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How Board Independence Moderates the Effects of Gender Diversity on Earnings Management Strategies in Nigerian Listed Deposit Money Banks

Edeh, Onyinyechi Precious
Anan University Kwall, Plateau State

Abstract:- There have been concerns regarding possible earnings manipulation within the Nigerian corporate sector. Such actions have cast doubts on the accuracy of finances and even resulted in the collapse of certain businesses. This study examines the moderating effect of board independence on the relationship between board gender diversity and earnings management of listed Deposit Money Banks in Nigeria. The study used a panel data regression technique for data analysis. Data was obtained from the audited annual reports and accounts of the banks over the period 2012-2022. Robustness tests such as normality test of standard error, multicollinearity and heteroscedasticity tests were carried out to validate the results. The findings revealed that board gender diversity has a significant negative effect on the earnings management of banks before moderation, while after moderation with board independence, it was found to have a positive and significant effect on the earnings management of banks. Therefore, board gender diversity is associated with less earnings management, while the multiplicative effect of board independence on board gender diversity does not guarantee a reduction in earnings management. The findings have important policy implications for the Central Bank of Nigeria (CBN) which is striving to improve transparency in the banking sector. It also has policy implication which enables deposit money banks to create an inclusive and equitable environment that goes beyond mere numbers and statistics and reap the benefit of having a re-structured, re-composed, re-organized and diversified board along the findings of the study.

Keywords:- *Board Gender Diversity, Board Independence, Earnings Management, Upper Echelon Theory.*

I. INTRODUCTION

Earnings management compromises the quality of financial reporting, thus undermining investors' confidence in decision-making processes. Despite the various measures recently introduced to enhance the reliability and credibility of companies' financial reports, firms continue to engage in earnings management to manipulate financial statements. This persistence is largely due to the legality of such practices within the defined boundaries set by accounting standards, setting them apart from illicit activities deemed fraudulent (Yildirim, 2016).

Over the recent past, most consumers of financial statements haven't regarded earnings management as a crucial factor when assessing performance and making decisions. Literature and global financial scandals suggest that earnings management erodes investor trust. Conversely, the board of directors is recognized as a key corporate entity in mitigating agency conflicts between managers and shareholders by controlling the extent of earnings management. Hence, it is incumbent upon the board of directors to oversee, scrutinize, and curtail the incidence of earnings management practices (Temile, et al., 2018).

However, earnings management is a nuanced concept, often defined as the deliberate actions undertaken by company management to adjust financial statements (Hosam, et.al 2019). While the actions might fall within legal and accounting boundaries, they can sometimes distort the true financial health of a company. Earnings management can be driven by various motivations, including the desire to meet financial targets, influence stock prices, or maintain a positive outlook in the eyes of investors (Ugochukwu, 2022).

The exploration of board diversity's influence on earnings management has generated a blend of insights in the academic realm. According to Emmanuel and Christopher, (2023), gender diversity in corporate boards refers to the representation and inclusion of different genders in decision-making positions at the highest level of an organization. This concept moves beyond mere numerical representation; it emphasizes the importance of varied gender perspectives in shaping a firm's strategic direction. Gender diversity is often hailed for its potential benefits, including improved decision-making, enhanced creativity, and a broader range of skills and experiences.

Over the past decade, the topic of gender diversity has garnered increased interest, leading to a global advocacy for incorporating more women into corporate boards as a strategy for enhancing corporate decision-making and governance (Cumming et al., 2015; Nguyen et al., 2020; Emmanuel & Christopher, 2023). Various nations have embarked on legislative reforms mandating a specified quota of female directors on corporate boards (Terjesen et al., 2009; Terjesen & Sealy, 2016). For example, Norway has set a requirement of 40% female representation on corporate boards, imposing penalties for failure to comply. In the wake of this, both Spain and Sweden have deliberated female board representation quotas of 40% and 25%, respectively,

leading the EU to recently suggest a 25% female board representation for major publicly listed companies (Temile et al., 2018; Zalata et al., 2021; Emmanuel & Christopher, 2022). Moreover, several other developed and emerging economies, including Australia, Brazil, Canada, and India, to name a few, have either adopted or proposed analogous quotas for female representation (Khlif & Achek, 2017; Kirsch, 2018). In the US, the trend of appointing female directors has been on an upward trajectory over the past two decades, albeit it remains a voluntary practice (Catalyst Group, 2004). In Nigeria, the average percentage of women serving on the boards of deposit money banks stands at 25% (Agusto & Co Research, 2022).

As part of the global diversity conversation, Nigeria's most comprehensive corporate governance rule book– the 2018 Nigerian Code of Corporate Governance (NCCG) sought to make the subject of diversity a front-burner issue amongst corporations. The 2018 NCCG is comprehensive as it made numerous adjustments, including new guidelines regarding the composition of a company's board of directors. The 2018 NCCG was the first Nigerian Corporate Governance code to emphasize on gender diversity in corporate leadership. The code states that a company's board of directors should take actions to promote gender, age and cultural diversity in its board membership and have policies to govern these processes. This code took effect in January 2020 and is the new standard for both private and public businesses in Nigeria (Nigeria Code for Corporate Governance, 2018).

