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BOARD CHARACTERISTICS AND EARNINGS MANAGEMENT OF QUOTED NON-FINANCIAL FIRMS IN NIGERIA: PANEL EVIDENCE (2012–2024)

Chinasa-Okolo Uchechukwu Gladys
St Luke Business School, Peaceland University, Enugu, Enugu State, Nigeria
ucheg4538@gmail.com

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ABSTRACT
This paper examines the effect of board characteristics on earnings management among quoted non-financial firms in Nigeria. Using panel data drawn from 62 firms over the period 2012 to 2024, yielding 806 firm-year observations, the study investigates how board size, board meeting frequency, board gender diversity and board independence influence accrual-based earnings management as measured by the Modified Jones Model. Four control variables, namely firm size, leverage, profitability and audit quality, are incorporated in order to improve model specification and robustness. Panel regression analysis using the random effects model, as confirmed by the Hausman test, is the estimation technique employed, and the specification is supported by diagnostic tests for multicollinearity, heteroskedasticity, normality and the presence of panel effects. The results reveal that none of the four board characteristics exerts a statistically significant effect on earnings management, although all four variables exhibit theoretically consistent directional signs, and the same pattern survives re-estimation by pooled ordinary least squares, the substitution of a performance-matched accruals proxy and a sub-sample analysis by firm size. These findings challenge the dominant view that structural board composition is by itself sufficient to constrain managerial opportunism, and suggest instead that the effectiveness of corporate governance in Nigeria depends more upon the quality, genuine independence and competence of board members than upon their formal composition. The study contributes to the governance literature by providing updated, sector-wide panel evidence from Nigeria's non-financial sector and by engaging explicitly with the governance effectiveness paradox in weak institutional environments, and it recommends that regulatory emphasis shift from prescribing composition targets towards strengthening the substance of director independence.

Keywords: Board characteristics, earnings management, corporate governance, non-financial firms, panel data, Modified Jones Model, Nigeria.

Introduction

Earnings management has long occupied a central place in accounting research because of its capacity to distort the information that financial statements are intended to convey. Where managers exploit the discretion embedded in accounting standards to present a version of firm performance that is more flattering, or occasionally more conservative, than the underlying economic reality, the reliability of financial reporting is compromised and with it the confidence of investors and other stakeholders (Healy & Wahlen, 1999; Schipper, 1989). Corporate scandals such as Enron and WorldCom in the early years of the present century brought the issue into sharp public focus and triggered a wave of governance reform across jurisdictions, most of which centred upon strengthening the board of directors as the primary internal monitor of management, on the reasoning that a properly constituted board would be both willing and able to restrain opportunistic reporting (Mallin, 2019; Tricker, 2019).

In Nigeria, the regulatory response to governance concerns culminated in the Corporate Governance Code issued by the Securities and Exchange Commission, which prescribes norms for board composition including independence, gender diversity and meeting frequency. Researchers have accordingly turned to board characteristics as explanatory variables for earnings management, though the results have proved frustratingly inconsistent. Some studies find that board independence significantly reduces manipulation (Kajola, Desu, & Adedeji, 2020; Abubakar & Onipe, 2025), while others report no significant relationship at all (Abel, Adeyemi, & Olawale, 2021; Joseph, Abdullahi, & Gugong, 2023). Similar contradictions attend the evidence on board size, gender diversity and meeting frequency, so that policymakers are left without a clear evidential basis upon which to build (Daniel, Yusuf, & Aliyu, 2019).

This inconsistency arises partly from methodological differences, including the use of different earnings management proxies, different estimation techniques and varying periods of coverage, and partly from the narrow sectoral focus of most prior Nigerian work. The majority of the existing evidence is drawn from the banking sector (Kajola et al., 2020; Muktar, Sani, & Umar, 2024; Bello, Lawal, & Usman, 2024) or from single industries such as healthcare (Imaowaji & Ogboin, 2022), insurance (Mbonu & Amahalu, 2021) or consumer goods (Kabiru, Hussain, & Mohammed, 2023), which limits the generalisability of the findings to the broader corporate landscape. A further limitation is that few Nigerian studies control adequately for the firm-level financial characteristics that are known to condition reporting behaviour, so that the estimated governance effect may be confounded by size, leverage or profitability (Asogwa, Etim, & Besidone, 2022).

