Enhancing Corporate Performance in Nigeria: The Role of Audit Committee Characteristics and Corporate Governance Mechanisms

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ABSTRACT

As accounting scandals involving publicly traded corporations continue to emerge, skepticism about financial reporting grows globally. Despite audit committees on company boards, these scandals still impact company performance, raising concerns about the efficacy of audit committees. This research examined how characteristics of audit committees (ACs), such as gender diversity, membership tenure, share ownership, and leadership roles, influence the performance of publicly traded non-financial firms in Nigeria. Analyzing data from 73 companies on the Nigerian Exchange Group over 2015-2021, yielding 511 firm-year observations, the study employed advanced panel data methodologies like fixed effects and two-step GMM models. Results indicated that gender diversity within ACs and leadership positions significantly boosted corporate performance, while longer tenure and share ownership by AC members were linked to poorer performance. Company size, growth, and leverage also critically influence performance. This study enriches the discourse on corporate governance and AC efficiency within the Nigerian market, offering evidence-based insights for enhancing firm performance through strategic AC compositions. The findings suggest increasing female representation on ACs and managing AC member tenure and share ownership to bolster corporate success and stakeholder trust, underscoring the need for strengthened governance and oversight mechanisms.

Keywords: Audit Committee Characteristics, Corporate Performance, Nigerian Listed Companies, Two-Step Difference GMM, Two-Step System GMM

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INTRODUCTION

Financial statements serve as a pivotal conduit for businesses to relay their fiscal health and operational efficiency to stakeholders. The integrity of these statements, a cornerstone of sound corporate governance, is largely dependent on the oversight capabilities of an entity's audit committee. The Audit Committee (AC) reviews financial accounts, both audited and unaudited, to ensure that they are accurate and assist in preventing management from engaging in financial impression management (Bala et al., 2019). It becomes crucial to scrutinize the attributes of the AC that contribute to the transparency and reliability of financial reports.

Prior research has underscored the correlation between certain AC attributes namely: tenure, chair, female representation, and share ownership and firm performance, with a consensus emerging around the idea that robust AC characteristics are indicative of more effective oversight and better corporate outcomes (Abeygunasekera et al., 2021). Yet, despite this understanding, the financial scandals and corporate collapses that have disrupted the global business environment, from WorldCom to Lehman Brothers, have cast a shadow of doubt over the veracity of financial statements and the efficacy of audit committees (ACs) (Ali & Kamardin, 2018). Such events have amplified the call for rigorous empirical investigation into the relationship between AC attributes and firm performance, particularly in Nigeria, where corporate practices continue to evolve.

The global financial crisis in 2008, coupled with a series of corporate misgivings, has intensified scepticism around financial reporting and the role of ACs in safeguarding stakeholder interests. An effective AC is integral to the deterrence and rectification of misleading financial disclosures. Nonetheless, the Nigerian corporate sector has witnessed scant research probing the nexus between distinct AC attributes and firm performance, an oversight this study seeks to rectify. In addressing this lacuna, the current investigation extends beyond the commonly examined AC characteristics, exploring aspects such as female committee membership, tenure, share ownership, and the role of the committee chair. These elements are posited to be critical in shaping the AC's effectiveness and, by extension, firm performance. Furthermore, the study embarked on a methodological advancement by employing the dynamic generalized method of moments (GMM) to address potential endogeneity issues and other econometric concerns (Al Farooque et al., 2020), thereby offering a more nuanced understanding of the AC's influence in a developing market context.

The findings are set against the backdrop of the broader literature on corporate governance within financial settings. By dissecting the AC attributes, the research illuminates how this committee can either perpetuate or counteract the strategic shaping of financial narratives. As firms grapple with the dual challenges of financial reporting, the insights from this study are timely and contribute to the ongoing debate about how to foster trust and transparency in the financial reporting process. This study, therefore, sought to contribute to the literature by exploring how specific AC attributes, within the Nigerian corporate setting, facilitate the presentation and perception of financial reports and performance. By doing so, it aimed to shed light on the mechanisms through which AC can either facilitate or hinder effective firm performance.

What follows next will elaborate on the theoretical framework, hypotheses, and methodologies underpinning this study. Following that, a detailed analysis of the data will be presented, culminating in a discussion that synthesizes the study's conclusions and offers actionable recommendations for enhancing corporate governance and financial decision-making in the Nigerian context.

LITERATURE REVIEW

Theoretical Framework - Agency Theory

The Agency Theory posits that when individuals or a group of individuals (referred to as the principal(s)) engage the services of another individual (known as the agent) to perform a job on their

behalf, it involves the transfer of a certain degree of decision-making power to the agent (Jensen & Meckling, 1976). The principal-agent association has two basic interrelated difficulties. The first issue that arises within the principal-agent relationship is the presence of information asymmetry since the shareholders and the management team have different levels of knowledge about the company. The power to create and curate financial narratives that may not represent the underlying facts increases when agents have access to more information than principals. The principals may make poor judgements due to a distorted view of the company's financial statement caused by selective information presentation.

The second factor is the potential for the principal and the agent to have competing interests (i.e. conflict of interest) (Hillman & Dalziel, 2003). In the case of conflicts of interest, the agent's decisions may not consistently align with the optimal interests of the shareholders. Managers as agents have the potential to put their interests ahead of those of the shareholders (Huse, 2005). The possible conflict of interest that may arise between principals and agents may be seen within the context of financial reporting. Agents may potentially engage in the practice of selectively presenting financial accounts in a manner that is most advantageous to their interests. This behaviour may include exaggerating performance or intentionally obscuring unfavourable information. In this context, the use of financial impression management emerges as a potential instrument that may be subject to misuse, resulting in a deviation from the primary aim of the principals to provide an accurate and unbiased representation.

