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Assessment of the Impact of Board Characteristics on Forensic Accounting Practices of Listed Deposit Money Banks (DMBs) in Nigeria

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ABSTRACT

Due to economic uncertainty and stakeholders' disillusionment, which has prompted calls for better financial system protection, extensive forensic accounting systems are needed. This study came into force to investigate how board characteristics affect forensic accounting practices in listed Nigerian Deposit Money Banks (DMBs). The longitudinal study included fifteen DMBs listed on the Nigerian Exchange Group as of December 31, 2022. The analysis used audited yearly financial records from 2013 to 2022 of these firms. The data was analysed using descriptive statistics and marginal logistic regression. This research found that board composition and competence positively affect forensic accounting adoption. The influence on board independence was positive but statistically negligible. This shows that board composition and expertise are key to forensic accounting practices implementation. This study concludes that board composition and experience help DMBs adopt forensic accounting practices. It was recommended that DMBs should adopt data analytics and AI. Policymakers should establish real-time information exchange methods, and banks should safeguard whistle-blowers and allow anonymous reporting. These methods are essential for improving forensic accounting, detecting fraud quickly, and protecting financial stability and reputation.

Keywords: Board Characteristics, Board Composition, Board Independence, Board Expertise, Forensic Accounting Practices

JEL Classification: M42, D25

INTRODUCTION

On a global scale, inadequate forensic accounting practices are evident across financial institutions. Despite their pivotal role in economies, DMBs (DMBs) remain vulnerable to financial crimes and fraud, eroding public trust and stability (Ehiedu, 2022). Notable cases like the Enron scandal underscore the limitations of conventional accounting methods in detecting and preventing illicit activities (Adeshina et al., 2020). This deficiency obstructs the efficient collection, analysis, and presentation of forensic evidence, hindering effective investigation and prosecution. The pressing need for comprehensive forensic accounting frameworks is underscored by the potential for economic instability and stakeholder disillusionment, prompting a call for enhanced practices to safeguard financial systems worldwide (Adeshina et al., 2020).

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Despite the increasing interest in forensic accounting, concerns persist regarding fraud in Nigerian DMBs, raising alarm among bank management and regulators. This, Bhat (2023) argued that the eradication of fraud within an organisation could be enhanced through effective internal controls. Regarding this, not having a strong forensic accounting department makes it harder to investigate financial crimes. This is made worse by weak laws that make it harder to prosecute and recover money (Akinadewo & Asaolu, 2020). Insufficient reporting systems and technological infrastructure further complicate forensic evidence collection, analysis, and presentation. These challenges erode stakeholder confidence, impede economic growth, and disrupt stability (Ogbechie & Egbide, 2019; Omoruyi & Osuma, 2021).

Olofinlade (2021) concentrated on examining how forensic audits affected managerial fraud in Nigerian deposit money institutions. The study showed a strong link between using forensic audits and avoiding managerial fraud. Additionally, it was observed that the utilisation of forensic audits contributed to the production of financial statements that accurately represented the financial position of these banks and were easily understandable. Board members with expertise in risk management can adeptly identify and assess potential risks, enabling proactive measures to counter fraud and financial crime.

The implementation of effective corporate governance practices is crucial in the banking sector to ensure openness and accountability. According to Di-Biase and Onorato (2021), the implementation of effective corporate governance practices leads to enhanced investor trust, better alignment with stakeholder interests, and increased stability and efficiency of the financial system. The qualities of a corporation's board of directors, which serves as its highest governing body, can affect its performance (Ahmed et al., 2019). According to Akpokerere and Obonofiemro (2022), the composition, independence, experience, and diversity of the board of DMBs play a vital role in promoting effective corporate governance. Okolie and Uwejeyan (2022) highlight the significance of various factors, including board independence, board size, gender diversity, ownership structure, directors' educational background, and the age ratio between executive and non-executive directors, in relation to corporate performance. The studies conducted by Somathiloke (2018) and Assenga et al. (2018) emphasise the influence of board directors' distinct viewpoints and orientations on the overall performance of organisations.

In addition, getting specialised knowledge helps make forensic accounting methods more useful and improves the overall control environment in Nigerian DMBs (DMBs). The goal of this study is to add to the previous research by looking at how board characteristics like independence, risk management knowledge, and the presence of qualified individuals affect the growth and improvement of forensic accounting processes in banks.

The primary aim of this study was to investigate the impact of board characteristics on the implementation of forensic accounting practices by DMBs that are publicly listed on the Nigerian Stock Exchange. To accomplish this, the study aims to address the following specific objectives: 1) To assess the impact of board composition on the adoption and implementation of Forensic Accounting Practices among Listed DMBs in Nigeria; 2) To examine the impact between board independence and the utilization of Forensic Accounting Practices within Listed DMBs in Nigeria; and 3) To investigate the relationship between board expertise and the integration of Forensic Accounting Practices among Listed DMBs in Nigeria. The study will be conducted on listed DMBs in Nigeria from 2013 to 2022. This period was selected because it coincides with the commencement of the forensic accounting certification program by ICAN (Oyedokun, 2015).