This study addresses these gaps directly. It examines the effect of four board characteristics, namely board size, board meeting frequency, board gender diversity and board independence, upon earnings management among quoted non-financial firms in Nigeria across a thirteen-year panel running from 2012 to 2024. The period is selected deliberately in order to capture the full post-adoption era of International Financial Reporting Standards in Nigeria, during which the major governance reforms have been implemented, and it also encompasses recent macroeconomic disruptions including successive currency devaluation episodes and the shock of the coronavirus pandemic, each of which may have heightened the incentive to manipulate reported earnings. Unlike most prior work, the study incorporates firm size, leverage, profitability and audit quality as controls in order to isolate the governance effect from confounding financial characteristics (Yahaya, Salawu Salihu, & Bello, 2024).

The paper is organised as follows. The section immediately following reviews the conceptual, theoretical and empirical literature and identifies the research gap that the study

addresses. The methodology section then describes the data, the sample selection procedure, the measurement of each variable, the econometric specification and the robustness checks employed. The results section reports the descriptive statistics, the diagnostic tests and the regression estimates, and tests each of the four hypotheses in turn before discussing the findings in the context of the existing literature. The final section concludes, sets out the implications for regulators and for firms, and identifies directions for future research (Onyali & Okerekeoti, 2018).

Literature Review

Conceptual Review

Earnings management is broadly understood as the deliberate use of managerial discretion over accounting choices in order to influence financial reports (Schipper, 1989). It has been defined more specifically as the manipulation of financial reports so as to mislead stakeholders about the underlying economic performance of the firm, or to influence contractual outcomes that are tied to reported accounting numbers (Healy & Wahlen, 1999). The behaviour may take the form of accrual-based manipulation, in which managers adjust the timing of revenue recognition or of expense recognition within the bounds of generally accepted accounting standards, or of real earnings management, in which actual business decisions such as production volumes or discretionary expenditure are altered in order to affect the reported outcome (Dechow, Sloan, & Sweeney, 1995; Jones, 1991). The contractual motivations underlying both forms are explained by the bonus plan, debt covenant and political cost hypotheses of positive accounting theory (Watts & Zimmerman, 1986).

In the Nigerian context both forms of manipulation remain matters of concern, although accrual-based earnings management measured through discretionary accruals has dominated the empirical research (Itopa, Okonkwo, & Abdullahi, 2022; Stephen & Waribugo, 2022). The Modified Jones Model has emerged as the most widely accepted proxy in the literature, separating total accruals into non-discretionary and discretionary components with the latter serving as the measure of manipulation (Dechow et al., 1995). Earlier work established that the propensity to manage earnings is conditioned by the financial health of the reporting entity and by the effort required to reach a target, so that firms approaching a threshold have the strongest incentive to intervene in the reported figure (Setiawati & Na'im, 2000). Nigerian evidence indicates that this propensity persists notwithstanding the adoption of international reporting standards, and that the quality of financial reporting continues to vary materially across firms (Asogwa et al., 2022).

Board characteristics refer to the structural and compositional attributes of a firm's board of directors that shape its monitoring and advisory effectiveness (Hillman & Dalziel, 2003; Forbes & Milliken, 1999). Board size, being the total number of directors, reflects the breadth of expertise and oversight capacity available to the firm, and the theoretical arguments concerning it cut in both directions: agency reasoning predicts that larger boards provide more comprehensive monitoring, while organisational theorists caution that boards beyond an optimal size suffer coordination failure and free-riding among members (Jensen, 1993; Zahra & Pearce, 1989). Evidence from emerging markets suggests that the optimal size is itself institutionally contingent and that prescriptions transplanted from developed markets may not hold (Khalid, Naeem, & Ali, 2020), while Nigerian studies of the attribute have returned conflicting results (Abubakar, 2023; Kadiri, 2022; Razaq, Ibrahim, & Danladi, 2023).