In Nigeria, the functionality and stability of the financial system and the broader economy are significantly upheld by Deposit Money Banks (DMBs). Therefore, augmenting their performance is viewed as both advantageous and crucial. Among the myriad factors of corporate boards impacting bank performance, considerable research emphasis has been placed on board size and composition. Existing literature exhibits diverging viewpoints, with agency theorists such as Linck et al. (2008) and Lehn et al. (2009) positing that larger boards are superior in overseeing and advising management due to their enhanced capacity for information gathering and processing compared to smaller boards. This attribute ostensibly renders them more adept at curbing managerial self-interest. Conversely, Jensen (1993) contends that large board sizes may verge on unwieldiness and inefficiency. He advocates that boards comprising more than seven or eight directors tend to be less effective, with a heightened susceptibility to CEO dominance as opposed to smaller boards.

On the flip side, board independence is characterized by the presence of directors who are not involved in the day-to-day operations of the company and typically do not have any ties that could compromise their objectivity. An independent board is largely composed of non-executive directors. The essence of board independence lies in its capacity to provide unbiased oversight, ensuring that decisions are made in the best interest of stakeholders, free from internal influences or conflicts of interest (Ugochukwu, 2022). Their role becomes even more pronounced within the context of the deposit money banks in the Nigeria Stock Exchange, ensuring that the financial narratives presented to investors and stakeholders are both accurate and transparent.

While previous research has delved into the impact of board attributes on earnings management, the outcomes have been varied and remain unresolved (Alareeni, 2018; Alzoubi, 2018; Arioglu, 2020; Arun et al., 2015; Asogwa et al., 2019; Rajeevan & Ajward, 2020). The inconclusive nature of these findings may be attributed to the institutional backdrop of the studies, especially given that the majority were conducted in nations with robust investor protection frameworks (Mnif & Cherif, 2021; Ferris & Liao, 2019; Ramachandran et al., 2015; X. Chen et al., 2015; Arun et al., 2015; Iqbal & Strong, 2010). In light of the outcomes from earlier studies, there emerges a necessity to probe into potential factors that might mediate the association between board gender diversity and earnings management. Likewise, the disparate results might be elucidated by the contextual elements inherent to the regions where these investigations were carried out.

This study contributes to the extant research in some ways. First, in the regional context, while numerous studies have delved into the dynamics of board diversity in various global contexts, the specific intricacies of regions such as West Africa, and more particularly Nigeria, remain underrepresented. The unique socio-economic, cultural, and political factors of these regions could shape the relationship between board diversity and earnings management in ways that diverge from global trends. Secondly, in the introduction of the moderating variable for this study: The role of board independence as a moderating variable in the relationship between gender diversity and earnings management is a relatively uncharted territory. While board independence is often studied in isolation or conjunction with other corporate governance variables, its specific moderating influence, especially in the context of gender diversity on boards, calls for deeper exploration.

Thirdly, the banking sector, with its unique characteristics, risks, and dynamics, hasn't been extensively examined about board diversity and earnings management. Understanding these dynamics within this specific sector of the Nigeria Stock Exchange can provide nuanced insights that might differ from broader, cross-sectoral studies.

Given these identified gaps, this study positions itself uniquely, offering originality by focusing on the intersections of regional nuances, the moderating role of board independence, and the specific context of deposit money banks. The research aims to contribute meaningfully to the academic discourse by addressing these gaps while providing valuable insights for industry practitioners, policymakers, and stakeholders.

Aligned with the aforementioned, the primary aim of this research is to scrutinize the mediating impact of board independence on the nexus between board gender diversity and earnings management within listed Deposit Money Banks in Nigeria. Accordingly, the specific objectives encompass: Ascertain the implications of board gender

diversity on earnings management within listed Deposit Money Banks in Nigeria. Evaluate the mediating impacts of board independence on the interplay between board gender diversity and earnings management within listed Deposit Money Banks in Nigeria. Towards this objective, this investigation delves into the mediating role of board independence concerning the relationship between gender diversity and earnings management in listed deposit money banks in Nigeria, given the sector's pivotal role in molding the Nigerian economy. The remainder of the document is structured as follows: Section 2 delves into preceding literature and formulates hypotheses. The employed methodology is elucidated in Section 3, succeeded by the exposition and deliberation of the outcomes in Section 4. The document concludes with a summary and suggestions based on the discoveries in Section 5.

II. LITERATURE REVIEW

A. Conceptual Review

➤ *Board Independence*

This refers to a board dominated by non-executive directors, ensuring decisions are devoid of internal biases or conflicts of interest. An independent board offers objective oversight, guaranteeing stakeholder interests are prioritized (Fama & Jensen, 1983).

