correlation coefficients as well as the variance inflation factors and tolerance for the predictor variables are presented (see Table 4.2) to check

for possible existence of multi-collinearity. The largest coefficient ($r=0.954$) is between BITE and BITEEX with VIF of 14.33 and 13.81 respectively and tolerance of 0.069 and 0.072.

These variables pose multi-collinearity threat to the model as Field (2009), considers a strong linear relationship among the predictors say, above 0.8 or 0.9 as an indication of multi-collinearity and according to Myers (1990), a value of VIF of above 10 calls for worry of multi-collinearity while the tolerance ($1/VIF$) below 0.2 may be a source of serious collinearity concern as noted by Menard (1995). Consequently, BITE dropped among the independent variable.

5.3 Test of Hypothesis

Table 3: Hypothesis One

aq1	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
Bi	0.087644	0.055597	1.58	0.115	-0.02132	0.196612
fsize	0.4913796	0.283011	1.74	0.083	-0.06331	1.04607
lev	0.0189521	0.028822	0.66	0.511	-0.03754	0.075442
mkt	-0.1493743	0.08265	-1.81	0.071	-0.31136	0.012616
cons	-6.31034	3.390399	-1.86	0.063	-12.9554	0.33472
Rsquare	0.164					
Hausman	Prob>chi2 =	0.9929		chi2	0.25	
BPLM	Prob > chibar2 =	0.0000		Chibar	177.57	
Wild/F	Prob > chi2 =	0.0018		Wild Chi2	17.13	
Het	Prob > chi2 =	0.6388		chi2	0.22	
SC	Prob > F =	0.6346		F	0.238	
Est	RE					

Source: computed by the researcher using STATA version 16

Table 4.3. presents the results for test of hypothesis 3. It equally contains the regression result of audit quality as the dependent variable. The study adopts the residuals from Beaver & Engel models to proxy audit quality since data were collected from firms in the financial service industry. Some diagnostic tests were conducted on the data to enable appropriate choice of model estimation technique for each of the specified models.

The Hausman tests conducted on the data reveal $\chi^2=0.9929$, $p>0.05$. This suggests the adoption of Random effect method for the estimation of the model. This was further confirmed by the Breusch-Pagan Lagrange Multiplier Test ($\text{chibar}^2=177.57$, $p<.01$). Moreso, the presence of heteroscedasticity ($\chi^2=0.638$, $p>0.05$) and serial correlation ($f=0.001$, $P>0.01$) suggests the use of random effect without robustness.

The results support the null hypothesis ($z= 0.08$, $p<0.05$) thereby supporting the proposition that board independence does not significantly affect audit quality of deposit money banks in Nigeria. The positive coefficient suggests an improvement in audit quality due to board independence and the model parameters signals result with model statistics ($f=17.13$, $P<0.01$) with R^2 of 16.40% for the model. Similarly, the models present unsigned significant effects of board independence on audit quality while leverage and market capitalization are positive but have no significant effect on audit quality for DMBs.

Table 4: Hypothesis Two

		Panel-corrected				
aq1	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
bitex	0.6904692	0.240177	2.87	0.0040	0.219731	1.161207
fsize	0.8033442	0.191239	4.2	0.0000	0.428524	1.178165
lev	0.0129619	0.008458	1.53	0.1250	-0.00362	0.02954
mkt	-0.0335404	0.070744	0.47	0.6350	-0.1722	0.105115
cons	-10.44444	2.603343	4.01	0.0000	-15.5469	-5.34199
Rsquare	0.2865					
Hausman	Prob>chi2 =	0.0114			chi2	12.97
Year	Prob > F =	0.0921			F	1.74
BPLM					Chibar	
Wild/F	Prob > chi2	0.0000			Wild Chi2	
Het	Prob>chi2 =	0.0000			chi2	18105.34
SC	Prob > F =	0.7940			F	0.071
Est	PCSE					

Source: computed by the researcher using STATA version 16

Table 4.7 above presents the results for test of hypothesis 5. It contains the regression result of audit quality as the dependent variable. The study adopts the residuals from Beaver & Engel models to proxy audit quality since data were collected from firms in the financial service industry. Some diagnostic tests were conducted on the data to enable appropriate choice of model estimation technique for each of the specified models.

The Hausman tests conducted on the data reveal $\chi^2=0.01$, $p>0.05$. This suggests the adoption of Random effect method for the estimation of the model. This was further confirmed by the Breusch-Pagan Lagrange Multiplier Test (chibar $^2=000.00$, $p<.01$). Moreso, the absence of heteroscedasticity ($\chi^2=0.000$, $p>0.05$) and serial correlation ($f=0.001$, $P>0.01$) suggests the use of random effect without robustness.

The results support the rejection of the null hypothesis ($z= 0.690$, $p<0.05$) thereby supporting the proposition that board IT expertise does not significantly affect the audit quality of deposit money banks in Nigeria. The negative coefficient suggests an improvement in audit quality due to board IT expertise and the model parameters signals good result with model statistics ($f=00.00$, $P<0.01$) with R^2 of 28.65% for the model. Similarly, the models present unsigned significant effects of firm size on audit quality while leverage and market capitalization are positive but have no significant effect on audit quality for DMBs.