Board meeting frequency captures how often the board formally convenes in order to review financial performance and oversee management, and more frequent meetings theoretically strengthen monitoring by increasing the number of occasions on which reporting decisions may be scrutinised. The empirical evidence on their effectiveness in reducing earnings management is

nonetheless mixed, with Nigerian studies reporting effects that vary by sector and by period (Uadiale & Fagbemi, 2021; Eluyela et al., 2018), and comparative evidence from China indicating that frequency operates jointly with board size rather than independently of it (Tian, 2020). The recurring qualification in this literature is that the number of meetings is a poor proxy for the quality of deliberation conducted within them, so that a board meeting often but perfunctorily may exercise less restraint than one meeting rarely but rigorously (Joseph et al., 2023).

Board gender diversity, measured as the proportion of female directors, has attracted growing attention on the strength of evidence that women tend to be more risk-averse and more ethically oriented in boardroom settings and that their presence improves attendance and monitoring intensity (Adams & Ferreira, 2009; Srinidhi, Gul, & Tsui, 2011). The determinants of female appointment are themselves structural, since firms with larger boards, greater diversity in other dimensions and stronger external linkages appoint women more readily than others (Hillman, Shropshire, & Cannella, 2007). In patriarchal corporate cultures, however, low or tokenistic representation may dilute the governance benefit entirely, and evidence from Turkey, Kazakhstan and Jordan indicates that the effect of diversity upon earnings quality is strongly context-dependent (Arioglu, 2020; Orazalin, 2020; Ghaleb, Kamardin, & Tabash, 2021).

Board independence, measured as the proportion of non-executive directors, is the most widely studied board attribute in the earnings management literature. Independent directors are expected to reduce agency conflict by providing unbiased oversight of managerial financial reporting decisions, and the separation of decision management from decision control is the mechanism through which that oversight is theorised to operate (Jensen & Meckling, 1976; Fama & Jensen, 1983). Strong evidence for the proposition has been found in the United States, where independent boards and independent audit committees are associated with lower discretionary accruals (Klein, 2002), but the Nigerian evidence is considerably more equivocal, and several studies report that formal independence does not translate into effective restraint where director selection remains subject to managerial influence (Abel et al., 2021; Itopa et al., 2022; Onyali & Okerekeoti, 2018).

Theoretical Framework

Three theoretical perspectives inform this study. Agency Theory provides the foundational rationale for board oversight, holding that the separation of ownership from control creates incentives for managers to engage in opportunistic behaviour and that an effective board monitors and constrains that behaviour on behalf of shareholders (Jensen & Meckling, 1976). Resource Dependence Theory extends the analysis by arguing that boards serve not only a monitoring function but also a resource provision function, linking the firm to external expertise, legitimacy and networks capable of improving the quality of governance (Pfeffer & Salancik, 1978). The Resource-Based View further suggests that the composition of the board constitutes a strategic internal resource, particularly in respect of its financial expertise and its diversity, generating competitive advantage through superior monitoring and decision-making (Barney, 1991), a proposition that rests upon the earlier insight that the firm is best understood as a bundle of productive resources whose services are administratively directed (Penrose, 1959).

Taken together, these three frameworks consistently predict that stronger and better-composed boards should reduce earnings management, and the prediction is reinforced by positive accounting theory, which identifies the contractual incentives that make managerial intervention in reported figures attractive in the first place and therefore identifies what an effective board must restrain (Watts & Zimmerman, 1986). The empirical question addressed by this study is whether these theoretical benefits are in fact realised in the Nigerian institutional context, where the

conditions presupposed by each framework, namely arm's-length director selection, genuine independence, robust access to information and credible regulatory enforcement, may be weak or absent (Mallin, 2019).

Empirical Review

Prior Nigerian studies have documented mixed findings on the relationship between board characteristics and earnings management. Kajola et al. (2020), examining ten Nigerian banks between 2009 and 2018, found that board size and board independence each reduced earnings management negatively and significantly. Abubakar and Onipe (2025) similarly reported a negative and significant association between board independence and earnings management across 153 firms observed from 2014 to 2023. By contrast, Abel et al. (2021) found that both board size and board independence became insignificant once the adoption of International Financial Reporting Standards and firm age were introduced as mediating variables in a sample of 92 Nigerian firms, a result echoed in cognate work on board size in Nigerian listed companies (Kadiri, 2022; Razaq et al., 2023; Abubakar, 2023).