➤ *Gender Diversity*

Beyond mere numerical representation, gender diversity stresses the integration of diverse gender perspectives in high-level decision-making roles, augmenting the board's collective wisdom and experience (Carter, D'Souza, Simkins, & Simpson, 2010).

➤ *Earnings Management*

This entails deliberate modifications to financial statements either to misguide stakeholders about a firm's economic performance or to influence contractual results that depend on reported accounting figures (Healy & Wahlen, 1999).

➤ *Board Independence and Earnings Management:*

Independent directors, free from conflicts and not entangled in daily operations, can critically assess managerial decisions. Their external vantage point equips them to discourage practices that cloud a company's genuine financial status (Baysinger & Butler, 1985).

➤ *Gender Diversity and Earnings Management:*

Gender-diverse boards, with their myriad perspectives, offer comprehensive oversight of managerial activities. Research reveals that firms boasting gender-diverse boards often present improved financial clarity and reduced earnings management propensities (Adams & Ferreira, 2009).

➤ *Moderating Role of Board Independence*

The paper's core lies in discerning how board independence modulates the relationship between gender diversity and earnings management. The combined influence of gender diversity and board independence can either bolster or dampen the proclivity for earnings management (Pathan & Faff, 2013).

B. Empirical Review And Hypotheses Development

➤ *Female directors and earnings management*

The scholarly domain of corporate governance is increasingly focusing on how the distinct traits of women in high-ranking executive roles influence decision-making and organizational outcomes. As posited by Morrison et al. (2004), the presence of women on boards enhances management effectiveness by complementing the abilities of their male counterparts. The distinct characteristics of female directors are suggested to influence decision-making and risk-taking tendencies. For example, Barber and Odean (2001) argue that women exhibit lesser risk-taking behaviors compared to men. It's depicted in corporate governance literature that women exhibit higher ethical standards in their judgments and actions (O'Fallon & Butterfield, 2013; Vermeir & Van Kenhove, 2008), thus being less prone to engage in unethical practices and effectively curbing managerial opportunism (Zalata et al., 2019). Recent scholarly works further affirm that female directors exhibit ethical and risk-averse tendencies in financial decision-making (Doan & IskandarDatta, 2020; Yahya et al., 2020). Additionally, a study by J. Chen et al. (2019) underscored the significance of female directors in sectors where male CEO overconfidence is prevalent. They also observed that female directors displayed lesser aggressiveness in investment and acquisition decisions, leading to enhanced financial performance. Hence, it's postulated that the inclusion of women on boards could deter unethical practices like earnings management.

Nevertheless, the literature exploring the connection between board gender diversity and earnings management yields varying results. For instance, Arun et al. (2015) discovered that UK firms with a higher ratio of female and independent female directors exhibit superior earnings quality with restrained earnings management practices. Gavious et al. (2012) reported analogous findings among Israeli high-tech firms listed in the USA (on the NYSE or NASDAQ) from 2002 to 2009.

Alves (2023) explored this aspect among European Union-listed firms and found an inverse relationship between female director presence on boards and earnings management, stressing the "critical mass hypothesis" which posits that having at least three female directors leads to better earnings quality. Orazalin (2020) uncovered that in Kazakhstan, an emerging market, firms with diverse boards were more effective in limiting earnings management practices. In Jordan, Ghaleb et al. (2021) related corporate social responsibility reporting with board gender diversity, finding a notable negative correlation between gender-diverse boards and real earnings management, particularly when associated with corporate social responsibility reporting.

On a different note, Arioglu (2020), examining non-financial firms listed on Borsa Istanbul from 2009 to 2017, found no significant impact of female directors on earnings management. Similarly, Abdullah and Ismail (2016), studying non-finance firms listed on Bursa Malaysia from 2008 to 2011, found no significant effect of women on boards and audit committees on earnings management. Sun et al., (2011) reported no link between the proportion of female directors on audit committees and earnings management, while Thiruvadi and Huang (2011) found a negative association between female directors on the audit committee and earnings management.

Based on the organizational theory and the above arguments, the researcher proposes the following:

H1: Female directors have no significant effect on earnings management of listed Deposit Money Banks in Nigeria.

- *Board Independence and Earnings Management*

Umer et al. examined the Pakistani corporate scenario, ascertaining that gender diversity, especially in top leadership roles like CEO, played a pivotal role in curbing earnings management. Meanwhile, Mnif and Cherif's (2020) examination of French family-owned firms unveiled that female board participation deterred aggressive earnings management. Significantly, this deterrent effect was particularly profound for independent female directors. Contrarily, Arioglu (2020), investigating the Turkish corporate landscape, argued that the mere presence of female directors on company boards did not inherently reduce earnings management.

