

Governance at the Helm: Audit Committee Structure and Discretionary Accrual-Based Earnings Management

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Abstract

The motivation for this study stems from growing concerns about the weak value relevance of sustainability reporting in emerging markets and the need for effective governance mechanisms to enhance stakeholder confidence. This study examined sustainability reporting, board independence and corporate value of listed industrial goods companies in Nigeria. An ex-post facto research design was employed using secondary data from annual reports of sampled listed industrial goods companies for the period 2013–2024. Corporate value was proxied by Price-to-Book Value (PBV), while sustainability reporting was disaggregated into environmental, social, and economic disclosure. Board independence served as the moderating variable, with firm leverage, size, and age as controls. Data were analyzed using the Random-Effects regression model. The results reveal that environmental sustainability reporting has a significant negative relationship with corporate value, implying that such activities may be perceived as cost inducing rather than value creating. Economic SR shows a significant positive relationship, whereas social SR is insignificant. Board independence exerts a strong positive and significant influence on corporate value, indicating that governance structures enhance investors' confidence in sustainability practices. The study contributes to corporate governance literature by demonstrating that board independence strengthens the value relevance of sustainability disclosures in Nigeria's industrial goods sector. It recommends among others that firms improve board composition and transparency to foster sustainable value creation.

Keywords: Board independence, sustainability reporting, corporate value.

P-ISSN: 2315-9391 AJAF June 2026, 10(1) 33–48

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1. Introduction

Corporate governance has become a central pillar in modern corporate architecture, serving as a system of rules, controls, and institutional arrangements designed to ensure accountability, transparency, and the protection of stakeholder interests. It primarily addresses the agency problem arising from the separation of ownership from daily management activities and decisions. Corporate governance serves as control mechanism by aligning managerial actions with shareholders' wealth maximization objectives. This perspective is consistent with the agency theory framework, which posits that governance mechanisms are essential in constraining managerial opportunism and reducing information asymmetry between managers and stakeholders (Shleifer & Vishny, 1997). Consequently, the effectiveness of corporate governance structures has continually attracted sustained attention from regulators, policymakers, and the academic community.

The growing concern for corporate governance effectiveness is largely driven by the recurrence of major corporate scandals such as those involving Enron and WorldCom, which exposed systemic weaknesses in financial reporting oversight and internal control mechanisms. These corporate failures were widely attributed to aggressive earnings management practices that compromised the integrity of financial statements and undermined investor confidence. Empirical literature has consistently linked weak governance structures with higher incidences of financial misreporting and opportunistic managerial behaviour (Nguyen, 2024). As a result, regulatory reforms across jurisdictions have emphasized strengthening board-level monitoring mechanisms, particularly audit committees, to enhance financial reporting quality.

Earnings management remains one of the most extensively examined phenomena in accounting research due to its implications for financial reporting credibility. According to Healy and Wahlen (1999), earnings management occurs when managers exercise judgment in financial reporting and transaction structuring to alter financial statements either to mislead stakeholders or to influence contractual outcomes. This definition underscores the discretionary nature of accounting choices and highlights the potential for manipulation inherent in accrual-based accounting systems. In empirical studies, discretionary accruals are widely employed as a proxy for earnings management, as they capture the portion of accruals subject to managerial discretion and opportunistic behaviour (Healy & Wahlen, 1999; Abbadi et al., 2016).

The prevalence of earnings management has been documented across both developed and emerging economies, though it tends to be more pronounced in environments characterized by weak regulatory enforcement and limited investor protection. Managers are often motivated to engage in earnings manipulation for reasons such as compensation incentives, job security, capital market expectations, and contractual obligations tied to reported performance. While such practices may provide short-term benefits, they significantly impair earnings quality, distort resource allocation, and erode stakeholder trust in financial reporting systems (Healy & Wahlen, 1999; Brennan, 2021).

In Nigeria, the issue of earnings management is particularly salient given the history of corporate failures and financial reporting irregularities in both financial and non-financial sectors. Notable cases involving Cadbury Nigeria Plc and several distressed banks have been linked to financial statement manipulation and weak governance structures. These developments have intensified regulatory scrutiny and reinforced the need for effective corporate governance mechanisms capable of curbing managerial opportunism and enhancing financial reporting reliability.

Among the internal governance mechanisms, the audit committee plays a pivotal role in overseeing the financial reporting process. As a specialized subcommittee of the board of

directors, the audit committee is tasked with monitoring the integrity of financial statements, ensuring the effectiveness of internal control systems, and liaising with both internal and external auditors. Prior empirical studies suggest that key structural attributes of audit committees such as independence, financial expertise, size, and meeting frequency are critical in constraining earnings management practices (Klein, 2002; Bédard et al., 2004; Xie et al., 2003; Zadeh et al., 2023). For instance, evidence indicates that audit committee independence, expertise, and diligence are negatively associated with discretionary accrual-based earnings management. However, despite these insights, the literature remains inconclusive, with some studies reporting insignificant or context-dependent relationships.