Therefore, according to the Theory, principals and agents have conflicting interests, and principals may control this by incentivizing agents and paying for activities that monitor and restrict agents' pursuit of their self-interests (Jensen & Meckling, 1976). In other words, the Theory suggests that this discrepancy may be alleviated by using efficient monitoring and incentive systems. The primary function of the AC is to supervise the financial reporting conducted by management, intending to ensure that it faithfully represents the organization's performance. This is crucial in maintaining the integrity of the information provided to shareholders (Al-Matari et al., 2012).

Empirical Literature

An AC is in charge of overseeing reporting procedures and assuring the reports' integrity and transparency in order to achieve good governance. The primary goal is to protect the quality of presented financial reports (Oji & Ofoegbu, 2017) and other duties and functions include ensuring that financial statements are prepared in accordance with implemented standards, monitoring interactions among management, workers, and external auditors, facilitating principles, and managing risk management procedures (Zraiq & Fadzil, 2018)

Although the relevance of an AC is becoming more and more recognised in the literature, Despite the presence of a few studies on developing nations, there is a dearth of research, to the best of the researcher's knowledge, on this particular issue in Nigeria. The literature is scarce on the impact of AC attributes on firm performance. Thus, there is the need to carry out this research in the Nigerian setting to investigate the function of the AC in relation to the concept of interest. Even the few previous researches that investigated the effect of AC attributes on firm performance revealed mixed outcomes, resulting in inconsistency. For example, several studies conducted on the effect of AC attributes on firm performance such as Dakhlallh et al., (2020); Issa & Siam, (2020); Orjinta & Evelyn, (2018); Puwanenthiren, (2020) discovered a substantial positive connection between AC meetings, financial expertise, independence, size and firm performance.

On the contrary, Agyemang, (2020); Koutoupis & Bekiaris, (2019) discovered that independence of the AC, AC meetings, and AC gender diversity is negatively correlated with firm performance. Also, other researchers showed mixed results such as Alqatamin, (2018); Bagais & Aljaaidi, (2020); Omotoye et al., (2021) studied AC and firm performance and the results disclose that AC financial expertise, AC independence, AC size and AC gender diversity have a substantial and positive association with firm performance while AC stock ownership, AC meetings, AC size and experience had an insignificant relationship. These are some evidence of prior research inconsistencies which have been unable to

provide evidence of the influence of AC attributes and firm performance, as shown by the studies above. Nevertheless, in light of the contradictory empirical outcomes, this study attempted to investigate whether audit committees in Nigerian-listed companies positively affected their financial performance,

The characteristics of the AC, including the responsibilities of the chair, the duration of its members' service, the distribution of share ownership, and the level of gender diversity, have a significant impact in shaping the management and presentation of financial information. The role of the shareholder chair is crucial in evaluating the capacity of the AC to effectively analyse and question the strategies used by management, (Ado et al., 2020). This ensures that financial disclosures are not superficial, but rather accurately represent the actual performance of the organisation (Wan-Hussin et al., 2021). The efficacy of the committee's oversight of financial reporting is influenced by the duration of the AC members' tenure. Long-standing members bring a depth of understanding and commitment to the integrity of financial information, which is essential in a landscape where financial impression management can easily deviate into manipulation (Yang & Krishnan, 2005). Their accumulated experience is a bulwark against the misrepresentation of financial performance.

Ownership stakes within the AC can either align the committee's interests with those of the shareholders or lead to a conflict of interest that may skew financial reporting towards certain narratives, as highlighted by Dakhlallh et al., (2020). The balance between these two outcomes is delicate and crucial for maintaining a clear and honest financial representation of the company. Gender diversity within the AC plays a significant role in the context of corporate governance. The presence of female members can introduce a range of ethical perspectives and decision-making styles that may counteract the propensity for biased financial reporting (Susanto, 2016). However, the influence of such diversity on the quality of financial information remains a contested issue, calling for further empirical scrutiny, (Mustapha et al., 2020). In synthesizing the principles of the Agency Theory with the dynamics of corporate governance, it becomes clear that the AC is not merely a technical body but a critical component in the governance ecosystem that shapes the narrative of firm performance.

Audit Committee and Corporate Performance

This study examined the impact of AC features on the financial performance of companies in Nigeria. The attributes under scrutiny comprised the AC chair's role, the committee's share ownership, the tenure of the AC, and the presence of female members within the AC. However, there is contradicting findings in the existing studies regarding the impact of AC characteristics on firm performance, (Rashid et al., 2015). While some studies revealed a positive correlation, others discovered a negative link. The investigation is framed within the context of corporate governance, recognizing the AC's pivotal role in shaping stakeholders' perceptions of financial reporting and corporate performance.

Audit committee female member

The role of gender within the AC encapsulates wider arguments on diversity and corporate governance effectiveness. Prevailing research suggests that gender-balanced committees enhance decision-making processes and may contribute to superior financial performance (Albawwat & Harasees, 2019). The ethical and conservative approach often attributed to female members has been linked to heightened corporate governance standards and, consequently, firm value (Susanto, 2016). Yet, the literature also acknowledges potential drawbacks to increased diversity, such as escalated interpersonal conflicts and reduced cohesion (Abad et al., 2017). Mwangi et al. (2017) found that firms with a higher proportion of female executives had a lower probability of making false statements and were linked to lower audit costs. Despite these concerns, empirical studies have predominantly found a positive association between female AC membership and firm performance (Fiardhani, 2022; Meah et al., 2021; Omotoye et al., 2021). Conversely, Agyemang, (2020) reported a negative correlation within a subset of Ghanaian banks. In addition, (Akhor & Oseghale, 2017) discovered an insignificant relationship between gender of the audit committee and financial reporting lag. In light of these mixed findings, the ensuing hypothesis was advanced:

H1: The presence of female members on the AC has a positive impact on corporate performance.