Klein (2002), utilizing data from the US, discerned a notable negative correlation between abnormal accrual levels and the ratio of external directors to board size. Pope et al. (1998), employing a dataset of 1178 firm-year observations from UK non-financial firms spanning 1993-1996, explored the impact on board composition. Peasnell et al. (2000), examining a cohort of UK firms, probed the influence of the 1992 Cadbury Committee Report on the nexus between board composition and earnings management (EM). Although their findings revealed no linkage between board independence and EM during the pre-Cadbury phase, a significant negative correlation was observed between abnormal accrual magnitudes and the ratio of external board members post-Cadbury. In a study conducted by Alves (2011), the effect of board structure on the extent of EM among listed firms in Portugal was empirically analyzed using a sample of 34 non-financial entities. The outcomes suggested that a higher ratio of non-executive directors on boards diminishes the level of discretionary accounting accruals, implying that boards with a larger number of non-executive members curtail EM practices. More recently, Rajeevan and Ajward (2020) delved into the relationship between corporate governance attributes and the degree of EM among publicly quoted companies in Sri Lanka, utilizing a sample of 70 companies listed on the Colombo Stock Exchange (CSE) from 2015 to 2017. The findings suggested that firms with a higher proportion of non-executive directors were able to restrain EM. Likewise, Türegün (2018) reported a negative correlation between the ratio of independent directors and EM among companies listed on Borsa Istanbul. In contrast, Alareeni (2018), examining listed firms from Bahrain, found that the proportion of independent directors positively impacted EM. Hence, it is anticipated that non-executive directors would constrain executives to oversee the financial information articulation process. Hence, the following hypothesis:

H2: Board Independence has no significant moderating effect on the relationship between board gender diversity and earnings management of listed Deposit Money Banks in Nigeria.

- *Gender Diversity, Board Independence, and Earnings Management*

Focusing on Nigeria, Emmanuel, Yusuf, and Shaibu (2022) embarked on a detailed study exploring the influence of board diversity on earnings management within conglomerates. Their findings were intriguing, with nationality and education emerging as critical variables influencing earnings management, while gender did not. Complementing this, Onyabe, Awen, and Yahaya's (2023) research indicated that while female directors had no significant impact on earnings management proxies, firms helmed by female CEOs were associated with negative operating cash flows.

Farouk and Isa (2018) shifted the lens to the banking sector, underscoring the vital role of audit committees as potential moderating variables. Their research showcased that while most board diversity variables, including gender, significantly influenced earnings management; the introduction of an audit committee's moderating influence amplified these effects.

C. Theoretical Review

Several theories aim to explain the relationship between board gender diversity and earnings management. Agency theory suggests that diverse boards can better monitor managerial actions, thereby reducing the likelihood of earnings management (Jensen & Meckling, 1976). Behavioural finance theories argue that men and women might have different risk appetites and ethical stances, which could influence corporate decisions including those about earnings management (Eckel & Grossman, 2008). Furthermore, the critical mass theory postulates that a certain threshold of female representation is necessary on boards to significantly impact board decisions and behaviours (Kanter, 1977).

Nonetheless, the scrutiny by a board diversified in gender, particularly through female directorship, is anticipated to restrain managerial conduct. This is because a gender-diverse board's oversight could compel managers to prioritize corporate performance over opportunistic or self-centered actions. Should gender diversity within corporate boards amplify monitoring efficacy, it could correlate with diminished utilization of discretionary loan loss provisions within banks.

Hence, the variables of corporate board diversity, particularly women directors, are grounded in the Upper Echelon theory, as it posits that organizations aiming to attract, retain, and leverage diverse competencies are often counseled to initiate by augmenting the diversity of their senior management (Gelfand, et al., 2004). Such a step is perceived as advantageous not merely due to the positive indication it communicates to diverse employees regarding their career progression prospects, but also because a heterogeneous senior management cadre is likely to exhibit heightened awareness towards issues that might impact business owners. Consequently, entities with a broader diversity among senior managers are projected to lower the extent of earnings management. The premise that the attributes of senior management, or an organization's upper echelon, can sway the decisions and practices adopted by an entity, traces back to the early formulations of the Upper Echelon theory by Hambrick and Mason (1984). In alignment with this, the current study employs the Upper Echelon theory to elucidate the relationship between female directors and earnings management.

III. RESEARCH METHODOLOGY

A. Research Methodology

This research adopts a positivist philosophical orientation. Positivism, grounded in the conviction that knowledge primarily originates from observable and quantifiable phenomena, prioritizes objective analysis over subjective notions. By adhering to this philosophy, this investigation endeavors to extract objective, quantifiable insights concerning the relationship among gender diversity on corporate boards, the function of board independence, and earnings management. Consistent with the research objectives and the positivist orientation, an ex post facto research methodology is utilized. Given that the research doesn't engage in variable manipulation but instead explores the relationships among them based on pre-existing data, this retrospective methodology is suitable. The ex post facto design facilitates the exploration of potential causal relationships by analyzing events that have already transpired.