Although substantial empirical work exists on the nexus between corporate governance and earnings management, several gaps remain unresolved. These include inconsistencies in findings, differences in measurement approaches for discretionary accruals, and limited focus on the structural configuration of audit committees, particularly within emerging market contexts. Furthermore, evolving corporate governance codes and institutional reforms necessitate continuous re-examination of governance mechanisms and their effectiveness in mitigating earnings manipulation.

Against this backdrop, this study investigates the influence of audit committee structure on discretionary accrual-based earnings management. By focusing on the structural attributes of audit committees, the study provides nuanced insights into how governance design shapes financial reporting behaviour. It contributes to the corporate governance literature by extending the discourse on audit committee effectiveness and offers policy-relevant implications for strengthening governance frameworks in emerging economies such as Nigeria.

2. Literature Review

This section reviews extant literature on audit committee structure and discretionary accrual-based earnings management. The review integrates conceptual, theoretical, and empirical perspectives to establish the relationship between governance structures and financial reporting behaviour. Corporate governance has been widely recognized as a critical mechanism for mitigating agency conflicts and enhancing financial reporting quality (Shleifer & Vishny, 1997; Khan et al., 2019). In particular, board committee structures, especially audit committees, have attracted considerable attention due to their oversight role in financial reporting and internal control systems (Mansor et al., 2013; Pramithasari & Yasa, 2016). The increasing incidence of earnings management and corporate failures has further intensified the need to examine the effectiveness of audit committee structures in constraining discretionary accruals (Healy & Wahlen, 1999; Uadiale, 2012).

2.1 Conceptual Review

Concept of Audit Committee

The audit committee is a key subcommittee of the board of directors responsible for overseeing financial reporting processes, internal controls, and audit functions (Uadiale, 2012). It serves as an internal governance mechanism that enhances transparency, accountability, and the credibility of financial disclosures (Christiani & Nugrahanti, 2014; Habbash, 2019). The committee is expected to monitor management behaviour, ensure compliance with regulatory frameworks, and safeguard the integrity of financial reporting (Mansor et al., 2013).

From an agency perspective, the audit committee functions as an independent monitoring body that reduces information asymmetry and aligns managerial actions with shareholders' interests (Jensen & Meckling, 1976; Shleifer & Vishny, 1997). Its effectiveness, however, depends on its structural attributes, including independence, expertise, size, and diligence.

Audit Committee Structure

Audit committee structure refers to the composition and operational characteristics of the committee that determine its monitoring effectiveness (Egbunike & Odum, 2018). Prior studies emphasize that governance effectiveness is contingent not merely on the existence of audit committees but on their structural configuration (Kesner, 1988; Egbunike & Odum, 2018).

Audit Committee Size

Audit committee size reflects the number of members on the committee. While larger committees provide diverse expertise and broader oversight, excessively large committees may lead to coordination inefficiencies and reduced effectiveness (Jamaludin et al., 2015; Yang et al., 2009).

Audit Committee Independence

Audit committee independence is measured by the proportion of non-executive or independent directors. Independent members enhance objectivity and reduce managerial influence, thereby strengthening monitoring effectiveness (Man, 2013; Samaila, 2014).

Audit Committee Financial Expertise

Financial expertise refers to the presence of members with accounting and financial knowledge. Such expertise improves the committee's ability to detect financial misstatements and constrain earnings manipulation (Jerry et al., 2018).

Audit Committee Meeting Frequency:

Meeting frequency reflects committee diligence and monitoring intensity. Frequent meetings enable timely review of financial reports and enhance oversight effectiveness (Uadiale, 2012; Mansor et al., 2013).

These attributes collectively determine the audit committee's capacity to curb managerial opportunism and improve earnings quality.

2.2 Concept of Earnings Management

Earnings management refers to the deliberate manipulation of financial reports by management through the use of accounting discretion to achieve desired objectives (Healy & Wahlen, 1999). It involves the selection of accounting policies, estimation techniques, and transaction timing to influence reported earnings (Man, 2013; Obigbemi et al., 2016). While some forms of earnings management may comply with accounting standards, aggressive practices distort financial reporting and mislead stakeholders (Schipper, 1989; Khan et al., 2019).

Earnings management is often motivated by compensation incentives, job security, capital market expectations, and contractual obligations (Guidry et al., 1996; Healy & Wahlen, 1999). These incentives create opportunities for managers to exploit the flexibility inherent in accounting standards.