Audit committee tenure

The tenure of the AC represents the committee's cumulative experience and institutional knowledge. Longevity on the board enhances members’ familiarity with the firm’s operational intricacies, risks, and strategic challenges, augmenting their capacity to safeguard shareholder interests and improve corporate performance (Yang & Krishnan, 2005). The tenure's correlation with directorial effectiveness, as argued by Beasley, (1996) underscores the potential impact of prolonged service on financial oversight. Research conducted by Edem et al., (2022) and Onyabe et al., (2018) indicated a negative association between AC tenure and the quality of financial reports. On the other hand, the study carried out by Bala et al., (2018) identified a favourable association between AC tenure and the quality of financial reports. Nonetheless, the relationship between AC tenure and firm performance has not been extensively examined, necessitating further empirical exploration:

H2: The tenure of AC has a positive impact on corporate performance.

Audit committee share ownership

Ownership structure, particularly the equity stake held by the AC members, embodies the alignment or lack thereof between the committee's incentives and the firm's performance outcomes (Imoleayo et al., 2017). Shareholding within the AC has been the subject of debate, with studies such as (Dakhlallh et al., 2020) uncovering a negative correlation with firm performance but contradicting (Bala et al., 2018; Kibiya et al., 2016) found a favourable link between AC share ownership and the quality of financial reports. This intriguing relationship invites further scholarly scrutiny, given the sparse research specifically dedicated to understanding the dynamics of AC share ownership in the Nigerian context. Thus, the third hypothesis was articulated as follows:

H3: The share ownership of AC has a positive impact on corporate performance.

Audit committee chair

The AC chair, as the head of the committee, assumes a central role in steering the committee's direction and ensuring the quality of financial disclosures. The chairperson, bearing a disproportionate share of accountability, is a critical determinant of the AC's effectiveness in enhancing financial reporting quality (Wan-Hussin et al., 2021). The depth of the chair's financial acumen and oversight experience are instrumental in fostering robust auditing practices and in mitigating agency issues, thus potentially reducing the firm's agency costs (Chiru & Gherghina, 2019). Furthermore, because of his or her extended duration of service within the organisation and extensive expertise and understanding of the firm's unique operations, an experienced AC chair is better equipped to ensure the accurateness of the committee's financial disclosures (Ghafran & Yasmin, 2018). Empirical investigations, such as that by (Chaudhry et al., 2020) have identified a positive and significant correlation between the AC chair's efficacy and firm performance, although the literature remains relatively scarce in this domain. Therefore, we posited the following hypothesis:

H4: The AC Chair has a positive impact on corporate performance.

Conceptual Framework

The conceptual structure of the study illustrates the relationship between the dependent variable, firm performance as measured by Tobin's Q, and the independent variables AC (female member, tenure, share ownership, and chair). Figure 1 illustrates the conceptual framework that guided the investigation.

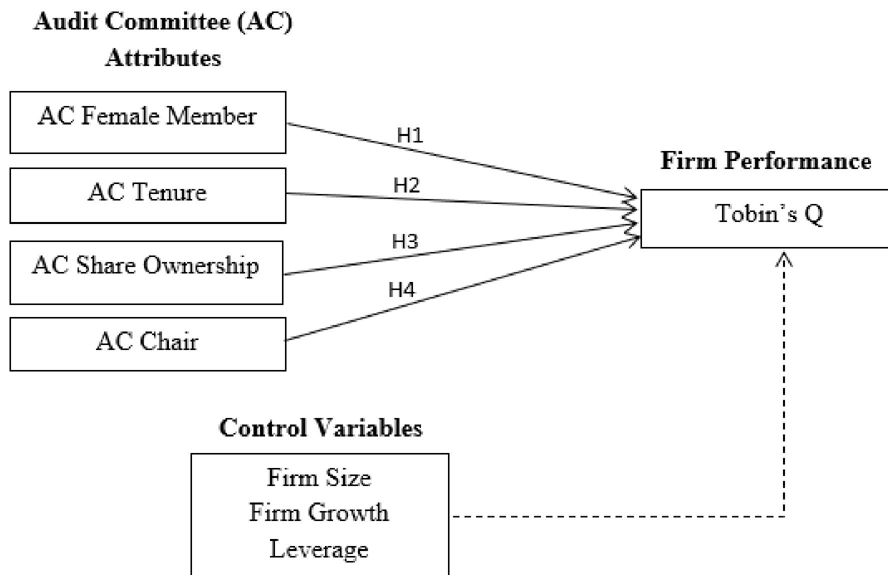

Figure 1. Conceptual Framework

METHODOLOGY

Selection of Study Sample

The methodology employed in this study was designed to rigorously examine the impact of AC features on the performance of firms listed on the Nigeria Exchange Group (NGX) over a period, from 2015 to 2021. This period witnessed significant regulatory changes and corporate governance reforms in Nigeria such as the release of 2018 Nigerian Code of Corporate Governance. Analyzing data from 2015-2021 allowed the study to capture the impact of these changes on audit committee effectiveness and firm performance. Secondary data was sourced from the annual reports of 161 NGX-listed companies to carry out this study. However, the Bloomberg and Thomson Reuters DataStream databases were utilised to collect firm performance data and to supplement any financial information missing from the yearly reports. Nevertheless, it was deemed necessary to remove the financial industry from the sample. The rationale behind this exclusion stems from the unique characteristics of financial institutions, notably their regulatory environment and leverage practices, which could potentially skew the results and lead to distorted interpretations of the relationship between AC attributes and firm performance (Puwanenthiren, 2020). Additionally, companies that provided insufficient information were not included to maintain the integrity of the dataset. The resultant sample comprised 73 firms, creating a total of 511 firm-year observations that form the empirical backbone of this study. Table 1 shows the total number of firms chosen as a sample:

Table 1. Selection of Study Sample

Description	Number of firms
Listed firms as of 31 December 2015	161
Exclude delisted firms	(21)
Exclude financial institution	(57)
Exclude firms with incomplete data	(10)
Total sample	73
Total firm years observations (7 years)	511