The research population encompasses Deposit Money Banks listed on the Nigerian Stock market as of 31st December 2022. Fourteen (14) Deposit Money Banks have maintained a consistent listing from 2012 to 2022 on the Nigerian Exchange Group (NGX), as documented in the Nigeria Stock Exchange Factbook. All the fourteen (14) listed Deposit Money Banks in Nigeria as of 31st December 2022 were selected for analysis, owing to the accessibility of their annual reports and accounts essential for data extraction. Consequently, a census approach is adopted for this study. A secondary data source was employed to accomplish the specified objectives. Data were retrieved from the Published Audited Annual Reports and Accounts of the Banks spanning 2012-2022. Multiple Regression Techniques and Robust Ordinary Least Squares were utilized for the investigation.

A two-step regression was employed, initially determining the degree of earnings management through the residual from the first regression of model I. The residuals from Chang et al. (2008) model served as proxies for earnings management in the second regression model designated for this study. However, the residuals ascertain the loan loss provision quality in banks. Larger residual values indicate a higher level of earnings management and lower earnings quality of banks, whereas smaller residual values signify lower earnings management and enhanced earnings quality of banks. Stata 17 was utilized as the instrument for data analysis. The selection of this technique and tool is predicated on its informative nature, as estimates are more efficient under it, and it also facilitates the examination of individual dynamics.

B. Variable Measurement And Model Specification

The study adopts Chang, Shen and Fang (2008) model of discretionary loan loss provision which was specifically built for the financial sector. The residual from this model was used to represent earnings management in the second regression.

$$DLLP_i / TA_{t-1} = LLP_{it}/TA_{t-1} - \{\alpha_0\ 1/TA_{t-1} + \alpha_1\ LCO_i/TA_{t-1} + \alpha_2\ BBAL_i/TA_{t-1}\} \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where

DLLP = Discretionary loan loss provision
LLP = Loan loss provision
LCO = Loan Charge-off
BBAL = Beginning Balance of loan loss
TA_{t-1} = Lagged Total Assets
α_0 = Constant

Table 1: Explanatory Variables

Variable	Proxy (ies)	Nature of Variable	Measurement
Earnings Management	Discretionary Loan Loss Provision Model	Dependent	Chang, Shen and Fang Model (2008)
Board Gender Diversity	Female Directors	Independence	The number of women on the board of directors is divided by the total number of board members (Bathula, 2008).
,,	Board Independence	Moderator	The ratio of Independent Non-Executive Directors to the total number of directors (Daghsnii, Zouhayer & Mbarek, 2016).
,,	Leverage	Control	The ratio of total debt to total assets of the bank in a year (Chouaibi, Harres & Brahim, 2016).

C. Model Specification

The succeeding equation forms the model of the study using Panel Multiple Regression. The equation is represented as given below:

$$EMG_{it} = \beta_{0it} + \beta_1 BGD_{it} + \beta_2 BGD*BOI_{it} + \beta_3 LEV_{it} + \mu_{it} \quad \text{……………………………………… (2)}$$

Where: EMG = Earnings Management, BGD = Board Gender Diversity, BOI = Board Independence, LEV = Leverage, β_1, - β_3 = Coefficient of explanatory variables, β_o = Constant or Intercept, μ = Error Term, it = Banks and Time

IV. DATA ANALYSIS AND DISCUSSION

The descriptive statistics are presented in Table 2 sheds light on four key variables: Earnings Management (EMG), Board Gender Diversity (BGD), Board Independence (BOI), and Leverage (LEV). Each variable is analyzed in terms of its minimum, maximum, mean, standard deviation, as well as skewness and normality tests (Sktest and Swilk).

Table 2: Descriptive Statistics

Variables	Min	Max	Mean	Std. Dev.	Sktest	Swilk
EMG	0.0002	0.0125	0.0021	0.0023	0.0000	0.00000
BGD	0	0.60	0.1448	0.1111	0.0000	0.00000
BOI	0.21	0.88	0.5755	0.1151	0.0181	0.00019
LEV	0.21	0.91	2.0118	10.241	0.0000	0.00000

Source: Descriptive Statistic Results Using STATA 17

For Earnings Management, the data ranges from a minimum of 0.0002 to a maximum of 0.0125. The average or mean value stands at 0.0021, indicating that the typical level of Earnings Management is relatively low within the dataset. Furthermore, the standard deviation is 0.0023, which signifies low variability around the mean. When it comes to normality, both the Sktest and Swilk tests returned a value of 0.0000, implying that the data likely deviates from a normal distribution.

Board Gender Diversity presents a different picture. The data spans from a minimum of 0 to a maximum of 0.60. The mean value is 0.1448, indicating that there is considerable room for enhancing gender diversity on corporate boards. The standard deviation of 0.1111 suggests a moderate level of variability around this average. Again, both the Sktest and Swilk values are 0.0000, signaling a non-normal distribution for this variable.

Board Independence values range from 0.21 to 0.88, with an average value of 0.5755. This suggests a moderate level of board independence in the dataset. The standard deviation of 0.1151 indicates a moderate spread around this mean value. The Sktest value is 0.0181 and the Swilk value is 0.00019, both suggesting that the data may not adhere to a normal distribution.