Discretionary Accrual-Based Earnings Management

Discretionary accruals represent the portion of accruals subject to managerial discretion and are widely used as a proxy for earnings management (Jones, 1991; Dechow et al., 1995). They capture deviations from normal accounting practices and reflect opportunistic financial reporting behaviour.

The Modified Jones Model remains the most widely adopted approach for estimating discretionary accruals, as it improves the measurement of non-discretionary accruals and enhances detection of earnings manipulation (Dechow et al., 1995). Empirical literature consistently relies on discretionary accruals to assess the extent of earnings management across firms and jurisdictions.

Audit Committee Structure and Earnings Management

The literature provides strong evidence that corporate governance mechanisms, particularly audit committees, play a crucial role in constraining earnings management (Mansor et al., 2013;

Biswas et al., 2022). Effective audit committees enhance monitoring, reduce information asymmetry, and improve financial reporting quality (Christiani & Nugrahanti, 2014; Habbash, 2019).

Prior empirical studies suggest that key structural attributes of audit committees such as independence, financial expertise, size, and meeting frequency are critical in constraining earnings management practices (Klein, 2002; Xie et al., 2003; Bédard et al., 2004; Badolato et al., 2014). These attributes strengthen oversight functions and limit managerial discretion in financial reporting.

2.3 Theoretical Review

Agency Theory

Agency theory provides the primary theoretical foundation for this study. It explains the conflict of interest between principals (shareholders) and agents (managers), which arises from the separation of ownership and control (Jensen & Meckling, 1976). Managers may engage in earnings management to maximize personal benefits, thereby increasing agency costs.

Audit committees serve as monitoring mechanisms that reduce agency conflicts by overseeing financial reporting and constraining opportunistic behaviour (Fama & Jensen, 1983; Shleifer & Vishny, 1997). Effective audit committee structures enhance monitoring efficiency and reduce earnings manipulation.

Resource Dependence Theory

Resource dependence theory emphasizes the importance of expertise and resources within governance structures (Pfeffer & Salancik, 1978). Audit committee members with financial expertise and diverse skills provide valuable resources that enhance oversight effectiveness. Larger and more competent committees are therefore better equipped to detect and prevent earnings manipulation.

2.4 Empirical Review and Hypotheses Development

Audit Committee Size and Earnings Management

Audit committee size has been widely examined as a determinant of monitoring effectiveness. The literature suggests that larger committees may enhance oversight through diverse expertise and broader perspectives, thereby reducing earnings manipulation (Yang et al., 2009; Jamaludin et al., 2015). However, excessively large committees may suffer from coordination challenges and free-rider problems, which could weaken their monitoring capacity (Egbunike & Odum, 2018).

Empirical evidence remains inconclusive. Some studies document a negative relationship between audit committee size and discretionary accruals, suggesting improved monitoring, while others report insignificant or even positive associations due to inefficiencies in larger committees. These mixed findings indicate that the effectiveness of committee size may depend on contextual and institutional factors.

Based on the foregoing, this study hypothesizes that:

H01: Audit committee size has non-significant effect on discretionary accrual-based earnings management.

Audit Committee Independence and Earnings Management

Audit committee independence is widely recognized as a critical governance attribute that enhances objectivity and reduces managerial influence. Independent members are more likely to challenge management decisions and ensure the integrity of financial reporting (Man, 2013; Samaila, 2014).

Empirical studies consistently report a negative relationship between audit committee independence and earnings management. For instance, independent audit committees are found to constrain discretionary accruals and improve earnings quality (Klein, 2002; Xie et al., 2003).

This is because independence strengthens monitoring effectiveness and reduces agency conflicts (Jensen & Meckling, 1976).

However, some studies suggest that independence alone may not guarantee effectiveness without complementary attributes such as expertise and diligence. This suggests the need for further empirical validation.

Accordingly, the study posits that:

H02: Audit committee independence has no significant effect on discretionary accrual-based earnings management.

Audit Committee Financial Expertise and Earnings Management

Financial expertise is considered a vital attribute that enhances the effectiveness of audit committees. Members with accounting and financial knowledge are better equipped to understand complex financial reports and detect earnings manipulation (Jerry et al., 2018).

Empirical evidence indicates that audit committees with financial expertise are associated with lower levels of discretionary accruals, suggesting improved monitoring of financial reporting (Bédard et al., 2004; Badolato et al., 2014). Financially literate members enhance the committee's ability to scrutinize accounting estimates and challenge managerial discretion.

Nonetheless, some studies report mixed findings, particularly in environments where expertise does not translate into effective independence or authority. This highlights the importance of examining financial expertise within specific institutional contexts.

Thus, the study hypothesizes that:

H03: Audit committee financial expertise has no significant effect on discretionary accrual-based earnings management.