This study holds significant implications for various stakeholders, including bank management, students, the media, government, and academia. Bank management can gain insights into the importance of board characteristics and tailor strategies to enhance forensic accounting practices. Students will better understand the challenges and opportunities in the banking industry, better preparing them for their future careers. The media can employ the study's findings to raise awareness about financial crimes and the crucial role of effective forensic accounting practices. Government authorities can utilize the study's recommendations to strengthen the legal framework and reporting systems. Lastly, academia will benefit from the expanded knowledge base in forensic accounting practices in DMBs.

The subsequent sections of this work are organized as follows: Section Two provides a concise overview of the current body of research and the development of theoretical frameworks. The present study will undertake a comprehensive assessment of previous research, with the aim of identifying any existing gaps in the literature. Hypotheses shall be developed in accordance with the findings of the literature review. Section Three of this study is dedicated to discussing the research methodology employed. This includes a detailed examination of the research design, the target population, the sampling strategies utilized, the method of data collection, and the subsequent analysis of the collected data. Section Four provides a comprehensive statistical overview and analysis of the findings obtained from the analysis. Section Five of the research paper serves as a comprehensive summary of the study's findings, concluding with a set of suggestions based on the results obtained.

LITERATURE REVIEW

This section comprises the review of concepts, theoretical frameworks, empirical studies, and the identification of gaps within the existing literature.

Conceptual Review

This chapter extensively reviews pertinent literature concerning board characteristics and forensic accounting practices. It establishes the theoretical underpinning for the study, emphasizing the significance of these factors in detecting fraudulent activities within listed DMBs in Nigeria.

Forensic Accounting Practices

Forensic accounting involves using auditing, accounting, and investigation methods to find, stop, and look into financial fraud and irregularities in Nigeria's listed DMBs (Association of Certified Chartered Accountants [ACCA], 2018). Ogiriki (2018) says that forensic accounting is a separate field of study that combines accounting knowledge with investigative skills to find and look into cases of financial wrongdoing, help with legal proceedings, and make sure that rules are followed.

These practices include fraud examinations, forensic audits, financial statement analysis, asset tracing, and expert witness testimony. They aim to expose and document financial irregularities such as embezzlement, asset misappropriation, fraudulent financial reporting, money laundering, and other deceptive activities (Bangura et al., 2020). Forensic accountants compile and analyse financial data, assess pertinent documents, conduct interviews, and employ specialized techniques to reconstruct financial transactions and present evidence clearly and concisely.

When it comes to Nigeria, forensic accounting has become very important because regulators and other interested parties are putting more emphasis on openness, accountability, and finding and stopping financial fraud. Mosuro and Martins-Wakwe (2020) stress how important strong risk management, internal controls, and forensic accounting are for protecting the accuracy of financial reporting and improving governance in Nigerian-listed DMBs.

Forensic accounting is very important for making sure that financial data is correct and reliable. This protects everyone's interests and builds trust in DMBs (DMBs) (Sorunke et al., 2018). These practices make substantial contributions to the overall efficacy of corporate governance by mitigating the potential for fraudulent activities, bolstering internal controls, and facilitating the recovery of assets in cases of financial misconduct (Madu-Chimau et al., 2018).

Akinadewo and Akinkoye (2020) assert that institutionalizing a dedicated forensic department is imperative for DMBs in Nigeria to administer forensic accounting practices effectively. While certain DMBs employ forensic accounting techniques within their compliance and internal control departments and equip their personnel with the requisite training to employ such techniques for the attenuation of financial malfeasance, it is noteworthy that anti-fraud regulations will be used to proxy the forensic accounting practices of DMBs listed in Nigeria.

Board Characteristics

In accordance with the findings of Stulz et al. (2021), it is the board of directors that has the duty of supervising the internal control system of a firm and assumes direct responsibility for its comprehensive administration. According to Somathiloke (2018), the fundamental function of the board is to assess and approve managerial choices, while also overseeing the activities of managers and directors. The primary responsibility of the board is to ensure that the company's actions are in line with its strategic goals, thereby increasing the value for stakeholders and mitigating the risk of detrimental management behaviours and practices that may result in failures or conflicts. Similarly, Sani et al. (2019) argue that the board of directors plays a crucial role in setting forth policies and procedures pertaining to the recruitment, termination, and remuneration arrangements of the Chief Executive Officer (CEO), while also offering strategic direction. According to Moses (2019), the board of directors plays a crucial role in exercising oversight over bank operations, setting strategic objectives, and ensuring adherence to legal and regulatory obligations.

The factors of board characteristics, as identified by Daghsni et al. (2016), include board education, independence, meeting frequency, gender diversity, and board size. These factors have a big effect on how well top-level managerial oversight protects the interests of stakeholders and changes how people feel about dishonest behaviour.