The Leverage variable has a minimum value of 0.21 and a maximum of 0.91. However, the mean value of 2.0118 appears to be incongruent with the minimum and maximum values, warranting further investigation. The standard deviation is notably high at 10.241, indicating significant variability. Both the Sktest and Swilk values returned as 0.0000, indicating yet again a non-normal distribution.

Table 3: Correlation Matrix

	EMG	BGD	BOI	LEV
EMG	1			
BGD	-.4277*	1		
BOI	.1645*	-.0616	1	
LEV	-.0028	.0695	.1774*	1

Source: Correlation Matrix Results Using STATA 17
*. Correlation is significant at 0.01 or 0.05 level (2-tailed)

Table 3 shows that earnings management is negatively correlated with board gender diversity to the tune of about 43%. This implies that earnings management has an inverse correlation with board gender diversity. Earnings management was found to have a positive and significant association with board independence in listed deposit money banks in Nigeria to the tune of about 16%. This implies that earnings management and board independence moved in the same direction and at the same magnitude. Leverage used as a control variable records a negative and weak association with earnings management.

In general, the interactions between the independent variables were relatively moderate. According to Cassey & Anderson (1999), the Variance Inflation Factor (VIF) and tolerance levels serve as benchmarks for detecting multicollinearity. In this case, the VIF values were not consistently below the threshold of 10, and the tolerance values were consistently under one. These mixed results suggested an ambiguous presence or absence of multicollinearity. However, additional analysis revealed a mean VIF of 8.28, confirming that multicollinearity was not a significant concern in the dataset.

A. Robustness Tests

The chi-square value of 42.05 from the heteroskedasticity test, coupled with a probability value below 5%, signifies the existence of heteroskedasticity. This compromises the reliability of the Ordinary Least Squares (OLS) estimates due to a violation of OLS assumptions. However, this issue was addressed by employing robust standard errors and assessing the error term's normality using kernel density estimation. The analysis revealed that the residuals were only mildly deviating from normality, making the robust standard errors an acceptable correction.

Table 4: Robust OLS Regression

Variables	Coefficient	T-Statistics	Probability
Constant	0.00934	7.87	0.000
BGD	-0.01896	-4.55	0.000
BGD*BOI	0.01729	3.68	0.000
LEV	-6.86e-06	-2.24	0.026
R^2			0.1677
F-Statistics			9.95
P-Value			0.0000
Test of Significance Difference (F)			15.11
P-Value			0.0000

Source: Result output from Stata 17

The R^2 value of 0.1677 indicates that 16.77% of the variability in the dependent variable, Earnings Management, is accounted for by the independent variables: proportion of female directors, board independence, and leverage. This is specific to Deposit Money Banks in Nigeria.

With a Fisher's Exact Statistics value of 9.95, significant at the 1% level, the model demonstrates a good fit. The near-zero p-value suggests a 99.9% likelihood that the observed relationships among the variables are not random. This lends strong support to the reliability of the regression outcomes.

The negative coefficient for Board Gender Diversity (BGD), -0.01896, with a t-value of -4.55 and p-value of 0.000, indicates a significant negative impact on Earnings Management. This suggests that increasing the number of female directors reduces earnings manipulation, possibly due to better board oversight.

However, when BGD is moderated by Board Independence, the t-value changes to 3.36 and the coefficient becomes 0.01729, significant at the 1% level. This suggests a surprising counter-effect: earnings management increases when both female board representation and board independence are high. One explanation could be that long-serving independent directors lose their effectiveness due to close relationships with executive directors.

An F-value of 15.11, significant at the 1% level, shows a significant difference between moderated and unmoderated BGD, supporting the rejection of the second null hypothesis. This indicates that board independence significantly moderates the relationship between gender diversity and earnings management in the context of Nigerian Deposit Money Banks.

The findings align with previous studies by Eze (2017), Einer and Soderqvist (2016), and Arun et al. (2015), but contradict the conclusions of Firoozi et al. (2016), Hussaini and Gugong (2015), and Ioualalen et al. (2015). This discrepancy adds weight to rejecting the null hypotheses.

B. Theoretical Implications of the Findings

The study's data analysis reveals the intricate roles board gender diversity and board independence play in determining the earnings management practices of Nigerian banks. Supported by the Agency Theory, the data suggests that non-executive directors, who make up an average of 57% in the banks, can effectively monitor managerial actions, leading to reduced earnings manipulations. However, the Upper Echelon Theory points out that the leadership characteristics at the top influence organizational decisions. With only 14% representation of women on boards, there's an indication of a need for more gender diversity in these top positions, which can potentially influence more ethical financial reporting.