Audit Committee Gender Representation and Earnings Management

Audit committee gender representation has increasingly gained attention in corporate governance literature due to its potential influence on monitoring effectiveness and financial reporting quality. Gender diversity within governance structures is argued to enhance decision-making, improve ethical standards, and strengthen oversight functions. Female directors are often associated with greater diligence, risk aversion, and sensitivity to ethical issues, which may contribute to constraining opportunistic financial reporting behaviour (Adamu, et al., 2017; Githaiga, et al., 2022).

From a theoretical standpoint, agency theory suggests that diverse boards, including gender-diverse audit committees, are better positioned to reduce agency conflicts through improved monitoring. Similarly, resource dependence theory posits that gender diversity brings varied perspectives, experiences, and competencies that enhance the effectiveness of governance mechanisms. In this regard, the inclusion of women in audit committees may strengthen independence, improve scrutiny of financial reports, and reduce earnings manipulation.

Empirically, prior studies provide mixed evidence on the relationship between gender representation and earnings management. Some studies report that higher female representation on audit committees is associated with lower discretionary accruals, suggesting improved financial reporting quality and reduced earnings manipulation (Githaiga et al., 2022). This is attributed to the tendency of female directors to exhibit higher ethical standards and stronger monitoring behaviour. In contrast, other studies find insignificant or weak relationships, particularly in emerging markets where female participation in governance structures remains low and may not translate into substantive influence (Adamu et al., 2017). The inconsistency in empirical findings may be attributed to contextual factors such as institutional environment, cultural dynamics, and the relatively low proportion of women on audit committees. Where gender representation is minimal, its impact on governance outcomes may be limited. Furthermore, the effectiveness of gender diversity may depend on

complementary factors such as expertise, independence, and the overall strength of governance frameworks.

Given the mixed empirical evidence and the need for further validation within emerging market contexts, this study examines the effect of audit committee gender representation on discretionary accrual-based earnings management.

Based on the foregoing empirical review and theoretical arguments, the study formulates the following null hypothesis:

H04: Audit committee gender representation has no significant effect on discretionary accrual-based earnings management.

3. Methodology

This study employs a quantitative research approach to examine the effect of audit committee structure on discretionary accrual-based earnings management among listed consumer goods firms in Nigeria. An ex-post facto research design is adopted, as the study relies on historical data obtained from firms' annual reports without manipulation of variables. The study is grounded in the positivist paradigm, which emphasizes objective measurement and statistical analysis of observable data.

The population comprises 21 consumer goods companies listed on the Nigerian Exchange Group (NGX) as at 31 December 2024. A sample of 16 firms is selected using purposive sampling based on continuous listing prior to 2012, non-delisting, and availability of complete data from 2012 to 2024. Secondary data are sourced from annual reports and NGX publications.

The dependent variable, earnings management (EMG), is proxied by discretionary accruals estimated using the Modified Jones Model (Dechow et al., 1995), with the absolute value applied to capture the magnitude of manipulation. The independent variables include audit committee size (ACZ), audit committee independence (ACI), audit committee financial expertise (ACF), and audit committee meeting frequency (ACM). Control variables include firm size (FSZ), firm age (FAG), leverage (LEV), and sales growth (SGW), measured using standard proxies.

The functional relationship is specified as:

$$EMG = f(ACZ, ACI, ACF, ACM, FSZ, FAG, LEV, SGW)$$

The econometric model is expressed as:

$$EMG_{it} = \beta_0 + \beta_1 ACZ_{it} + \beta_2 ACI_{it} + \beta_3 ACF_{it} + \beta_4 ACM_{it} + \beta_5 FSZ_{it} + \beta_6 FAG_{it} + \beta_7 LEV_{it} + \beta_8 SGW_{it} + \varepsilon_{it}$$

Where EMG represents discretionary accruals, ACZ audit committee size, ACI independence, ACF financial expertise, ACM meeting frequency, FSZ firm size, FAG firm age, LEV leverage, SGW sales growth, and ε the error term.

Panel data estimation techniques, including pooled OLS, fixed effects, and random effects models, are employed. The Hausman test is used to select the appropriate estimator. Diagnostic tests such as normality, multicollinearity (VIF), heteroskedasticity, autocorrelation (Wooldridge test), and cross-sectional dependence (Pesaran CD test) are conducted to ensure robustness of the results. This methodological framework provides a concise and robust basis for assessing the influence of audit committee structure on earnings management.

4. Results and Discussion

This section presents and discusses the empirical findings on the relationship between audit committee structure and discretionary accrual-based earnings management. The analysis begins with descriptive statistics to provide an overview of the data distribution and key characteristics of the study variables. This is followed by correlation analysis to examine the

direction and strength of relationships among variables and to assess potential multicollinearity issues.