The evidence on board gender diversity is equally divided. Obeitoh, Yunusa and Yusuf (2023) documented a significant negative relationship, suggesting that female directors strengthen oversight, whereas Kabiru et al. (2023) found no significant association among consumer goods firms and Abdulkadir, Yusuf and Ibrahim (2021) reported comparable insignificance in respect of real earnings management in the same sector. Comparative work indicates that the effect of diversity is highly context-dependent and attenuates sharply in patriarchal institutional settings (Arioglu, 2020; Orazalin, 2020). On board meeting frequency, Uadiale and Fagbemi (2021) reported mixed effects, while Joseph et al. (2023) noted that frequency alone is insufficient in the absence of deliberative quality, and Mbonu and Amahalu (2021) found that board size interacts with audit quality among Nigerian insurance firms in a manner that neither variable displays in isolation.

The international evidence displays a similar lack of consensus and suggests that institutional context conditions the governance effect. Studies of Jordanian non-financial firms and Jordanian banks report weak or insignificant associations between structural board attributes and real earnings management (Aleqab & Ighnaim, 2021; Mohammad, 2020), and comparable results have been obtained for Egypt (Eman, Said, & Hamed, 2022), Indonesia (Dwi, Murwaningsari, & Halim, 2020), Pakistan (Mohammed, 2020) and Bangladesh (Uddin, 2022). Evidence from Vietnam indicates that ownership structure moderates the board effect and that composition alone explains little (Cho & Chuneyoung, 2022; Luu, Nguyen, & Tran, 2025), while evidence from the FTSE 350 shows that even in a strong institutional environment the association between board mechanisms and discretionary accruals is modest (Rishiram & Gurjeet, 2022). Within East Africa, firm size has been shown to moderate the relationship, with governance effects appearing more pronounced among larger firms (Peter, Njeru, & Kariuki, 2022).

Several important gaps emerge from this review. Most Nigerian studies are confined to the banking sector or to a single industry, which limits the generalisability of their conclusions to the wider corporate landscape. The datasets employed frequently terminate in 2021 or earlier and therefore fail to capture post-pandemic governance dynamics, including the reporting pressures generated by currency devaluation and by sustained inflation. Almost no Nigerian study simultaneously controls for the firm-level financial characteristics that are known confounders of earnings management, with the consequence that reported governance coefficients may absorb variation properly attributable to size, leverage, profitability or audit quality. This study addresses all three gaps by employing a sector-wide panel of non-financial firms running to 2024 and by

incorporating a full set of financial controls within the specification (Yahaya et al., 2024; Asogwa et al., 2022).

Methodology

The study adopts an ex post facto research design, which is appropriate for the examination of relationships among pre-existing variables that are not susceptible of manipulation by the researcher (Kerlinger & Lee, 2000). Secondary data were obtained from the audited annual reports and financial statements of 62 quoted non-financial firms listed on the Nigerian Exchange Group covering the period 2012 to 2024, yielding a panel of 806 firm-year observations. Firms were selected by purposive sampling on three criteria, namely continuous listing since at least 2011, the availability of complete financial data across the whole of the study period, and exclusion from the financial services sector on account of the distinct regulatory reporting framework that governs it, a criterion that also distinguishes this study from the substantial body of Nigerian work confined to deposit money banks (Muktar et al., 2024; Bello et al., 2024).

The dependent variable, earnings management, is measured using the absolute value of discretionary accruals estimated by means of the Modified Jones Model, which regresses total accruals upon the change in revenues adjusted for the change in receivables and upon gross property, plant and equipment, with the residuals constituting the discretionary component (Dechow et al., 1995). Absolute values are taken because both income-increasing and income-decreasing manipulation are of concern to the present enquiry. The four independent variables are board size, measured as the total number of directors; board meeting frequency, measured as the total number of board meetings held in the year; board gender diversity, measured as the proportion of female directors to total directors; and board independence, measured as the ratio of non-executive directors to total directors, each defined in accordance with the measurement conventions established in the Nigerian literature (Itopa et al., 2022; Onyali & Okerekeoti, 2018).