Board Composition

The concept of board composition pertains to the organizational structure and configuration of the board, encompassing many components such as the proportion of executive and non-executive directors. The incorporation of autonomous non-executive directors is widely recognized as a crucial element in upholding impartiality and minimizing any conflicts of interest. The empirical findings of Rafinda et al. (2018) and Pucheta-Martnez and Gallego-lvarez (2019) lend support to the notion that the composition of a firm's board of directors can potentially influence both corporate governance mechanisms and financial performance. Moraes et al. (2022), however, opined that gender diversity injects diverse perspectives, skills, and competences, among others to boards, which enhances performance and effectiveness. Jia and Zhang (2013) assert that the estimation of board efficiency frequently relies on the use of board size as a surrogate measure. Nevertheless, according to Adigwe et al. (2016), larger boards may encounter challenges in achieving consensus due to the presence of varied interests and viewpoints among their members. The extant literature consistently indicates a positive correlation between the inclusion of independent directors on corporate boards and enhanced firm performance, as well as a heightened level of accountability.

Board Independence

The independence of the board is the degree at which individuals serving on a board of directors are not influenced by conflicts of interest or excessive pressure, thereby enabling them to make impartial decisions that prioritise the company's well-being and the interests of its stakeholders (Shettima & Dzolkarnaini, 2018). Board independence is a pivotal concept for effective corporate governance, particularly concerning forensic accounting practices within Nigerian listed DMBs. According to Mosuro and Martins-Wakwe (2020), board independence is a fundamental principle emphasising the significance of independent directors who are not engaged in the bank's day-to-day operations and have no substantial financial or personal relationships that could compromise objectivity. Independent directors are expected to exercise impartial judgment, provide constructive challenges to management, and act in the bank's and shareholders' best interests (Adegboegun et al., 2022). Similarly, Ahmed et al. (2019) contend that independent directors enhance transparency, accountability, and effective oversight. Likewise, Almontaser et al. (2021) emphasize that independent directors check and balance management actions, ensuring decisions benefit the bank and its stakeholders. Independent directors are instrumental in implementing and overseeing forensic accounting practices within the bank.

Research by Hossain et al. (2017) underscores the importance of board independence in detecting and addressing financial irregularities. Unencumbered by personal or professional ties within the bank, independent directors are more likely to scrutinize financial statements, question suspicious transactions, and challenge management assumptions (Babatunde & Folorunsho, 2020). They assert that independence facilitates effective oversight of forensic accounting practices, ensuring regulatory compliance and minimizing the risk of financial misconduct.

The Central Bank of Nigeria (CBN), which is a regulatory body in Nigeria, gives Nigerian-listed DMBs guidelines and suggestions on how to make sure their boards are independent. These guidelines and suggestions often say how many or what percentage of independent directors are needed to make sure strong governance and independent oversight.

Board Expertise

Board expertise entails the knowledge, skills, qualifications, and experience that individual board members contribute to decision-making (Benvolio & Ironkwe, 2022). It encompasses a specialised understanding of various areas pertinent to the company's operations, industry, and strategic goals (Di-Biase & Onorato, 2021). Emeka-Nwokeji and Agubata (2019) underscore the significance of board expertise in facilitating efficient governance and decision-making processes within Nigerian listed deposit money institutions.

Sultana et al. (2019) stress that board expertise is vital for effective oversight and strategic roles. Board members with expertise in finance, banking, risk management, accounting, legal matters, and other relevant fields offer valuable insights, guidance, and critical analysis (Farhan et al., 2020). Their expertise enables them to grasp complex financial matters better, assess risks, and make informed decisions aligned with the bank's objectives and regulatory mandates.

Board members with relevant expertise enhance the board's capacity to ask probing questions, challenge management proposals, and contribute to robust discussions (Gambo et al., 2018). Similarly, Hafsat and Jibril (2021) say that expertise helps the board understand financial statements, judge the strength of internal controls, and check how well risk management practises work. Board expertise is crucial concerning forensic accounting practices, which involve detecting, preventing, and investigating financial fraud and misconduct (Hawkar, 2021).

Hossain et al. (2017) underscores the importance of board expertise in detecting and addressing financial irregularities. Board members with accounting and financial expertise play a pivotal role in identifying red flags, comprehending forensic accounting techniques, and ensuring appropriate controls are established to mitigate fraud risks (Sorunke et al., 2018). Their expertise enables them to effectively oversee forensic accounting practices within the bank, ensuring regulatory compliance and minimising the potential for financial misconduct.

Board Characteristics and Forensic Accounting Practices

The relationship between board characteristics and forensic accounting practices is significant in corporate governance and financial fraud prevention. Some research has been done on how the makeup of the board affects how well forensic accounting works, but more research needs to be done to fully understand these relationships. For instance, Albrecht et al. (2018) suggest that boards with more independent directors are likelier to cultivate a culture of integrity and ethical conduct within the organization. Similarly, Rafinda et al. (2018) say that independent directors—those who aren't connected to the company or its management—should keep an eye on things objectively and question questionable financial practices, which makes fraud less likely.