Variable Measurement

The study employed two distinct types of variables: dependent and independent. The dependent variable serves as a measure of firm performance, while the independent variables represent the characteristics of the AC that may exert influence on this performance. Firm performance, the outcome variable of primary interest, is quantified using Tobin's Q. Tobin's Q is an economic metric that measures how the market values a firm relative to its recorded asset base. This study followed previous research using firm growth, leverage, and firm size as control variables (Bagais & Aljaaidi, 2020; Oroud, 2019). We included these variables as control variables due to their impact on firm performance and their examination in corporate governance research. Findings on the impact of firm size on firm performance are contradictory. Some research has shown, for instance, that bigger companies may be less efficient than their smaller counterparts due to increased agency problems and government bureaucracy, while others discovered that larger companies tend to perform better due to their increased ability to invest in assets and access external funding at a lower cost compared to smaller companies (Al-Jalahma, 2022) and (Warrad & Khaddam, 2020). Regarding leverage, several researchers have indicated that companies with high leverage do badly in the stock market (Al-Jalahma, 2022; Olokoyo, 2013), while others suggested that leverage did not affect company performance (Kurawa & Shuaibu, 2022). Firm growth refers the expansion and development trajectory of a company, indicating its ability to adapt, innovate, and capture market opportunities over time Table 2 gives a summary of variables and equivalent measurements.

Table 2. Variable Measurements

Dependent Variable		
Firm Performance	FP	Proxied by Tobin's Q was computed by dividing the total market value of a firm's equity and debt by the book value of equity and total debts (Darmawan et al., 2019).
Independent Variables		
AC Chair	ACCHR	Dummy variable, If the AC chair was a shareholder, the variable took the value of 1, If the chair was a director, the variable was set to 0 (Bala et al., 2018).
AC Share Ownership	ACSOW	The ratio of shares owned by AC members to the total shares of the company (Dakhlallh et al., 2020).
AC Tenure	ACTEN	The averaging number of years the current AC members have been in service (Braswell, 2018).
AC Female Member	FACM	Dummy variable. It assumed a value of 1 if there was at least one female member on the AC, and 0 if the committee was composed entirely of male members (Bala et al., 2018).
Control Variables		
Firm Growth	FGRW	The change in total assets over the lagged total assets (Li & Kuo, 2017).
Leverage	LEVRG	The ratio of total liabilities to total assets (Al-ahdal & Hashim, 2022; Shamsuddin & Alshahri, 2022)
Firm Size	FSZE	Natural logarithm of total assets (Bennouri et al., 2018; Shamsuddin & Alshahri, 2022)

Model Specification

The study employed the Generalized Method of Moments (GMM) as its primary analytical tool. The GMM is particularly adept at addressing potential endogeneity concerns that can arise in regression model issues such as reverse causality, omitted variable bias, measurement error, and simultaneity (Al Farooque et al., 2020) The dynamic nature of the GMM enables the model to consider the possibility

that past performance may influence current AC attributes, rather than solely the reverse. This methodological choice underscored the study's commitment to produce results that could withstand scrutiny regarding causal inference. Specifically, the empirical model described below was developed:

$$TOBQ_{it} = p_0 + p_1 FACM_{it} + p_2 ACTEN_{it} + p_3 ACSOW_{it} + p_4 ACCHR_{it} + p_5 FGRW_{it} + p_6 LEVRG_{it} + p_7 FSZE_{it} + \epsilon_{it} \qquad (1)$$

In this model, TOBQ represented the performance of company i at time t, which was the dependent variable of interest. The p_0 term was the constant, the parameters p_1 through p_4 were the coefficients of the independent variables, which represented the hypothesized AC attributes. These included the presence of female members on the AC (FACMit), AC tenure (ACTENit), AC share ownership (ACSOWit), and the AC chair (ACCHRit). Firm growth was represented by (FGRW), leverage was (LEVRG) and firm size was (FSZE). The εit term captured the error, representing unobserved factors that may affect firm performance.

RESULTS AND DISCUSSION

Descriptive Statistics and Correlation Matrix

Table 3 provides descriptive statistics for various variables related to audit committee attributes, firm performance, and other firm-specific characteristics in NGX companies. Tobin's Q is widely used measure of firm performance that relates the market value of a firm to the replacement cost of its assets. The average value of TOBQ across the sampled firms stood at 0.7182182, with a standard deviation of 1.104899. This indicated that, on average, the market values the firms at a premium to the book value of their assets, suggesting a generally positive market performance among the Nigerian companies studied during the period from 2015 to 2021. The maximum value of Tobin's Q in the dataset was quite high at 8.248, which could be indicative of certain firms being highly valued by the market, possibly due to high growth potential or effective management practices. The minimum value was 0.013937, suggesting that at least one firm in the sample may have been distressed or undervalued by the market during the study period.

FACM indicates the presence of female audit committee members, with a value of 1 representing the presence of at least one female member, and 0 representing no female members. The mean value of 0.5890411 suggested that approximately 59% of the firms in the sample had at least one female audit committee member. ACTEN represents the tenure of the audit committee members. The mean tenure was approximately 1.5 years, with a maximum of 5 years, suggesting that audit committee members were typically rotated every few years. ACSOW measured the audit committee members' share ownership in the firm. The mean value of 0.0311633 indicated that, on average, audit committee members held a relatively small percentage of the firm's outstanding shares. ACCHR indicated whether the audit committee chair was a shareholder or a director, with a value of 1 representing a shareholder chair and 0 representing a director chair.

The mean value of 0.9158513 suggested that a majority of firms in the sample had representative of shareholders as audit committee chairs. FSZE represented firm size, the mean value of 10.07408 suggested that the firms in the sample were relatively large. FGRW represented firm growth, the mean value of 1.852621 suggested that, on average, firms in the sample had experienced moderate growth. The standard deviation was relatively large (39.36%), showing significant variability in firm growth rates. This suggested that while some firms experienced significant growth, others might face substantial declines. The high variability could be due to differences in industries, firm sizes, market conditions, or stages of the business lifecycle. For instance, older companies may expand more slowly than start-ups in terms of growth. LEVRG represented the firm's leverage, the mean value of 0.2220689 suggested that, on average, firms in the sample had a moderate level of leverage.