Subsequently, the study presents the results of panel regression analyses, including pooled ordinary least squares (OLS), fixed effects (FE), and random effects (RE) estimations. The Hausman specification test is employed to determine the most appropriate model for interpretation. In addition, relevant diagnostic tests are reported to validate the robustness and reliability of the estimated models.

The findings are interpreted in line with the study's hypotheses and existing literature, with particular emphasis on how audit committee structural attributes influence discretionary accrual-based earnings management. The section concludes with a discussion of the implications of the results for corporate governance practices and financial reporting quality.

Descriptive Statistics

Table 1 presents the descriptive statistics of Audit Committee Structure of listed consumer goods companies in Nigeria.

Table 1: Descriptive Statistics of Audit Committee Structure

Variables	Mean	Std. Dev.	Variance	Min.	Max.	Skewness	Kurtosis	Coef. of Var. (CV)
ACZ	5.8843	0.9700	0.9409	4.0000	10.0000	0.5092	2.2630	16.48%
ACI	0.5213	0.0996	0.0100	1.0000	6.0000	0.6040	2.1280	19.09%
ACF	0.3183	0.2399	0.0575	0.0000	0.8000	-0.2363	-1.3083	75.34%
ACG	0.1422	0.1438	0.0207	0.0000	0.6000	0.7174	-0.1918	101.15%
FSZ	54.6074	14.8419	220.2809	20.0000	78.0000	-0.7235	0.2848	27.18%
FAG	7.5180	1.0290	1.0588	2.7163	10.2075	-1.8769	7.2914	13.69%
LEV	0.0375	0.1697	0.0288	0.0000	1.5383	7.9143	65.4838	452.65%
SGW	21.2149	22.6677	513.8266	0.0286	123.0380	2.1189	4.5729	106.85%

Note: Audit Committee Size (ACZ), Audit Committee Independence (ACI), Audit Committee Member's Financial Expertise (ACF), Audit Committee Gender Representation (ACG), Leverage (LEV), Firm Size (FSZ), Firm Age (FAG), Sales Growth (SGW)

Table 4.2 presents the descriptive statistics for audit committee structure variables and selected firm-specific controls. The results provide important insights into the distribution, variability, and data quality of the variables used in the analysis.

The average audit committee size (ACZ) is approximately 5.88 members, with a relatively low standard deviation (0.97) and coefficient of variation (16.48%), indicating low dispersion and suggesting that firms maintain moderately uniform committee sizes. The skewness value (0.5092) indicates slight right skewness, while the kurtosis (2.2630) suggests a relatively normal distribution. Audit committee independence (ACI) records a mean of 0.5213, implying that, on average, just over half of audit committee members are non-executive directors. The relatively low variability (CV = 19.09%) indicates consistency across firms. The positive skewness (0.6040) suggests that more firms tend toward higher independence levels, reinforcing compliance with governance expectations. Audit committee financial expertise (ACF) has a mean of 0.3183, indicating that approximately 32% of audit committee members possess accounting or financial expertise. However, the high coefficient of variation (75.34%) reveals substantial disparities across firms, suggesting uneven distribution of expertise. The negative skewness (-0.2363) implies a slight concentration toward lower levels of expertise, which may weaken monitoring effectiveness in some firms. Audit committee gender

representation (ACG) shows a low mean value of 0.1422, indicating limited female participation on audit committees. The very high coefficient of variation (101.15%) suggests significant variability across firms, with some firms having no female representation at all. The positive skewness (0.7174) further indicates that gender diversity is generally low but improving in a few firms. Regarding control variables, firm size (FSZ) exhibits a high mean of 54.61 with moderate dispersion (CV = 27.18%), indicating relatively stable firm size distribution. Firm age (FAG) also shows low variability (CV = 13.69%), suggesting that most firms are mature and well-established. Leverage (LEV) displays extreme variability, with a very high coefficient of variation (452.65%), along with significant positive skewness (7.9143) and kurtosis (65.4838). This indicates the presence of outliers and highly leveraged firms, which may influence earnings management behavior. Sales growth (SGW) also exhibits substantial dispersion (CV = 106.85%) and positive skewness (2.1189), suggesting that while some firms experience high growth, others show relatively low or stable performance. The descriptive statistics indicate that while audit committee size and independence are relatively stable across firms, financial expertise and gender representation vary considerably. Additionally, the presence of skewness and high variability in certain control variables suggests the need for further diagnostic testing to ensure robustness of the regression results.

Correlation Analysis

Table 4.3 presents the Pearson correlation matrix for audit committee structure variables and selected firm-specific controls, providing preliminary insights into the relationships among the variables and potential multicollinearity concerns.