Furthermore, the board's size has been examined with forensic accounting practices. Larger boards may offer diverse perspectives and expertise, potentially enhancing fraud detection and prevention. However, a trade-off between board size and efficiency exists. Smaller boards may possess greater agility and responsiveness to fraud allegations, while larger boards may encounter challenges in reaching consensus and making prompt decisions (Albrecht et al., 2018).

The efficacy of forensic accounting is contingent upon the autonomy of the audit committee, which assumes responsibility for overseeing financial reporting and audit procedures. The autonomous committee is expected to use sound discretion, uphold a robust control framework, and effectively identify instances of financial fraud (Albrecht et al., 2018).

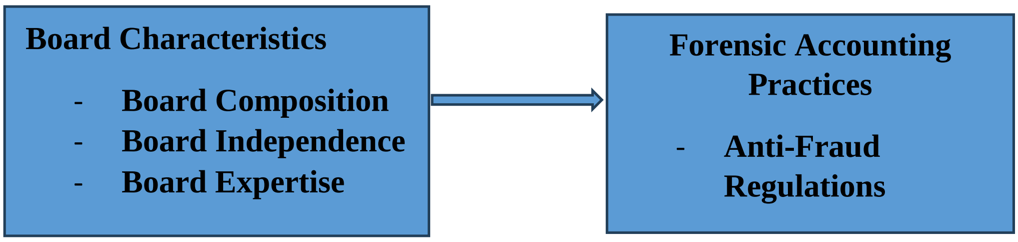

Figure 1. Conceptual framework showing the link between board characteristics and forensic accounting practice
Source: Researcher's design, 2024

This conceptual framework was purposed to establish the link between the dependent and independent variables. Anti-fraud regulations serve as the dependent variable, and board characteristics such as board composition, board independence, and board expertise serve as the independent variable.

Theoretical Review

Agency Theory

The primary emphasis of the theoretical framework referred to as agency theory, initially introduced by Jensen and Meckling in 1976, is in the examination of the dynamics between principals (shareholders) and agents (administrators). Eisenhardt (1989) posits that contemporary organisational theory acknowledges the existence of a contradiction between ownership and management inside modern corporations, resulting in conflicts of interest between shareholders (referred to as principals) and executives (referred to as agents).

There exists a widely held perception that administrators possess the capacity to prioritise their own interests above those of their shareholders, hence placing financial obligations on the organisation. The presence of this discrepancy leads to an agency dilemma, necessitating the proactive involvement of the board of directors in supervising operations to protect shareholders' interests and improve the overall performance of the company.

Nevertheless, the presence of unanticipated events and the assignment of residual rights to managers might perhaps augment managerial independence, so exacerbating the agency dilemma. The implementation of governance systems plays a pivotal role in effectively addressing agency conflicts and ensuring the congruence of interests between principals and agents. The board of directors and compensation schemes are two significant governance systems that serve the purpose of fulfilling this responsibility.

The strategies stated above have been developed with the objective of protecting the interests of shareholders, reducing agency expenses, and promoting alignment between principals and agents. These components are widely recognised as essential for strengthening oversight systems and ensuring the congruence of management's interests with those of shareholders. According to agency theory, the primary duty of the board of directors is to serve as a mechanism for mitigating agency conflicts by overseeing and moderating the activities of management.

Empirical Review

The study by Agboare (2021) looked at the impact of forensic accounting on the detection of financial misconduct inside listed DMBs in Nigeria. The core data for this study were acquired using standardized Likert scale questionnaires, employing a survey methodology. The data analysis involved the use of the Statistical Package for the Social Sciences (version 20.0) to incorporate descriptive statistics and regression analysis. Findings from the study showed that using forensic accounting techniques, such as looking at financial transactions, conducting investigations, and completing missing accounting records, greatly improved the ability to find financial crimes in listed DMBs in Nigeria.

Bangura's (2020) study examined why forensic accounting techniques are used to stop and find fraud in money-deposit banks in Sierra Leone. This study used regression analysis to show that forensic accounting methods have a positive and statistically significant effect on internal control, corporate governance, and whistleblowing in a group of people from Sierra Leone.

Sorunke (2018) evaluated the effectiveness of forensic accounting investigative approaches within the specific domain of corruption investigation and prosecution in Nigeria. The survey design incorporated the involvement of investigators and prosecutors who are associated with Nigeria's anti-corruption agencies, namely the EFCC, the ICPC, and the CCB. The results of the study demonstrated a strong and positive association between the successful implementation of anti-corruption measures in Nigeria and the utilization of forensic accounting techniques for investigation purposes.

Ugbede et al. (2019) examined the effects of forensic audits on instances of bank fraud within the Nigerian context. The study employed a survey methodology, using a sample of 128 participants selected from a larger population of 165 individuals. Data analysis involved Ordinary Least Square (OLS) regression modelling. The results illustrated the positive impact of forensic audits in enhancing the identification and prevention of bank fraud, specifically in Nigeria, effectively identifying, avoiding, and mitigating instances of fraudulent activities within the banking sector.