The correlation matrix highlights a notable negative correlation between earnings management and board gender diversity, which aligns with the Upper Echelon Theory's premise of ethical decision-making influenced by gender diversity. Conversely, the positive correlation between earnings management and board independence, although seemingly counterintuitive, can be explained by considering other factors like the tenure of independent directors. The regression analysis further strengthens these correlations, suggesting that while board gender diversity reduces earnings management, introducing board independence as a moderator might produce contrasting effects. These findings, in the context of the Agency and Upper Echelon Theories, emphasize the importance of both board diversity and active, effective board independence in shaping earnings management practices in Nigerian banks

V. CONCLUSION AND RECOMMENDATIONS

A. Conclusion

The exploration of the relationship between board gender diversity, board independence, and earnings management in Nigerian banks has provided several significant insights. Backed by the foundations of the Agency and Upper Echelon Theories, the study unveils the intricate dynamics and interplay between these variables. The results

reveal that while board gender diversity tends to reduce earnings management, the role of board independence as a moderating factor is more nuanced. The effectiveness of board independence appears to be contingent upon other considerations, such as the tenure of board members and their active participation in governance. The findings reinforce the notion that while both board gender diversity and board independence are indispensable for effective corporate governance, their combined impact on earnings management is multifaceted and requires a holistic approach.

The results are interpreted while keeping in mind certain constraints. One such limitation is that the research exclusively focuses on the deposit money banks in Nigeria. This choice was made due to the banking sector's rigorous oversight, extensive regulation, and continuous monitoring. Consequently, it is important to recognize that the conclusions and suggestions offered are relevant exclusively to the banking sector. Further research can be undertaken in other sectors to make the findings flexible for generalization. Also, the model of Chang et al. (2008) was employed to proxy earnings management. Researchers may consider more recent and sophisticated models for measuring earnings management such as Yoon et al. (2012). Furthermore, the study is based on a ten-year data coverage period, further studies can be extended beyond ten years.

Finally, the Nigerian banking sector, with its unique socio-economic and regulatory peculiarities, adds an additional layer of complexity to the observed relationships. This study underscores the need for a more diverse representation at the top echelons of banking leadership and a revaluation of the criteria for board independence to ensure genuine oversight.

B. Recommendations

Based on the findings and conclusions drawn from this study, the following recommendations are put forth:

- Promotion of Gender Diversity: Nigerian banks should actively pursue policies and initiatives that promote gender diversity at board and executive levels. This not only aligns with global best practices but, as the study suggests, can lead to more ethical financial reporting and decision-making.
- Reevaluation of Board Independence Criteria: It is imperative for regulatory bodies, like CBN and NDIC, to reexamine the criteria that define board independence. Considerations such as tenure and active involvement should be factored in to ensure that independent directors maintain their objectivity and effectiveness over time.
- Active Oversight: It is not enough to just have independent directors; they should be actively involved in the bank's operations, asking critical questions and demanding accountability.
- Stakeholder Engagement: Banks should actively engage with stakeholders, including shareholders, to ensure that their governance practices align with stakeholders' expectations and global standards.

REFERENCES

[1]. Alves, S. (2023). Gender diversity on corporate boards and earnings management: Evidence for European Union listed firms. *Cogent Business & Management*, 10(1), 2193138.
[2]. Alzoubi, E. S. S. (2018). Audit committee, internal audit function and earnings management: Evidence from Jordan. Meditari Accountancy Research, 27(1), 72–90.
[3]. Arioglu, E. (2020). Female board members: the effect of director affiliation. Gender in Management: *An International Journal*, 35(2), 225-254.
[4]. Arun, T. G., Almahrog, Y. E., & Aribi, Z. A. (2015). Female Directors and Earnings Management: Evidence from UK Companies. *International Review of Financial Analysis.* 39(C), 137-146.
[5]. Asogwa, C. I., Ofoegbu, G. N., Nnam, J. I., Chukwunwike, O. D., & Ntim, C. G. (2019). Effect of corporate governance board leadership models and attributes on earnings quality of quoted Nigerian companies. Cogent Business & Management, 6(1), 1683124
[6]. Bathula, H. (2008). Board Characteristics and Firm Performance: Evidence from New Zealand. An Unpublished thesis submitted to Auckland University of Technology in fulfilment of the requirements for the degree of Doctor of Philosophy.
[7]. Casey, K. M., & Anderson, D. C. (1999). Examining the Impact of the Tax Reform Act on Corporate Dividend Policy: A New Methodology, *Journal of Financial Review*, 34(3), 17– 28.
[8]. Chang, R. D., Shen, W. H. A., & Fang, C. J. (2008). Discretionary Loan Loss Provisions and Earnings Management for the Banking Industry. *International Business & Economics Research Journal*, 7(3), 9-20.
[9]. Chouaibi, J., Harres, M., & Brahim, N. B. (2016). The Effect of Board Director's Characteristics on Real Earnings Management: Tunisian-Listed Firms. *Journal of the Knowledge Economy*, 1-15.
[10]. Daghsni, O., Zouhayer, M., & Mbarek, K.B.H. (2016). Earnings Management and Board Characteristics: Evidence from French Listed Firms. *Account and Financial Management Journal*, 1(2), 92-110
[11]. Einer, M., & Soderqvist, J. (2016). Earnings management and female representation on the board of directors. Being a Master's degree project in Accounting, School of Business, Economics and Law, University of Gothenburg.
[12]. Emmanuel, M., & Christopher, B. (2023). Corporate Governance Mechanisms and earnings management: the moderating role of female directors. Accounting, corporate governance & business ethics research article 1-20.
[13]. Eze, I. O. (2017). Corporate governance mechanisms and earnings management in Nigerian food product companies. *Journal of Administrative and Business Studies*, 3(1), 1-9.
[14]. Farouk, M. A., & Isa, M. A. (2018). Moderating effect of the audit committee on board diversity and earnings management in Nigerian banks. *NDIC Quarterly*, 33, 19-32.