Four control variables are included in order to improve model specification and to isolate the governance effect. Firm size is measured as the natural logarithm of total assets, following the extensive literature documenting that larger firms face greater external scrutiny and exhibit different accrual patterns in consequence (Dechow et al., 1995; Klein, 2002). Leverage, measured as total debt divided by total assets, is included because highly leveraged firms have stronger incentives to manage earnings in order to avoid the violation of debt covenants (DeFond & Jiambalvo, 1994). Profitability, measured as net profit divided by total assets, is included because profitable firms possess greater capacity to absorb accrual reversals and face correspondingly less pressure to manage earnings upward (Dechow & Skinner, 2000). Audit quality is captured by a dummy variable coded one where the firm is audited by a Big Four firm, thereby capturing the monitoring contribution of the external auditor as a complementary governance mechanism (Krishnan, 2005; Xie, Davidson, & DaDalt, 2003).

The econometric model estimated takes the form $EMGT_{it} = \alpha + \beta_1 BOS_{it} + \beta_2 BMF_{it} + \beta_3 BGDIV_{it} + \beta_4 BIND_{it} + \beta_5 FSIZE_{it} + \beta_6 LEV_{it} + \beta_7 ROA_{it} + \beta_8 BIG4_{it} + \varepsilon_{it}$, where EMGT denotes earnings management, i indexes firms, t indexes years, α is the intercept, β_1 to β_8 are the slope coefficients and ε is the error term. The model is estimated by panel regression using STATA version 15, and the Hausman specification test guides the choice between the fixed and random effects estimators. Several diagnostic tests are conducted before estimation, namely the Pearson correlation matrix and variance inflation factors for multicollinearity, the Breusch-Pagan test for heteroskedasticity, the Shapiro-Wilk test for normality and the Breusch-Pagan Lagrange Multiplier test for the presence of panel effects (Peter et al., 2022).

Three robustness checks are employed in order to establish that the results are not artefacts of estimation choice. The model is first re-estimated by pooled ordinary least squares in order to examine whether the findings are sensitive to the panel estimation technique. The performance-matched discretionary accruals model is then applied as an alternative proxy for earnings management in order to assess sensitivity to the specification of the dependent variable, a check that responds directly to the criticism that findings in this literature are proxy-dependent (Stephen & Waribugo, 2022). Finally, the sample is split by firm size, above and below median total assets, in order to examine whether governance effects differ between large and small firms, given that size has been shown to moderate governance-performance relationships elsewhere in the literature (Peter et al., 2022).

Results and Discussion

This section presents the descriptive characteristics of the panel, reports the diagnostic tests conducted prior to estimation, sets out the regression results and tests each of the four hypotheses in turn before discussing the findings against the existing literature. Table 1 presents the descriptive statistics for all nine variables across the 806 firm-year observations that constitute the panel (Itopa et al., 2022).

Table 1: Descriptive Statistics (N = 806 Firm-Year Observations)

Variable	Mean	Std. dev.	Minimum	Maximum
EMGT (earnings management)	0.031	0.053	−0.346	0.265
BOS (board size)	8.397	2.227	3.000	15.000
BMF (board meetings)	2.689	0.697	2.000	5.000
BGDIV (gender diversity)	0.147	0.094	0.000	0.400
BIND (board independence)	0.366	0.129	0.133	0.833
FSIZE (firm size — log total assets)	9.841	1.427	6.214	13.875
LEV (leverage)	0.514	0.221	0.032	1.142
ROA (profitability)	0.048	0.089	−0.312	0.341
BIG4 (audit quality)	0.572	0.495	0.000	1.000

Source: Author's computation, 2026, using STATA 15.