Table 3: Descriptive statistics

	TOBQ	FACM	ACTEN	ACSOW	ACCHR	FSZE	FGRW	LEVRG
Mean	0.7182182	0.5890411	1.482387	0.0311633	0.9158513	10.07408	1.852621	0.2220689
Std. Dev.	1.104899	0.4924899	2.049793	0.1083167	0.2778828	.691127	39.36365	0.2190457
Minimum	0.013937	0	0	0	0	8.239405	-1.53542	0
Maximum	8.248124	1	5	1.225752	1	11.7897	877.6412	2.134542

The correlation matrix in Table 4 provides insights into the relationships between the variables related to audit committee attributes, firm performance, and other firm-specific characteristics in NGX firms. TOBQ had a positive and statistically significant correlation with FACM (0.0963), FSZE (0.1537), and LEVRG (0.2373). This suggested that firms with female audit committee members, larger firm size, and higher leverage tended to have higher Tobin's Q values (better firm performance). TOBQ had a negative and statistically significant correlation with ACTEN (-0.4169), indicating that firms with longer audit committee tenure tended to have lower Tobin's Q values (poor firm performance). FACM had a positive and significant correlation with ACCHR (0.2196) and FSZE (0.0899), suggesting that larger firms and firms with shareholder audit committee chairs were more likely to have female audit committee members. ACTEN had a negative and significant correlation with ACSOW (-0.0971) and FSZE (-0.3552), indicating that firms with longer audit committee tenure tended to have lower audit committee share ownership and smaller firm size. ACSOW had a negative and significant correlation with FSZE (-0.2877), suggesting that larger firms tended to have lower audit committee share ownership. FSZE had a negative and significant correlation with FGRW (-0.1216), indicating that larger firms tended to have lower growth rates. LEVRG had a positive and significant correlation with FACM (0.0981), suggesting that firms with female audit committee members tended to have higher leverage.

Table 4: Correlation Matrix

Variables	TOBQ	FACM	ACTEN	ACSOW	ACCHR	FSZE	FGRW	LEVRG
TOBQ	1.000							
FACM	0.0963*	1.000						
ACTEN	-0.4169*	0.0249	1.000					
ACSOW	0.0605	0.0427	-0.0971*	1.000				
ACCHR	-0.0117	0.2196*	-0.0147	0.0456	1.000			
FSZE	0.1537*	0.0899*	-0.3552*	-0.2877*	0.0121	1.000		
FGRW	-0.0014	0.0391	-0.0475	0.0208	0.0150	-0.1216*	1.000	
LEVRG	0.2373*	0.0981*	-0.0615	0.0310	0.0504	-0.0344	-0.0218	1.000

p<0.001 = ***, p<0.05 = **, p<0.01 = *

Furthermore, the correlation matrix as depicted in Table 4 above, confirmed the absence of multicollinearity among the independent variables, indicating that they were sufficiently distinct from one another to be used in the same regression model. This was supported by the observation that all correlation coefficients were below the threshold of 0.8, beyond which multicollinearity would be a concern (Shrestha, 2020). This detailed statistical overview provided a foundational understanding of the variables and sets the stage for deeper econometric analysis. By establishing the baseline characteristics of these variables, we could proceed with confidence to model the relationships between AC attributes and corporate performance, with the assurance that the data's structure supports meaningful inference.

Regression Results

Table 5 presents the results of three panel data models examining the effect of audit committee attributes on firm performance, as measured by Tobin's Q, in NGX firms. The models employed different estimation techniques: fixed effects, two-step difference GMM (Generalized Method of Moments), and two-step system GMM. The two-step system GMM technique has advantages over the first difference GMM and Fixed Effects methods. It offers enhanced efficiency and flexibility for panel data settings where there may be serial correlation or heteroscedasticity, effective management of endogeneity, and stronger model consistency, and has shown effectiveness in various empirical applications (Arellano & Bond, 1991; Baltagi, 2021; Blundell & Bond, 1998; Roodman, 2009). Utilising the dynamic System GMM panel regression model, the study provided robust insights into these relationships, corrected for finite sample bias as per Windmeijer's approach (Windmeijer, 2005).

In Model 1 the results revealed that FACM had the coefficient of -0.148, though insignificant, which suggested that the presence of a female audit committee member was associated with a 0.148 decrease in TOBQ. This might be attributable to the fact that female committee members were more conservative during board discussions than their male counterparts. In their study of gender diversity, (Khlif & Achek, 2017) found that women were seen as being more conservative. The result is consistent with the findings of Akhor & Oseghale, (2017) who discovered an insignificant association between AC gender and financial reporting lag. The coefficient of 0.002, which was insignificant, implied that ACTEN had a negligible impact on firm performance in the Nigerian context. The result corresponds to the findings of Alhassan et al., (2019) that revealed an insignificant influence of AC tenure.The coefficient of -0.946, which was statistically significant at the 5% level, indicated that a one-unit increase in ACSOW was associated with a 0.946 decrease in TOBQ. This is in agreement with Omotoye et al., (2021) findings of an insignificant impact of stock ownership on firm performance The coefficient of 0.136, which was insignificant, suggested that the shareholder ACCHR had a negligible impact on firm performance in the Nigerian setting. The coefficient of -1.701, which was statistically significant at the 1% level, indicated that a one-unit increase in FSZE was associated with a 1.701 decrease in TOBQ. The coefficient of -0.001, which was marginally insignificant, suggesting that FGRW had a negligible impact on firm performance. The coefficient of 0.431, which is insignificant, implied that LEVRG had a negligible impact on TOBQ.