Table 2: Correlation Matrix

VAR.	ACZ	ACI	ACF	ACG	FSZ	FAG	LEV	SGW
ACZ	-							
ACI	0.621**	-						
ACF	-0.039	-0.021	-					
ACG	0.099	0.050	0.036	-				
FSZ	0.173**	0.126	0.108	-0.148*	-			
FAG	0.190**	0.191**	0.256**	0.195**	-0.090	-		
LEV	-0.121	-0.123	0.045	-0.130*	-0.220**	0.295**	-	
SGW	-0.046	-0.046	-0.047	0.058	0.056	-0.095	0.040	-

Source: Computed by the Researcher.

The results in table 2 above show that audit committee size (ACZ) is positively and significantly correlated with audit committee independence (ACI) ($r = 0.621$, $p < 0.01$), suggesting that larger committees tend to have a higher proportion of independent members, although the magnitude remains below the multicollinearity threshold. ACZ is also positively associated with firm size (FSZ) ($r = 0.173$, $p < 0.01$) and firm age (FAG) ($r = 0.190$, $p < 0.01$), indicating that larger and more mature firms maintain larger audit committees. Similarly, ACI is positively related to firm age ($r = 0.191$, $p < 0.01$), while audit committee financial expertise (ACF) shows a significant positive association with firm age ($r = 0.256$, $p < 0.01$), implying that older firms are more likely to appoint financially knowledgeable members. Audit committee gender representation (ACG) exhibits generally weak relationships, but shows a negative and significant correlation with firm size ($r = -0.148$, $p < 0.05$) and leverage ($r = -0.130$, $p < 0.05$), suggesting lower female representation in larger and more leveraged firms. Leverage (LEV) is negatively associated with firm size ($r = -0.220$, $p < 0.01$) but positively related to firm age ($r = 0.295$, $p < 0.01$), while sales growth (SGW) displays weak and insignificant relationships with most variables. Overall, the absence of excessively high correlation coefficients indicates that multicollinearity is unlikely to distort the regression estimates.

Outlier Detection Test

Table 3 presents the results of the Mahalanobis distance test used to detect multivariate outliers in the dataset.

Table 3: Mahalanobis Multivariate Outliers Detection

	MD ($p > 0.001$)
Observations	208
Outliers	0
Non-outliers remaining	208

Source: Computed by the Researcher.

The findings indicate that, out of 208 observations, no cases exceeded the critical threshold at $p > 0.001$, implying that no multivariate outliers were identified. Consequently, all 208 observations were retained for subsequent analysis. This result suggests that the dataset is free from extreme values that could distort the regression estimates, thereby enhancing the reliability and robustness of the empirical findings.

Panel Regression Assumptions

Before running the multivariate regression analysis, it is essential to confirm that the underlying assumptions are satisfied as outlined by Hair et al. (2014), and these assumptions include normality, linearity, the absence of multicollinearity, and homoscedasticity. Checking these conditions helps ensure that the results are both valid and reliable, since violations can distort the interpretation of the model.

Normality Test

Table 4: Skewness and Kurtosis of Variables

Variables	Skewness	Kurtosis
EMG	1.943	6.386
ACZ	0.280	1.472
ACI	0.493	1.502
ACF	-0.236	-1.308
ACG	0.717	-0.192
FSZ	-0.723	0.285
FAG	-1.877	7.291
LEV	7.914	65.484
SGW	2.119	4.573

Source: Computed by the Researcher

Multicollinearity Check

The results for this check is presented in Table 4.12.

Table 5: VIF and Tolerance Values

Variables	VIF	1/VIF
ACZ	0.428	2.337
ACI	0.486	2.058
ACF	0.755	1.324
ACG	0.809	1.236
FSZ	0.735	1.361
FAG	0.627	1.594
LEV	0.802	1.247
SGW	0.971	1.030

Source: Computed by the Researcher

The tolerance and VIF values reported in Table 4.12 indicate no evidence of multicollinearity among the study variables since the tolerance values fall between 0.836 and 0.975, which are comfortably above the commonly accepted cutoff of 0.1 (Hair et al., 2014; Pallant, 2005). Similarly, the VIF scores range from 1.03 to 1.20, well below the threshold of 10 suggested in

the literature. Taken together, these results suggest that the regression estimates are unlikely to be distorted by multicollinearity.

Linearity Check

When testing the assumption of linearity in multiple regression, different approaches are recommended by scholars. Some scholars advocate using residual plots to visually check the pattern of errors (Pallant, 2005; Tabachnick & Fidell, 2007), while others suggest a more statistical approach by comparing the standard deviation of the dependent variable with that of its residuals (Hair et al., 2014). According to the latter method, linearity is assumed when the dependent variable shows greater variability than its residuals. In this study, that condition appears to be satisfied, as the standard deviation of the performance variable (0.8208) is higher than that of the residuals (0.7431).