[15]. Firoozi, M., Magnan, M., & Fortin, S. (2016). Board Diversity and Financial Reporting Quality.
[16]. Ferris, S. P., & Liao, M. Y. S. (2019). Busy boards and corporate earnings management: An international analysis. Review of Accounting and Finance, 18(4), 533–556.
[17]. Ghaleb, B. A. A., Qaderi, S. A., Almashaqbeh, A., & Qasem, A. (2021). Corporate social responsibility, board gender diversity and real earnings management: The case of Jordan. *Cogent Business & Management*, 8(1),
[18]. Hussaini, B., & Gugong, B. K. (2015). Board Characteristics and Earnings Management of Listed Food and Beverages Firms in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 3(8), 25-41.
[19]. Ibrahim, M., & Hamza, M. A. (2022). Board Diversity and Earnings Management in Publicly Listed Oil and Gas Firms in Nigeria. *Audit and Accounting Review*, 2(2), 1-15
[20]. Ioualalen, L., Khemakhem, H., & Fontaine, R. (2015). The Impact of Audit Committee Characteristics on Earnings Management: A Canadian Case Study. *Case Studies in Business and Management*, 2(1), 78-96.
[21]. Iqbal, A., & Strong, N. (2010). The effect of corporate governance on earnings management around UK rights issues. International Journal of Managerial Finance, 6(3), 168–189
[22]. Martins, O. S., & Ventura Júnior, R. (2020). The influence of corporate governance on the mitigation of fraudulent financial reporting. *Revista Brasileira de Gestão de Negócios*,22, 65-84.
[23]. Mnif, Y., & Cherif, I. (2021). Female board directorship and earnings management. *Pacific Accounting Review*, 33(1), 114-141.
[24]. Nadeem, M. (2022). Board gender diversity and managerial obfuscation: Evidence from the readability of narrative disclosure in 10-K reports. *Journal of Business Ethics*, 179(1), 153-177.
[25]. Onyabe, J. M., Awen, B. I., & Yahaya, O. A. (2022). Board gender diversity and earnings management: Evidence from Nigeria. *International Journal of Accounting, Auditing and Performance Evaluation*, 18(3/4), 198-222.
[26]. Orazalin, N. (2020). Board gender diversity, corporate governance, and earnings management: Evidence from an emerging market. *Gender in Management: An International Journal*, 35(1), 37-60.
[27]. Pope, P. F., Peasnell, K. V., & Young, S. (1998). Outside directors, board effectiveness, and earnings management. Board Effectiveness, and Earnings Management. working paper, Lancaster University, Lancaster.
[28]. Rajeevan, S., & Ajward, R. (2020). Board characteristics and earnings management in Sri Lanka. Economic Studies, 27(1), 2–18.
[29]. Ramachandran, J., Ngete, Z. A., Subramanian, R., & Sambasivan, M. (2015). Does corporate governance
[30]. Terjesen, S., & Sealy, R. (2016). Board gender quotas: Exploring ethical tensions from a multi-theoretical perspective. Business Ethics Quarterly, 26(1), 23–65.
[31]. Terjesen, S., Sealy, R., & Singh, V. (2009). Women directors on corporate boards: A review and research agenda. Corporate Governance: An International Review, 17 (3), 320–337.
[32]. Temile, O. S; Dadang, P. J., Subuh, H. (2018). Gender Diversity, Earnings Management practice and Corporate Performance in Nigeria Quoted firms (2018). International
[33]. Ugochukwu, P.O.2022) The Impact of Board Diversity on earnings management of Aforementioned non-financial companies in Nigeria. International Journal of Advances in Engineering and Management. 4(3) 108-116.
[34]. Umer, R., Abbas, N., Hussain, S., & Naveed, N. (2020). The Gender Diversity and earning management practices: evidence from Pakistan. *City University Research Journal*, 10(2), 23-36.
[35]. Zalata, A.M., Ntim, C.C., Mostafa, H.A., & John, M. (2021). Gender Diversity and Earnings Management: the case of female directors with a financial backdrop. 101-136.