Olofinlade (2021) investigated the impact of forensic audits on instances of management fraud within Nigerian deposit money institutions. The research employed both descriptive and empirical methodologies, with panel regression analysis as the primary analytical technique. There was a strong and positive link between forensic auditing and its ability to reduce management fraud in Nigerian deposit money institutions, as shown by the regression analysis results. Additionally, the study indicated that forensic auditing contributes to the accurate portrayal and utility of financial statements.

Abdulrahman et al. (2020) delved into the use of forensic accounting techniques for the detection and prevention of potentially fraudulent activities within the banking sector of the United Arab Emirates. Findings from the study showed that using forensic accounting techniques greatly improved the ability to find fraud in the banking sector of the United Arab Emirates.

Adebisi et al. (2022) examined computer-aided auditing methods, ratio analysis techniques, and trend analysis techniques can help stop fraud in Nigeria. The researchers applied the ordinary least squares approach for data analysis. The research results revealed a causal connection between the utilisation of forensic accounting techniques and the identification and prevention of fraud in Nigerian banks, except for trend analysis, which exhibited no direct link to fraud detection or prevention.

Rehman and Hashim (2020) aimed to enhance our understanding of the influence of forensic accounting on the maturity of corporate governance in publicly listed businesses. They conducted an in-depth examination of current literature and empirical research, defining two fundamental roles of forensic accounting: preventative and investigative responsibilities. The research combined agency theory, the fraud triangle theory, and path dependency theory. It found that figuring out the risk of fraud is important in the relationship between forensic accounting and how mature corporate governance is.

Alaoubi and Almomani (2021) investigated how forensic accounting affects the link between corporate governance and the quality of accounting information in Jordanian companies that are traded on the stock market. The study encompassed a study population of certified accountants who were external to the organization. From this group, a subset of accountants was randomly chosen to constitute the study sample. A sample size of 217 questionnaires was administered to external certified accountants, and the collected data was subjected to analysis using multiple and hierarchical regression equation tests. The study's results indicated a strong and statistically meaningful influence of governance rules on multiple parameters.

Gap in Literature

The present study aims to fill a void in the current body of literature. Some empirical studies have looked at the effects of forensic accounting on finding and stopping fraud, as well as the role of different board characteristics in corporate governance. However, there is a big gap in the research that has already been done. This gap necessitates a thorough investigation into the concurrent impact of board characteristics on the implementation and efficacy of forensic accounting practices. The focus of this study will be on the DMBs that are listed in Nigeria. This topic is highly debated and has the capacity to avert the probable collapse of these financial institutions.

By filling in this gap, this study will give us a better idea of how board characteristics and forensic accounting practices of listed DMBs in Nigeria are related. The information gathered will be very helpful for policymakers, regulators, and practitioners who want to improve governance, make forensic accounting work better, and make sure that the listed DMBs in Nigeria are honest.

Given the above considerations, the null hypotheses will be stated as follows:

H_{01}: Board Composition has no significant effect on Forensic Accounting Practices of Listed DMBs in Nigeria.

H_{02}: Board Independence has no significant effect on Forensic Accounting Practices of Listed DMBs in Nigeria.

H_{03}: Board Expertise has no significant effect on Forensic Accounting Practices of Listed DMBs in Nigeria.

METHODOLOGY

This research employed a longitudinal study design to investigate the period spanning from 2013 to 2022. The primary focus of this study was on the retrospective data accessible within the administrative records and financial accounts of DMBs listed on the Nigerian Exchange Group (NGX). The Institute of Chartered Accountants of Nigeria (ICAN)'s introduction of the forensic accounting certification program during that time served as the primary factor in choosing the base year.

Secondary data was collected from the annual reports and audited financial statements of DMBs (DMBs) listed in Nigeria. The study sample included the 15 DMBs listed on the Nigerian Exchange Group (NGX) as of December 31, 2022. The sampling methodology employed a census approach, encompassing all registered DMBs in Nigeria. Consequently, the obtained sample size represented 100% of the population under investigation.

The data analysis process incorporated descriptive statistics, correlation analysis, and marginal logistic regression analysis.

Model Specification

A multiple linear model was made to look into how the board characteristics impact forensic accounting practices of listed DMBs in Nigeria impact. This model was designed to shed light on the collective influence of board composition, board independence, and board expertise on the integration and utilisation of forensic accounting practices.

The model is stated below:

$$FAP = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BE_{it} + \sum \quad (1)$$

Where:

FORP = Forensic Accounting Practices

BCOM = Board Composition

BODI = Board Independence

BFEX = Board Expertise

β_0 = Intercept

β_1 …… β_3 = Coefficient of explanatory variables

$\sum$ = Component Error or Error Term.

From the preceding, board characteristics are expected to affect forensic accounting practices significantly. In summary, the *a priori* expectation is stated as follows: $\beta1>0, \beta2>0, \beta3>0, \beta4>0$.