Heteroskedasticity Test

The result of the Breusch-Pagan/Cook-Weisberg test is provided in Table 4.13

Table 6: Breusch-Pagan/Cook-Weisberg Test

DVs	Chi2(1)	Prob> Chi2	Null (Ho)
EMG	44.31	0.0000	Rejected

Note: Ho (null): Homoscedasticity

Source: Computed by researcher using STATA 17.0.

As shown in Table 4.13, the Breusch–Pagan/Cook–Weisberg test produced a chi-square statistic with a p-value of 0.0000, significant at the 0.01 level. This result leads to the rejection of the null hypothesis of homoscedasticity, indicating that the model suffers from heteroscedasticity, and to address this issue, the study applied Panel Corrected Standard Errors (PCSEs), a technique recommended and used in earlier research (e.g., Bailey & Katz, 2011; Reed & Ye, 2009). By doing so, the analysis accounts for the non-constant variance in the error terms, helping to produce more reliable estimates.

Cross-Sectional Dependence Test

The results of Pesaran's CD test are reported in Table 7.

Table 7: Pesaran's and Frees' CD (Cross-section Dependence) Test

Variables	Test
EMG	2.590, Prob. = 0.0096

Source: Computed by the Researcher

The test results obtained using both the Pesaran's and Frees' tests as presented in Table 7 show that cross-sectional dependence is not an issue since the probability values are not greater than the threshold value of 5% ($p < 0.05$).

Autocorrelation Test

The test results, shown in Table 4.15, indicate that the regression model for EMG does suffer from autocorrelation, and to put it differently, the null hypothesis of no first-order autocorrelation had to be rejected because the evidence pointed the other way. To address this issue, the study used Panel Corrected Standard Errors (PCSEs), a technique recommended in the literature (Bailey & Katz, 2011; Reed & Ye, 2011), which helps adjust for the bias introduced by serial correlation.

Table 8: Wooldridge Test of Serial Correlation

Variables	F(1,16)	Prob. > F	Ho (null) hypothesis
EMG	10.373	0.0053	Accepted

Notes: Ho: No first-order autocorrelation.

Source: Computed by the Researcher

The test results obtained using both the Pesaran's and Frees' tests as presented in Table 4.15 show that cross-sectional dependence is an issue since the probability values are not greater than Standard Errors (PCSEs) regression.

Regression the threshold of 5% ($p < 0.05$). This was addressed in this study using the Panel Corrected

Result

After the diagnostic tests for multivariate regression were conducted, the Panel Corrected Standard Errors (PCSEs) regression is the appropriate statistical technique suitable for this study to solve cross-sectional dependence. The reason behind using PCSEs is because the model has a problem of Serial Correlation and heteroscedasticity, which can be solved using the PCSEs regression as suggested by Bailey and Katz (2011) and Reed and Ye (2009). PCSEs regression is commonly applied in panel data analysis, whether the number of cross-sectional units (N) is smaller, equal to, or larger than the time dimension (T). Hence, this research employs OLS with PCSEs to address issues typically found in panel models, including cross-sectional dependence, serial correlation, and heteroscedasticity. The regression outcomes based on the PCSEs approach are presented in Table 9 below.

Table 9: Panel Corrected Standard Errors (PCSEs) Regression

Variable	Coefficient (β)	Standard Error (SE)	z-value	p-value
Constant	0.078	0.512	0.15	0.879
ACZ	-0.137	0.068	-2.00	0.045**
ACI	0.198	0.098	2.02	0.043**
ACF	0.083	0.233	0.36	0.722
ACG	-0.069	0.335	-0.21	0.837
FSZ	0.018	0.004	4.65	0.000***
FAG	0.015	0.062	0.25	0.805
LEV	0.277	0.283	0.98	0.328
SGW	-0.001	0.002	-0.42	0.671
Observations		208		
No. of groups		16		
R ²		0.1946		
Wald chi2 (10)		43.87***		
Prob > chi2		0.0000		

Notes::***, **, and * represent significant at 1%, 5%, and 10% levels respectively

Source: Researcher's Computation

Table 9 presents the Panel Corrected Standard Errors (PCSE) regression results and indicates that the model is statistically fit and robust for analysis. The Wald chi-square statistic ($\chi^2 = 43.87$) is significant at the 1% level ($p = 0.0000$), confirming that the explanatory variables jointly have a significant effect on discretionary accrual-based earnings management. The coefficient of determination ($R^2 = 0.1946$) suggests that approximately 19.46% of the variation in earnings management is explained by the audit committee structure variables and selected control variables, which is acceptable within corporate governance studies where firm behaviour is influenced by multiple factors. Therefore, the results indicates that the model is well-specified, statistically significant, and appropriate for hypothesis testing.

Test of Hypotheses and Discussion of Result

H01: Audit committee size has no significant effect on discretionary accrual-based earnings management.