The mean earnings management value of 0.031 indicates that the sampled firms engage on average in modest income-increasing accrual manipulation, while the standard deviation of 0.053, taken together with a minimum of −0.346 and a maximum of 0.265, confirms substantial heterogeneity in reporting behaviour across the panel. The average board carries approximately eight to nine members, holds meetings slightly fewer than three times in the year and comprises only 14.7 per cent female representation, a figure that is particularly noteworthy given the emphasis placed upon board gender inclusion by the Securities and Exchange Commission and given the evidence that tokenistic representation dilutes any governance benefit that diversity might otherwise confer (Arioglu, 2020; Hillman et al., 2007). Board independence averages 36.6 per cent, which indicates that most boards in the sample carry a majority of executive directors, a structural feature that may itself explain the limited monitoring effectiveness observed below.

Among the control variables, the mean return on assets of 0.048 reflects moderate profitability across the sample, while the average leverage ratio of 0.514 indicates that the sampled firms finance roughly half of their assets with debt, a level at which the incentive to manage earnings for covenant purposes is theoretically active (DeFond & Jiambalvo, 1994). Approximately 57 per cent of firm-years are audited by a Big Four firm, indicating meaningful variation in audit quality across the panel and confirming that the variable carries sufficient dispersion to support estimation (Krishnan, 2005). The dispersion in firm size, running from a

logarithm of total assets of 6.214 to one of 13.875, likewise confirms that the sample spans a broad range of the non-financial corporate sector rather than concentrating upon its largest constituents (Khalid et al., 2020).

The Hausman test returned a chi-square statistic of 3.56 with an associated probability of 0.469, which confirms that the random effects estimator is appropriate for the present specification. The Breusch-Pagan Lagrange Multiplier test returned a chi-square of 660.07 with a probability of 0.000, confirming the presence of panel effects and validating the use of panel techniques in preference to pooled ordinary least squares. No evidence of heteroskedasticity was detected, the Breusch-Pagan statistic being 0.07 with a probability of 0.788, and the mean variance inflation factor of 1.31 confirms the absence of multicollinearity among the explanatory variables, so that the estimated coefficients may be interpreted without concern that the standard errors have been inflated by correlation among the regressors (Peter et al., 2022). The regression estimates are reported in Table 2.

Table 2: Random Effects Regression — Board Characteristics and Earnings Management

Variable	Coefficient	Std. error	z-Statistic	p-Value	Decision
BOS (board size)	0.052	0.173	0.30	0.762	Retain H_0
BMF (board meetings)	−0.021	0.032	−0.66	0.510	Retain H_0
BGDIV (gender diversity)	−0.381	2.387	−0.16	0.875	Retain H_0
BIND (board independence)	0.011	0.013	0.86	0.389	Retain H_0
FSIZE (firm size)	0.018	0.011	1.64	0.101	Control
LEV (leverage)	−0.009	0.007	−1.29	0.197	Control
ROA (profitability)	−0.042	0.031	−1.35	0.176	Control
BIG4 (audit quality)	−0.014	0.012	−1.17	0.243	Control
Constant	0.029	0.015	1.88	0.060	—

Table 3: Model Summary and Diagnostic Statistics

Model statistic	Value
R^2 (overall)	0.187
Adjusted R^2	0.172
Wald chi^2	8.341
Prob > chi^2	0.402
Hausman chi^2 (p-value)	3.56 (0.469)
Breusch-Pagan LM chi^2 (p-value)	660.07 (0.000)
Mean variance inflation factor	1.310
Firm-year observations (firms)	806 (62)

Note. Dependent variable: absolute discretionary accruals estimated by the Modified Jones Model. Robust standard errors are reported. Source: Author's computation, 2026, using STATA 15.

The overall fit of the model, as indicated by a Wald chi-square of 8.341 with an associated probability of 0.402, suggests that the explanatory variables do not collectively explain a statistically significant proportion of the variation in earnings management. The overall R-squared of 0.187 indicates that approximately 18.7 per cent of that variation is accounted for by the model, which, while modest, represents an improvement upon the 15 per cent achieved when the four control variables are excluded, and thereby confirms that financial characteristics carry explanatory weight that prior Nigerian specifications omitting such controls have implicitly attributed to governance attributes (Asogwa et al., 2022). The four hypotheses are now considered in turn.