The Model 2 addressed endogeneity concerns by using lagged levels of the explanatory variables as instruments for the equation in first differences. The results indicated that FACM had a coefficient of 0.052, which was insignificant, suggesting that the presence of a female audit committee member had a negligible impact on TOBQ. ACTEN with a coefficient of -0.161, which was insignificant, implied that ACTEN had a negligible impact on firm performance. ACSOW with the coefficient of -0.368, which was statistically significant at the 1% level, indicated that a one-unit increase in ACSOW was associated with a 0.368 decrease in Tobin's Q. ACCHR with the coefficient of -0.011, which was insignificant, suggesting that the shareholder ACCHR had a negligible impact on firm performance. FSZE with coefficient of -1.774, which was statistically significant at the 1% level, indicated that a one-unit increase in FSZE was associated with a 1.774 decrease in Tobin's Q. FGRW with a coefficient of 0.001, which was marginally insignificant, suggesting that FGRW had a negligible impact on firm performance. LEVRG with coefficient of 2.671, which was statistically significant at the 1% level, implied that a one-unit increase in LEVRG was associated with a 2.671 increase in Tobin's Q.

The Model 3 combined the equations in first differences with the equations in levels, using lagged first-differences as instruments for the level equations. The results confirmed that Lagged TOBQ coefficient of 0.633, which was statistically significant at the 1% level, suggesting that a one-unit increase in the previous year's Tobin's Q was associated with a 0.633 increase in the current year's Tobin's Q. This finding indicated persistence in firm market valuations over time, consistent with the notion that firm-specific factors can contribute to sustained competitive advantages (Amit & Schoemaker, 2016; Barney, 1991). FACM had coefficient of 0.238, which was statistically significant at the 1% level, implying that the presence of a female audit committee member was associated with a 0.238 increase in Tobin's Q. ACTEN had a coefficient of -0.031, which was statistically significant at

the 1% level, suggesting that a one-unit increase in audit committee tenure was associated with a 0.031 decrease in Tobin's Q. ACSOW with the coefficient of -0.112, which was statistically significant at the 1% level, indicating that a one-unit increase in ACSOW was associated with a 0.112 decrease in Tobin's Q. ACCHR with a coefficient of 0.344, which was statistically significant at the 1% level, suggesting that the presence of an audit committee chair was associated with a 0.344 increase in Tobin's Q. FSZE has a coefficient of -0.068, which was statistically significant at the 1% level, indicating that a one-unit increase in firm size was associated with a 0.068 decrease in Tobin's Q. FGRW with the coefficient of -0.000, which was statistically significant at the 1% level, suggesting that a one-unit increase in firm growth was associated with a 0.000 decrease in Tobin's Q. LEVRG had coefficient of 0.440, which was statistically significant at the 1% level, implying that a one-unit increase in leverage was associated with a 0.440 increase in Tobin's Q.

Table 5. Descriptive statistics

	Model 1	Model 2	Model 3
Variables	Fixed Effect	Two -step Diff-GMM	Two-step Sys -GMM
	-	-	0.633***
Lagged TOBQ	-	-	(0.000)
	-0.148	0.052	0.238***
FACM	(0.106)	(0.413)	(0.000)
	0.002	-0.161	-0.031***
ACTEN	(0.980)	(0.580)	(0.000)
	-0.946*	-0.368***	-0.112***
ACSOW	(0.012)	(0.000)	(0.000)
	0.136	-0.011	0.344***
ACCHR	(0.228)	(0.858)	(0.000)
	-1.701	-1.774***	-0.068***
FSZE	(0.000)	(0.000)	(0.000)
	-0.001	0.001	-0.000***
FGRW	(0.071)	(0.076)	(0.000)
	0.431	2.671***	0.440***
LEVRG	(0.128)	(0.000)	(0.000)
Number of observations	511	438	438
Number of companies	73	73	73

p<0.001 = ***, p<0.05 = **, p<0.01 = *

Discussion

The System GMM estimators were favoured due to their improved reliability over difference GMM and fixed effect estimators, as suggested by the seminal work of Blundell & Bond, (1998). Moreover, it can be inferred from the findings that Model 3 exhibited lower levels of bias and higher levels of efficiency. This may be attributed to the use of robust standard errors in the two-step System GMM approach. Hence, in this part, our analysis and conclusions mostly relied on the results obtained from the two-step system GMM estimation. The findings as shown in Table 5 demonstrated that the coefficients associated with the lagged dependent variable (Lagged TOBQ) exhibited positive relationships at the 1%. significance level.

H1: The presence of female members on the AC has a positive impact on corporate performance.

Delving into the results of the two-step System GMM, the variable of primary interest was the impact of having women on an AC (FACM) on firm performance. The results showed a favourable and statistically significant correlation at the 1% level, suggesting that having women on the AC improves the company's financial performance. This conclusion offered empirical support of H1 and was in accordance with the findings of Fiardhani, (2022) and Omotoye et al., (2021) who showed that gender diversity within the AC may contributed to better business outcomes. These studies suggested that gender diversity can lead to improved board monitoring, decision-making processes, and overall

corporate governance practices, ultimately translating into superior firm performance. However, this result contradicted the findings of Agyemang, (2020) who found that the gender of ACs had a negative impact on corporate performance. The rationale behind this positive association was that female directors can bring unique perspectives, experiences, and skill sets to the boardroom, which can complement those of their male counterparts. This diversity can lead to more comprehensive and balanced decision-making, as well as enhanced risk management and oversight capabilities. Additionally, the presence of female directors can signal a commitment to diversity and inclusiveness, which can positively influence stakeholder perceptions and enhance the firm's reputation. Furthermore, female directors may serve as role models and mentors for other women within the organization, fostering a more inclusive and diverse corporate culture. This can contribute to attracting and retaining top talent, as well as promoting innovation and creativity, which are essential for long-term competitiveness and growth.

H2: The tenure of AC has a positive impact on corporate performance.