The regression result shows that audit committee size (ACZ) has a negative and statistically significant effect on earnings management ($\beta = -0.137$, $p = 0.045$). This implies that an increase in the number of audit committee members reduces discretionary accrual-based earnings management. Consequently, the null hypothesis is rejected. The finding suggests that larger audit committees enhance monitoring effectiveness through diversity of expertise and improved oversight capacity. This result is consistent with prior studies such as Yang et al. (2009) and Jamaludin et al. (2015), which argue that larger committees provide stronger monitoring and reduce managerial opportunism. It also aligns with agency theory, which posits that stronger governance structures mitigate earnings manipulation.

H02: Audit committee independence has no significant effect on discretionary accrual-based earnings management.

Audit committee independence (ACI) is found to have a positive and statistically significant relationship with earnings management ($\beta = 0.198$, $p = 0.043$). This indicates that higher independence is associated with increased discretionary accruals, contrary to theoretical expectations. Therefore, the null hypothesis is rejected. This unexpected result suggests that independence alone may not guarantee effective monitoring, particularly in environments where independent directors may lack true autonomy or expertise. The finding contrasts with studies such as Klein (2002) and Xie, et al. (2003), which document a negative relationship, but supports arguments in emerging market literature that independence may be symbolic rather than functional.

H03: Audit committee financial expertise has no significant effect on discretionary accrual-based earnings management.

The coefficient for audit committee financial expertise (ACF) is positive but statistically insignificant ($\beta = 0.083$, $p = 0.722$). This indicates that financial expertise does not significantly influence earnings management in the sampled firms. As a result, the null hypothesis is not rejected. This finding suggests that the presence of financially literate members alone may not be sufficient to constrain managerial opportunism, possibly due to weak enforcement mechanisms or limited authority of such members. The result is inconsistent with studies like Bédard, et al. (2004) and Badolato et al. (2014), but aligns with literature that highlights contextual limitations in emerging economies.

H04: Audit committee meeting gender diversity sub has no significant effect on discretionary accrual-based earnings management.

The regression result for audit committee gender representation (ACG) indicates a negative but statistically insignificant relationship with discretionary accrual-based earnings management ($\beta = -0.069$, $p = 0.837$). This implies that although increased female representation on audit committees tends to reduce earnings management, the effect is not strong enough to be statistically meaningful. Consequently, the null hypothesis is not rejected.

This finding suggests that gender diversity within audit committees does not exert a significant influence on earnings management in the sampled firms. A plausible explanation is the relatively low level of female representation observed in the descriptive statistics, which may limit the ability of female members to meaningfully influence committee decisions. This aligns with studies such as Adamu, et al. (2017), which report insignificant effects of gender diversity in contexts where female participation is minimal. However, the negative sign of the coefficient is consistent with theoretical expectations and prior evidence (such as Githaiga, et al., 2022), which suggest that female directors tend to enhance ethical oversight and reduce opportunistic financial reporting. Overall, the result indicates that while gender diversity has the potential to improve governance outcomes, its effectiveness may depend on achieving a critical mass within audit committee structures.

5. Conclusion

This study examined the effect of audit committee structure on discretionary accrual-based earnings management among listed consumer goods firms in Nigeria, focusing on audit committee size, independence, financial expertise, and gender representation. The findings reveal that audit committee size has a significant negative effect on earnings management, suggesting that larger committees enhance monitoring effectiveness and reduce managerial opportunism. In contrast, audit committee independence shows a significant positive relationship with earnings management, indicating that independence alone may not guarantee effective oversight, particularly in environments with weak institutional enforcement. The results further indicate that audit committee financial expertise does not significantly influence earnings management, implying that the presence of financially literate members may not translate into effective monitoring without supportive governance conditions. Similarly, audit committee gender representation exhibits an insignificant relationship with earnings management, although its negative coefficient suggests a potential role in improving ethical oversight. This study concludes that while audit committee size is effective in constraining earnings management, other structural attributes may not yield the expected outcomes in isolation, highlighting the need for a more holistic governance framework that combines structural design with institutional effectiveness and active monitoring.

6. Suggestion for Further Studies

Future research should extend this study by incorporating broader governance and institutional variables, such as board dynamics, ownership structure, and regulatory quality, to better capture the multifaceted determinants of earnings management. It would also be useful to examine the interaction effects between audit committee attributes, particularly how independence, expertise, and gender diversity jointly influence monitoring effectiveness. Expanding the sample to include multiple sectors or conducting cross-country analyses could improve generalizability and provide comparative insights across different institutional environments. In addition, future studies may adopt alternative measures of earnings management, such as real earnings management, and employ advanced estimation techniques like dynamic panel models to address potential endogeneity concerns and enhance robustness of findings.

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