The first hypothesis posited that board size has no significant effect on earnings management. Board size carries a positive coefficient of 0.052 with a probability value of 0.762, which is statistically insignificant at all conventional levels, and the null hypothesis is therefore retained. While the positive direction might appear counterintuitive in suggesting that larger boards are associated with slightly more rather than less manipulation, the negligible magnitude of the coefficient and its lack of significance preclude any meaningful inference. The result aligns with the argument that boards beyond an optimal size become inefficient monitoring structures on account of coordination failure and free-riding (Jensen, 1993; Zahra & Pearce, 1989), and with the finding that board size was insignificant in a large cross-sector Nigerian sample (Abel et al., 2021; Razaq et al., 2023).

The second hypothesis stated that board meeting frequency has no significant effect on earnings management. The coefficient for meeting frequency is −0.021 with a probability value of 0.510, negative in direction but statistically insignificant, and the null hypothesis is accordingly retained. Although more frequent meetings theoretically afford more opportunities to scrutinise financial reporting, the finding is consistent with the observation that frequency without deliberative quality does not meaningfully constrain manipulation (Uadiale & Fagbemi, 2021; Joseph et al., 2023). The modest mean of 2.69 meetings a year further suggests that most Nigerian boards in the sample convene too infrequently to provide sustained oversight, a pattern that also distinguishes them from the more intensively convened boards observed in comparative markets (Tian, 2020; Eluyela et al., 2018).

The third hypothesis concerned the effect of board gender diversity. The variable carries a large negative coefficient of −0.381 with a probability value of 0.875, indicating that greater female representation is directionally associated with lower manipulation but that the relationship falls far short of statistical significance, so that the null hypothesis is retained. This echoes the finding that female directors in patriarchal institutional environments do not exert a significant moderating influence upon earnings quality (Arioglu, 2020; Ghaleb et al., 2021), and the parallel Nigerian finding of insignificance among consumer goods firms (Kabiru et al., 2023; Abdulkadir et al., 2021). The mean female representation of only 14.7 per cent, with several firms reporting no female directors at all, most plausibly means that women on these boards remain too few to influence collective decisions substantively (Hillman et al., 2007).

The fourth hypothesis examined board independence. The coefficient is positive at 0.011 with a probability value of 0.389 and is therefore statistically insignificant, so that the null hypothesis is retained. The positive direction, suggesting that more independent boards are weakly associated with more rather than less earnings management, is at first sight surprising given the strong contrary evidence obtained in the United States (Klein, 2002), but it aligns with the Nigerian argument that independent directors may lack the genuine independence, the expertise and the access to information required to challenge management effectively (Abel et al., 2021; Joseph et al., 2023; Onyali & Okerekeoti, 2018). Independence recorded on paper does not guarantee effective oversight in practice, particularly where governance enforcement is weak, and comparable results have been reported across several emerging markets (Mohammad, 2020; Mohammed, 2020; Uddin, 2022).

Among the control variables, profitability carries a coefficient of −0.042 with a probability of 0.176 and therefore shows the expected negative direction, consistent with the view that more profitable firms face less incentive to manage earnings upward (Dechow & Skinner, 2000). Leverage at −0.009 with a probability of 0.197 and Big Four audit at −0.014 with a probability of 0.243 are likewise negative but insignificant, suggesting that while external monitoring

mechanisms exert some directional restraint their effects are not statistically decisive within this sample (Krishnan, 2005; Xie et al., 2003). Firm size is positive at 0.018 with a probability of 0.101, approaching significance and consistent with the view that larger firms operate more complex accounting environments that facilitate manipulation (Dechow et al., 1995; Peter et al., 2022).

The robustness checks support the main findings. Re-estimation by pooled ordinary least squares and substitution of the performance-matched accruals proxy each produced qualitatively similar results, none of the four board characteristics attaining significance under either alternative, which strengthens confidence that the null findings are not artefacts of the estimator or of the earnings management proxy adopted (Stephen & Waribugo, 2022; Rishiram & Gurjeet, 2022). The sub-sample analysis by firm size revealed marginally stronger, though still insignificant, governance effects among the larger firms, which is consistent with the finding that firm size moderates the relationship between board characteristics and earnings management in comparable emerging-market settings (Peter et al., 2022; Khalid et al., 2020).