Measurement of Variables

There were three independent variables and one dependent variable to be used in this study, as defined, and measured below:

Table 1: Variables and Measurements

S/N	Variable	Description	Measurement	Source
1.	Board Composition (Independent variable)	Is the total number of directors sitting on the board of a particular bank	Total number of Directors	Farhan et al. (2020)
2.	Board Independence (Independent variable)	Is the number of non-executive directors on the board	% of non-executive directors to the total board members	Raed (2021)
3.	Board Expertise (Independent variable)	Is the quality of experience gathered by the board over the years	Years of experience	García-Meca and Palacio (2018)

4.	Forensic Accounting Practices (Dependent Variable)	This measures compliance with anti-fraud regulations, indicating forensic accounting effectiveness in meeting requirements.	Measured as the banks that adhere to anti-fraud policies and procedures in their annual reports.	Enofe et al. (2017)

Note: The table above illustrates each variable's description, measurement, and sources.
Source: Researchers' Computation (2024)

DATA ANALYSIS AND DISCUSSION OF FINDINGS

This section shows the preliminary regression analysis, including descriptive statistics and data normality test. Additionally, correlation analysis and the binary logistic regression analysis are also shown.

Descriptive Statistics Analysis

Table 2 presents a comprehensive overview of the statistical information pertaining to the factors examined in this study. According to the provided analysis, the dependent variable, specifically forensic accounting practices (FORP), has an average value of 0.14 and a SDof 0.35. The findings of this study indicate that around 14% of the banks examined employ forensic accounting practices, frequently by means of implementing anti-fraud policies.

Our research shows that the board composition (BCOM) variable has a mean value of 13.63 and a SDof 3.22 when it comes to the independent variables. This finding suggests that the boards of directors of the surveyed deposit money institutions typically have an average of 14 directors. In a similar vein, it is worth mentioning that the average value of board independence (BODI) is calculated to be 61.99, accompanied by a SDof 12.57. The results of this study suggest that, on average, around 62% of the board members in the institutions under investigation occupy non-executive director roles. Additionally, the average value of board financial expertise (BFEX) is 0.68, accompanied by a SDof 0.47. This finding suggests that, on average, around 68% of the board members hold pertinent professional qualifications in the areas of accounting and finance.

Our research shows that the average market capitalization (MCAP) is 8.09 with a SDof 0.58 in relation to the control variable.

Table 2: Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
Forp	120	.1416667	.35017	0	1
Bcom	120	13.63333	3.217425	6	21
Bodi	120	61.99342	12.56715	36.84	93.75
Bfex	120	.675	.4703387	0	1
Mcap	120	8.079917	.5780487	6.79	9.06

Note: The table presented above displays the descriptive statistics pertaining to the dataset.
Source: Researchers' Computation (2024)

Normality Test

The assumption of normality in data distribution is a fundamental requirement when performing linear model analysis. This assumption entails that the residuals demonstrate a similar and independent distribution. It's important to note that different normality tests often yield varying results. Some tests may reject the null hypothesis of normality, while others may not.

In the current study, in Table 3, the Shapiro-Wilk test was employed to evaluate the normality of the data. This test was initially only applicable to sample sizes smaller than 2000 when Shapiro and Wilk first introduced it in 1965. In the context of normality testing, when the p-values exceed 0.05, it indicates that the data adheres to a normal distribution. Conversely, when the p-values are less than 0.05, it suggests that the data deviates from a normal distribution.

Table 3: Test of Data Normality

Variable	Obs	W	V	Z	Prob>z
Forp	120	0.91835	7.857	4.618	0.00000
Bcom	120	0.99287	0.686	-0.844	0.80068
Bodi	120	0.90872	8.783	4.868	0.00000
Bfex	120	0.99023	0.940	-0.139	0.55512
Mcap	120	0.96360	3.503	2.809	0.00249

Note: The table above shows the normality of data distribution.
Source: Researchers Computation (2024)

Correlation Analysis

The pairwise correlation coefficient is employed to assess the presence of a linear relationship between the dependent and explanatory variables. By using correlation analysis, it is easier to find cases of multicollinearity between the variables being studied. This can have a big effect on the standard error of these variables, which could have bad results as stated in Table 4.

The Spearman rank correlation analysis in Table 4 shows a statistically significant positive correlation (r = 0.1047) between the make-up of the board and forensic accounting techniques. This suggests that these two things are connected. The results of this study show a statistically significant positive correlation (0.1288) between the frequency of forensic accounting procedures observed and the financial knowledge held by board members. The frequency of forensic accounting practices is considered the dependent variable in this analysis. The results of our study reveal a statistically significant positive correlation (r = 0.2280) between the control variable of market capitalization and the dependent variable of forensic accounting techniques.

On the other hand, there is a statistically significant negative correlation coefficient of -0.1343 between the forensic accounting methods dependent variable and the degree of board independence. The results shown in Table 4.3 also suggest that there isn't any strong evidence of multicollinearity among the factors that explain the data.

Table 4: Correlation Analysis

	Forp	Bcom	Bodi	Bfex	Mcap
forp	1.0000				
bcom	0.1047	1.0000			
bodi	-0.0840	-0.5034	1.0000		
bfex	0.1288	0.0206	-0.1227	1.0000	
mcap	0.2280	0.0420	-0.1194	0.0100	1.0000

Note: The table above shows the relationship between the variables.
Source: Researchers' Computation (2024)

Binary Logit Regression Analysis

The study used binary logit regression analysis to look into the causes and effects between the dependent and independent variables, taking into account that the dependent variable was either true or false which is dichotomous in nature. The results obtained from this analysis are reported in the subsequent section.