Furthermore, the research analysed the impact of the average tenure of AC members (ACTEN) on firm performance The negative coefficient of -0.031 for the ACTEN which was statistically significant at the 1% level, contradicted H2 that proposed a positive relationship and was in line with the findings of Edem et al., (2022) and Onyabe et al., (2018) that had indicated a negative correlation. This finding was inconsistent with the findings of Bala et al., (2018) who discovered a positive relationship between ACTEN and financial reporting quality. The negative coefficient suggested that prolonged tenure of audit committee members may lead to potential entrenchment, complacency, or a lack of fresh perspectives. Over time, long-tenured committee members may become too entrenched in their ways, resulting in a reluctance to challenge established practices or question management decisions critically. This entrenchment could diminish the audit committee's ability to provide effective oversight and independent scrutiny, which are crucial for maintaining strong corporate governance practices. Additionally, extended tenure may lead to a sense of complacency among committee members, where they become overly familiar with the company's operations and fail to maintain the necessary level of vigilance and skepticism. This complacency could result in overlooking potential issues or red flags, ultimately compromising the audit committee's ability to identify and address risks effectively. Moreover, a lack of fresh perspectives due to prolonged tenure could hinder the audit committee's ability to adapt to changing business environments, regulatory landscapes, or emerging risks. New members with diverse backgrounds and experiences can bring fresh insights and challenge existing assumptions, fostering a more dynamic and responsive audit committee. Consequently, the negative coefficient associated with longer audit committee tenure suggested that a periodic rotation or refreshment of committee members may be beneficial. Introducing new members with diverse experiences and perspectives could enhance the committee's effectiveness, promote critical thinking, and prevent the potential drawbacks of entrenchment and complacency. This, in turn, could contribute to stronger corporate governance practices and potentially improve firm performance.

H3: The share ownership of AC has a positive impact on corporate performance.

Table 5 also presents the results of the relationship between AC share ownership (ACSOW) and firm performance. The negative coefficient of -0.112 for ACSOW which was statistically significant at the 1% level, implied that, in the Nigerian context, audit committee share ownership may not necessarily result in better monitoring and higher firm performance. The results of the study disproved the hypothesis, leading to the rejection of H3. The present results aligned with previous study conducted by Dakhlallh et al., (2020) but diverged from other research that has shown a favourable influence, as demonstrated by Bala et al., (2018)and Kibiya et al., (2016). This finding was also inconsistent with the Agency Theory proposed by Jensen & Meckling, (1976), which suggested that share ownership by directors and executives should mitigate agency problems and improve monitoring effectiveness, ultimately leading to enhanced firm performance (Bhagat & Bolton, 2019). This contradicted the Agency Theory's premise that share ownership would incentivize audit committee members to act in the best interests of shareholders due to their own financial stake in the company. There could be several potential explanations for this unexpected finding. One possibility is that the level of share ownership

by audit committee members in the studied firms may not be significant enough to effectively align their interests with those of shareholders. If the ownership stakes are too small, the incentive effect may be negligible, and other factors could potentially outweigh the potential benefits of share ownership especially the specific institutional and regulatory environment in Nigeria. The effectiveness of share ownership as an incentive mechanism may depend on the robustness of corporate governance practices, shareholder rights protection, and the overall legal and enforcement framework. If these supporting mechanisms are weak, the intended benefits of share ownership may not materialize. Furthermore, cultural or social factors could potentially influence the relationship between audit committee share ownership and firm performance in the Nigerian context. For example, if there are strong social ties or personal relationships between audit committee members and management, share ownership alone may not be sufficient to overcome potential conflicts of interest or ensure objective monitoring.

H4: The AC Chair has a positive impact on corporate performance.

The research concluded by examining how the AC Chair (ACCHR) affected a company's financial performance. The findings revealed that a shareholder representative as the AC chair was significantly associated with enhanced firm performance, which suggested that ACCHR contribute to improved monitoring and better firm performance in Nigeria. This suggested that when the AC chair was a shareholder, they may align their interest with shareholders and be more inclined to ensure that the company's financial reporting and oversight mechanisms are functioning effectively, thereby boosting firm performance. This result corroborated with previous studies by Aldamen et al., (2012) and Chaudhry et al., (2020) which have also noted a positive link between the AC chair's shareholder status and firm performance. The outcome supported H4 of the study, validating the notion that shareholder-led ACs can positively influence corporate outcomes. This result indicated that shareholder audit committee chairs, with their expertise and leadership, can enhance the committee's oversight responsibilities and ultimately lead to improved corporate governance and firm performance.

The findings underscore the significance of other firm-level characteristics in influencing firm performance. The correlation between FSZE and firm performance was negative and statistically significant, with a coefficient of -0.068 at a 1%. significance level This is consistent with Kurawa & Shuaibu, (2022) which found a statistically significant negative correlation with Tobin's Q. These findings implied that as firms grow larger, they may encounter difficulties in effectively managing and leveraging their expanding asset base, potentially resulting in inefficiencies and lower market valuations relative to their asset replacement costs. Several factors contribute to this phenomenon. Larger firms often have more complex organizational structures, longer decision-making processes, and greater bureaucracy, which can impede agility and responsiveness to market changes. Additionally, as firms grow, they may face challenges in maintaining effective communication, coordination, and control mechanisms across various divisions or geographical locations, potentially leading to suboptimal resource allocation and utilization. Furthermore, larger firms may be susceptible to agency problems, where the interests of managers diverge from those of shareholders. In such cases, managers may pursue empire-building or engage in excessive diversification, leading to inefficient investment decisions and diminished firm performance.