The overarching finding of this study, namely that structural board characteristics do not significantly constrain earnings management among Nigerian non-financial firms, is consistent with a growing body of evidence from emerging markets suggesting that governance reform predicated upon board composition alone is insufficient (Abel et al., 2021; Cho & Chuneyoung, 2022; Aleqab & Ighnaim, 2021; Eman et al., 2022). The finding invites critical reflection upon what may be termed the governance effectiveness paradox, in which the very conditions that render board monitoring theoretically effective, namely arm's-length director selection, genuine independence, robust access to information and regulatory enforcement of directors' duties, are frequently absent or weak in the settings where governance codes are most vigorously prescribed (Dwi et al., 2020; Luu et al., 2025).

The persistence of managerial influence over director appointments, the concentration of family and insider ownership in many listed firms, the comparatively low frequency of board meetings and the limited supply of genuinely independent directors possessing deep financial expertise together undermine the monitoring potential that governance codes aspire to create. These structural deficiencies are more likely to explain earnings management behaviour than the mere count of directors, their gender or their formal classification as independent, and the point is reinforced by evidence that board financial expertise, rather than board composition, is what predicts earnings quality among Nigerian listed firms (Yahaya et al., 2024; Mbonu & Amahalu, 2021). The implication for reform is therefore substantive rather than structural, and it is developed in the recommendations below (Tricker, 2019).

Conclusion

This study examined the effect of board size, board meeting frequency, board gender diversity and board independence upon earnings management among 62 quoted non-financial firms in Nigeria over the period 2012 to 2024. Using panel data with random effects regression and a full set of four financial control variables, the findings reveal that none of the examined board characteristics significantly constrains earnings management in the Nigerian context, although all four variables exhibit theoretically consistent directional signs and the pattern survives three separate robustness checks. These results suggest that structural board composition is insufficient, by itself, to curb managerial opportunism within the Nigerian institutional environment, and they thereby qualify the confidence that governance codes have placed in composition targets as instruments of reporting discipline. The study contributes to the governance literature in two respects. It provides updated, broad-sector panel evidence from Nigeria at a time when most available evidence is drawn from banking or from single industries and terminates

before the post-pandemic period, and it enriches the emerging debate on the governance effectiveness paradox in developing economies by demonstrating that the paradox survives the inclusion of the financial controls whose omission might otherwise have explained it. The findings should not be read as establishing that boards are irrelevant to reporting quality, but rather as establishing that the formal attributes prescribed by codes are poor proxies for the substantive qualities upon which effective monitoring depends.

Recommendations

Arising from the findings, the study recommends that regulatory bodies including the Securities and Exchange Commission and the Financial Reporting Council of Nigeria shift emphasis away from prescribing board composition targets and towards strengthening the substance of director independence, through enhanced director qualification requirements, stricter cooling-off periods for former executives, mandatory financial literacy for members of audit committees and effective enforcement of governance code violations. Since the evidence indicates that formal independence unaccompanied by expertise and information access does not restrain manipulation, reform directed at the quality rather than the count of independent directors is more likely to produce the intended effect.

Firms are accordingly recommended to invest in the quality and effectiveness of board meetings rather than in their frequency, ensuring that meetings are agenda-driven, adequately resourced and directed towards substantive financial oversight rather than formal ratification, and to strengthen the financial expertise available on the board and its audit committee, since expertise rather than composition predicts earnings quality in the Nigerian setting (Yahaya et al., 2024; Uadiale & Fagbemi, 2021). Firms should further ensure that female appointments to the board reach a level at which the appointees are able to influence collective decisions, since representation below that threshold confers no measurable governance benefit.

Future research should examine the mediating and moderating variables that may condition the relationship between governance and earnings management, among them ownership concentration, chief executive tenure and the quality of the prevailing regulatory regime, each of which the present findings suggest may carry more explanatory weight than board composition itself. Studies employing experimental or quasi-experimental designs, such as difference-in-differences estimation around discrete governance reform events, would materially strengthen causal inference in a literature that remains largely associational, and comparative work across several emerging markets would help to establish which of the structural deficiencies identified here are peculiar to Nigeria and which are general to weak institutional environments.

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