Table 5: Binary Logistic Regression Result

	INSM Model (Logistic Regression)	**INSM Model (Marginal Effect)**
CONS.	-16.671 {0.008} **	
BCOM	0.092 {0.000} ***	0.092 {0.000} ***
BODI	0.014 {0.564}	0.002 {0.564}
BFEX	0.897 {0.000} ***	0.897 {0.000} ***
MCAP	1.465 {0.018} **	0.163 {0.016} **
LR(prob>chi2)	10.05 (0.0000) ***	
Pseudo R- Squared	0.4027	
Goodness of Fit Test	132.98 {0.0965}	
Sensitivity	00.0%	
Specificity	100.00%	
Classification	85.83%	

Note: (1) The p-values are included in brackets {}; (2) The symbols ** and *** indicate statistical significance at the 5% and 1% levels, respectively.

Table 5 shows the results of using logistic regression analysis on the model of forensic accounting practices. The value of 0.4027 for pseudo-R-squared is shown. This value suggests that approximately 40% of the observed variations in the forensic accounting practices of the aggregated deposit money institutions over the specified period can be collectively attributed to the independent and control variables integrated into the model. However, it is worth noting that the lack of clarity surrounding forensic accounting practices may arise from the exclusion of other independent factors that could potentially impact these practices, which were instead subsumed into the error term.

The logistic regression model's LR Statistics, specifically 10.05 {0.0000}, suggest that the model demonstrates statistical significance at a significance level of 1%. This statement implies that the logistic regression model is deemed acceptable and appropriate for performing statistical inference. Furthermore, the LR Statistics findings are corroborated by the Pearson goodness of fit test [132.98 {0.0965}], providing evidence that the model exhibits a satisfactory overall fit. Supplementary diagnostic tests are performed on the model in order to ascertain the dependability of the estimations.

Sensitivity and Specificity Test

Sensitivity, alternatively referred to as the true positive rate, is a quantitative measure that is calculated as the reciprocal of the false negative rate. It is utilized as a statistic to accurately identify instances of real positive events. Concurrently, specificity, which is often referred to as the true negative rate, assesses the accuracy of correctly detecting negative instances and serves as a counterpart to the false positive rate. The analysis of the classification table indicates that cases classified as lacking forensic accounting practice samples did not yield any precise predictions, leading to a sensitivity accuracy rate of 0%. By doing a thorough analysis of the data, it was ascertained that out of the total 120 occurrences examined in the sample related to forensic accounting practice, 103 instances were accurately predicted. This outcome yielded a specificity accuracy rate of 100%. Nevertheless, it is imperative to acknowledge that the model exhibits an estimated overall accuracy of 85.83%. This discovery suggests that the model exhibits negligible bias and can be efficiently employed for policy recommendations and interpretation.

Test of Hypotheses

Hypotheses 1: Board composition does not significantly affect forensic accounting practices of listed DMBs in Nigeria.

The binary logistic regression analysis shown in Table 5 shows that there is a statistically significant positive relationship between the variable that shows the make-up of the board and the use of forensic accounting practices. The estimate for the coefficient for board composition is 0.092, which means that more people on the board are more likely to be involved in forensic accounting. The observed p-value of 0.000 provides additional evidence supporting the statistical significance of this link.

The results show that increasing the number of women on the boards of banks that haven't been closely studied by a single person would have a big impact, leading to a notable improvement of about 9% in the way financial accounting was done during the time period that was studied. The results in this paper provide more proof that the null hypothesis is not true. This means that there is a statistically significant link between the make-up of the board and the use of forensic accounting procedures in Nigerian listed DMBs. The present study shows that the membership of the board has a big effect on how listed DMBs in Nigeria use forensic accounting techniques.

Hypotheses 2: Board independence has no significant effect on forensic accounting practices of listed DMBs in Nigeria.

The binary logistic regression analysis in Table 5 shows that the board independence variable has a positive coefficient, but it doesn't have a statistically significant effect on forensic accounting practices (coefficient: 0.002; p-value: 0.564). According to these results, adding a single non-executive board member to banks that haven't been studied as much is all that makes a small difference in how many forensic accounting practices are used. Over the research period, this led to an increase of about 1%.

The study's results provide more evidence for the null hypothesis, which says that board independence does not have a big effect on whether or not listed DMBs in Nigeria use forensic accounting practices. So, being on a board doesn't seem to have had much of an effect on improving forensic accounting practises in Nigerian listed DMBs during the time period that was looked into.

Hypothesis 3: Board financial expertise does not significantly affect forensic accounting practices of listed DMBs in Nigeria.