The findings revealed a negative and statistically significant coefficient for the Firm Growth (FGRW), which implied that higher growth rates may not necessarily lead to higher firm performance. This contradicted the findings of Agyemang-Mintah & Schadewitz, (2018) which documented a positive relationship. One potential explanation for this unexpected finding could be the challenges associated with sustaining high growth rates over an extended period. Firms experiencing rapid growth may face difficulties in effectively managing and integrating their expanding operations, resources, and personnel. Failure to adequately address these challenges could lead to operational inefficiencies, increased costs, and potential disruptions in the business model, ultimately undermining profitability and market valuations. Additionally, high growth rates may strain a firm's financial resources, necessitating significant investments in capital expenditures, working capital, and other growth-related expenses. If these investments are not managed prudently or do not translate into corresponding increases in revenue and profitability, they may negatively impact the firm's financial performance and

market valuation. Furthermore, the negative coefficient could be attributable to investor perceptions and expectations regarding firm growth. In some cases, investors may view excessively high growth rates as unsustainable or indicative of potential risks, such as overexpansion or aggressive acquisition strategies. Such perceptions could lead to discounting the firm's market valuation, even in the face of strong growth rates. It is also possible that the negative relationship between firm growth and market valuation may be influenced by industry-specific factors or macroeconomic conditions. Certain industries or economic environments may favour more moderate or stable growth patterns, where high growth rates are perceived as riskier or less desirable. This finding highlights the importance of considering the nuances and potential trade-offs associated with firm growth. Sustainable and profitable growth, supported by effective operational and financial management, may be more valuable in driving market valuations than merely pursuing rapid expansion at the expense of profitability and operational efficiency.

The findings revealed a positive and statistically significant coefficient for the Leverage (LEVRG). This result is consistent with a study conducted by Kurawa & Shuaibu, (2022) and Graham et al. (2015), suggesting that higher leverage can align managers' interests with those of shareholders and mitigate agency conflicts, ultimately leading to higher firm performance. The rationale behind this positive relationship lies in the notion that debt financing imposes financial discipline on managers, as they are obligated to make regular interest and principal payments. This financial obligation reduces the free cash flow available to managers, thereby limiting their ability to engage in value-destroying activities or pursue personal interests at the expense of shareholders. Furthermore, higher leverage increases the risk of financial distress or bankruptcy, which can have severe consequences for managers, such as job loss or reputational damage. This risk acts as a powerful incentive for managers to operate efficiently, make prudent investment decisions, and prioritize the creation of shareholder value. Additionally, debt financing often comes with stringent covenants and monitoring requirements imposed by lenders, which can further align managers' actions with shareholder interests. These covenants may restrict the use of funds, impose performance targets, or require regular financial reporting, ensuring greater transparency and accountability. It is worth noting that the positive effect of leverage may be subject to an optimal level, beyond which excessive debt can become detrimental to firm performance. Excessively high leverage can increase the risk of financial distress, limit a firm's operational flexibility, and constrain its ability to pursue growth opportunities or invest in strategic initiatives. Moreover, the positive impact of leverage may be influenced by the specific industry, regulatory environment, or macroeconomic conditions in which the firm operates. Industries with stable cash flows and lower business risk may benefit more from the disciplining effect of debt, while firms in more volatile or cyclical industries may find excessive leverage to be a hindrance.

The findings derived from this extensive regression study exhibited both statistical significance and important implications for corporate governance. They underscored the importance of considering the attributes of ACs in the broader context of corporate performance. By understanding the nuanced effects of AC characteristics, stakeholders can make more informed decisions regarding the governance structures that underpin the integrity of financial reporting and the sustainable success of firms.

CONCLUSION

This study investigated the impact of audit committee characteristics, specifically the presence of female members, tenure, share ownership, and chair, on corporate performance in Nigerian listed companies covering from 2015 to 2021. The research aimed to provide empirical evidence on the relationship between these AC attributes and firm performance, contributing to the understanding of effective corporate governance practices in the Nigerian context. The results obtained from the panel data analysis, particularly the two-step system GMM model, provided valuable insights. Significantly, the study highlighted the positive influence of shareholder-led AC chairs. This suggested that shareholder chair with the necessary expertise and skills to effectively lead the committee, their presence may translate into improved monitoring and better firm performance. The study also found

that the presence of female members on the AC had a significant positive impact on corporate performance. This finding supported the hypothesis that gender diversity in the AC contributes to improved decision-making processes and corporate governance, ultimately enhancing firm performance. However, the study also revealed that the tenure of AC members exhibited a significant negative relationship with corporate performance. These results suggested that excessive tenure may lead to potential entrenchment, adversely affecting corporate performance. Furthermore, the share ownership of AC members was found to have a significant negative impact on corporate performance. This finding contradicted the notion of the Agency Theory that share ownership aligns the interests of AC members with those of shareholders, indicating potential conflicts of interest or risk-averse behaviour that could undermine firm performance.

The findings have several implications for managerial practices, theoretical contributions, and practical considerations in the Nigerian corporate governance. The results emphasized the importance of promoting gender diversity in the composition of ACs. Nigerian companies should prioritize the appointment of qualified female members to their ACs, as their presence can enhance corporate governance and decision-making processes, ultimately contributing to improved firm performance. The study contributes to the existing body of knowledge on corporate governance and audit committee effectiveness. It provides empirical evidence on the relationship between AC characteristics and firm performance in the Nigerian context, extending the understanding of corporate governance mechanisms in emerging markets. The findings underscore the need for Nigerian companies to evaluate and refine their corporate governance practices, particularly regarding the composition and tenure of ACs. Policymakers and regulators should consider implementing guidelines or regulations to promote gender diversity, and tenure limits within ACs, fostering effective monitoring and accountability.

However, the exclusion of financial institutions could limit the generalizability of findings to the entire NGX. Therefore, future research could include both financial and non-financial firms across various sectors to enhance the generalizability of findings. Future studies could also compare the effectiveness of audit committees across different regions or countries with varying regulatory frameworks and corporate governance practices. In conclusions, this study calls for a strategic alignment of AC attributes with the broader goals of transparency and accuracy in financial communication, reinforcing the critical role of ACs in shaping the financial narratives of publicly listed firms in Nigeria.

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