Table 5: Hypothesis Three

		Robust				
aq1	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
bitex	-.6355938	0.1550061	-4.1	0.001	-0.97	-0.29786
bi	-0.2037477	0.105053	-1.94	0.076	-0.43264	0.025143
bibitex	0.3659525	0.120849	3.03	0.011	0.102645	0.62926
fsize	2.254933	0.830224	2.72	0.019	0.446031	4.063835
lev	-0.0055657	0.034179	-0.16	0.873	-0.08004	0.068904

mkt	-0.0708706	0.067934	-1.04	0.317	-0.21889	0.077145
years						
Rsquare	0.1759					
Hausman	Prob>chi2 =	0.0161		chi2	15.59	
Year	Prob > F =	0.0042		F	2.96	
BPLM				Chibar		
Wild/F	Prob > F =	0.0048		Wild Chi2	3.36	
Het	Prob>chi2 =	0.0000		chi2	1205.9	
SC	Prob > F =	0.5792		F	0.325	
Est	FE (Year Effect) Robust					

Source: computed by the researcher using STATA version 16

The Hausman test ($p = 0.0161$) suggests that the Fixed Effects (FE) model is preferred over the Random Effects (RE) model, as it rejects the null hypothesis that RE is consistent.

The Breusch-Pagan Lagrange Multiplier (BPLM) test results are not provided explicitly, but since we are using FE, we assume that RE was found unsuitable.

Heteroskedasticity (Het) Test \rightarrow Chi2 = 1205.9, $p = 0.0000$. This indicates the presence of heteroskedasticity (non-constant variance in errors), which means regular standard errors would be unreliable. The model is adjusted with robust standard errors to correct this.

Serial Correlation (SC) (Test $\rightarrow p = 0.5792$). No evidence of serial correlation (autocorrelation), meaning that standard FE estimation is valid in this respect. Wild/F test ($p = 0.0048$, Wild Chi2 = 3.36). This test further confirms the presence of heteroskedasticity, reinforcing the need for robust standard errors. The year effects suggest some fluctuations over time, with 2018 showing a positive but weak effect ($p = 0.072$). However, most other years are not statistically significant.

Later years (2022, 2023) show negative coefficients, implying a declining trend, but they are not statistically significant.

5.6 Model Fit and Justification for Robust Estimation

$R^2 = 0.1759 \rightarrow$ The model explains 17.59% of the variation in the dependent variable (aq1). This suggests a moderate but not strong fit. Year Effects (F-test $p = 0.0042$) \rightarrow Indicates that time has a significant impact on the dependent variable. Use of FE Model with Robust Standard Errors is justified because: Hausman test supports FE over RE. Presence of heteroskedasticity ($p = 0.0000$) requires robust standard errors. No serial correlation means that additional correction for autocorrelation is unnecessary. Heteroskedasticity is a major issue, so robust standard errors were applied. Fixed Effects (FE) with year effects is appropriate, as confirmed by the Hausman test and Year F-test.

6. SUMMARY AND CONCLUSION

Audit quality variations in response to corporate governance, moderated by information technology expertise, is the main objective of this study. Board size was found to significantly

improve audit quality with and without the moderating effect of Information technology expertise. Audit quality is proxied with residuals of loan loss provision. The use of loan loss provisions to measure the proficiency of auditors in constraining earnings management in the financial report explains the level of tolerance of auditors for loan loss provision and hence the quality of audits. The use of loan loss provision to proxy audit quality is consistent with previous research works (see Becker, DeFond, Jiambbalvo & Subramanyam, 1998; Francis, Maydew & Sparks, 1999; Lawrence, Minutti-Meza & Zhang, 2011; Lennox, Wu & Zhang, 2014; Lennox, 2016; Wang, Yuan & Wu, 2017; Singh, Singh, Sultana & Evans 2019) in the subject matter.

The result of this study provides evidence to support that auditors of firms constrain loan loss provision in earnings management due to board size. It noted, in consistence with the studies of Abubakar and Tesleem (2016); Tache, (2022) that audit quality improved for firms due to board size. More so, the result provides evidence to suggest that the behaviour of auditors did not change with respect to tolerance of earnings management due to information technology expertise moderation. No significant effect was noted for board independence, board gender diversity and board audit committee. Board size effect on the audit quality of firms in the financial services industry as equally discovered by Cameran & Perotti, (2018). The study Uwuigbe, Emeni, Uwuigbe, and Maryjane (2016) as well as Ozili and Outa (2018) found no evidence to support that board size improved audit quality of Nigerian banks. The study further establishes that board information technology expertise improves audit quality.

Moreover, the moderation of the relationship between independent variables and audit quality with board information technology expertise indicates that the introduction of information technology expertise bears not significant relevance to the corporate governance except with respect to board independence and board size where both indicated significant moderation of information technology expertise between both variables and audit quality. while studies on information technology expertise is quite rare in literature, the study of Crucean and Hategan (2023) identify the strength of information technology in governance issues and audit quality with submission to the discovery of this study.

This submission explains the proposition of the resource dependency theory that given the availability of resource disposal, be it human or otherwise, the impact is usually felt on specific outcomes. With respect to this study, the resource identified is information technology expertise and it directly impacts audit quality of deposit money banks as well as explain variations in the relationship between corporate governance and financial audit quality.

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