The analysis of the binary logistic regression model, shown in Table 5, shows that the variable that measures board financial expertise has a positive and statistically significant effect on the use of forensic accounting practises (coefficient: 0.897; p-value: 0.000). These results suggest that adding a board member with professional qualifications in both accounting and finance to institutions that haven't been studied as much leads to a big improvement in financial accounting practises over the time period that was studied.

This study's findings provide further evidence in favour of rejecting the null hypothesis, which posits that the level of financial knowledge on the board has no substantial impact on the implementation of forensic accounting practices among listed DMBs in Nigeria. Therefore, the presence of board members with financial competence is seen to have a significant positive impact on the adoption of forensic accounting practices within listed deposit money institutions in Nigeria throughout the investigated time frame.

Discussion of Findings

Our study's findings indicate a statistically significant and positive relationship between the independent variable of board composition and the adoption of forensic accounting practices. These results suggest that increasing board composition in less-researched banks by just one member can lead to a substantial enhancement in financial accounting practices, estimated to be around 9% during the analysed timeframe. Consequently, the inclusion of diverse board members greatly facilitates the implementation of forensic accounting procedures within Nigerian listed deposit money institutions over the examined period.

In line with what Mbir et al. (2020) found, this study shows that the link between forensic accounting and the quality of reporting depends on things like corporate governance frameworks that make sure the rules are followed. Mbir et al. (2020) found in their study that a larger board has the potential to increase the positive effects of forensic accounting methods on the integrity of financial reporting. Our findings are consistent with those of Chalaki et al. (2012), who examined the impact of board size on the use of forensic accounting procedures in firms listed on the Tehran Stock Exchange between 2003 and 2011. Their research revealed a statistically significant relationship between the magnitude of the board and the application of forensic accounting techniques. In addition, our findings are consistent with those of Rotich (2017), who found a positive and statistically significant correlation between board size and the adoption of forensic accounting procedures.

Furthermore, the study presents empirical data indicating that the level of board independence exerts a beneficial influence on the utilization of forensic accounting procedures. However, it is worth noting that this impact does not reach statistical significance. The results suggest that enhancing the level of board independence in organizations with restricted research capabilities through the addition of a sole non-executive board member will have a minimal effect on financial accounting standards, leading to an approximate 1 percentage point rise over the course of the investigation. Hence, the statistical analysis performed throughout the research period suggests that the presence of board independence has a limited impact on the enhancement of forensic accounting procedures at listed DMBs (DMBs) in Nigeria. The current finding challenges the assertions made by Beasley (2016) on the relationship between the presence of independent directors on the board and the level of monitoring and supervision of managerial activities, which in turn affects the likelihood of corporate fraud. In their study, Li and Ang (2018) discovered that the level of independence demonstrated by external directors did not have a statistically significant impact on the effectiveness of the board in terms of overseeing and regulating management behaviours. Furthermore, a study done by Sadique (2016) shown that the level of board independence does not significantly contribute to the enhancement of corporate governance effectiveness in Malaysia as a means of discouraging fraudulent activity.

In conclusion, our study shows that having board expertise has a positive and statistically significant effect on the implementation of forensic accounting practices. These study results show that adding a board member with advanced knowledge in accounting and finance to institutions that haven't gotten much research attention leads to a big improvement in financial accounting procedures at the time of the evaluation—about 88% better. Therefore, it can be concluded that having board members who are experts has a noticeable and positive effect on how forensic accounting practices are used in listed DMBs during the time that the investigation is being carried out. According to the study by Be'dard et al. (2014), most people agree on how important it is for board members to have the right skills to do their jobs, such as overseeing internal control mechanisms and financial reporting. DeZoort et al. (2002) found that board members who had a greater level of experience demonstrated enhanced abilities in comprehending auditor judgments and identifying the fundamental nature of disagreements that emerge between management and the external auditor. According to the research by Raghunandan et al. (2019), there is a significant correlation between the presence of board directors with financial competence and their understanding of the internal audit program and its results. Furthermore, it is more probable that these board members will support the use of forensic accounting practices.

CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to examine the impact of board characteristics on the implementation of forensic accounting practices in listed DMBs (DMBs) in Nigeria. To achieve this objective, pertinent data were gathered, analysed, and then interpreted. This study's conclusions and recommendations are derived from its analysis and discussion of the obtained results.

The results of this study indicate that the composition of boards of directors plays a crucial role in the adoption of forensic accounting practices. The financial expertise of the board is identified as a significant factor that significantly contributes to the implementation of these practices. Although the relationship between board independence and performance was not statistically significant, further research is warranted to understand its potentially nuanced effects.

In light of the findings of this study recommended that: DMBs should embrace cutting-edge technologies, such as data analytics and artificial intelligence, to bolster their forensic accounting capabilities; Policymakers should establish mechanisms for real-time information exchange, facilitating the rapid sharing of insights regarding emerging fraud schemes and effective counterstrategies among stakeholders, and DMBs should develop mechanisms that ensure the protection of whistle-blowers and enable the anonymous reporting of suspicions of fraud. This, in turn, would enable timely reporting without the fear of reprisal, thereby enhancing the capacity to promptly mitigate potential financial losses and safeguard reputational standing.

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