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THE GOVERNANCE-PERFORMANCE NEXUS IN AN EMERGING MARKET: ANALYSING BOARD EFFECTIVENESS, OWNERSHIP STRUCTURE, AND EXTERNAL ASSURANCE IN NIGERIA

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Abstract

This study investigates the relationship between corporate governance and stock market performance in Nigeria by developing an integrated governance triad comprising board effectiveness, ownership structure, and financial reporting oversight. Unlike previous Nigerian studies that predominantly examine individual governance mechanisms in isolation, the study considers their combined relevance within an emerging-market institutional context. Using an ex post facto correlational research design, the study analyses an unbalanced panel of 112 non-financial firms listed on the Nigerian Exchange Group (NGX) over 2013-2022. The dataset contains 986 firm-year observations, while the dynamic System GMM estimation reports 874 usable observations after application of the lag structure and estimation requirements. Stock market performance is primarily measured using Tobin's Q, with market capitalization growth employed as a robustness measure. Board effectiveness is measured through board independence, board size, and board activity; ownership structure through ownership concentration, institutional ownership, and foreign ownership; and financial reporting oversight through Big Four auditor affiliation and audit committee financial expertise. The study employs a two-step System Generalized Method of Moments (System GMM) estimator to address dynamic endogeneity and unobserved firm heterogeneity. The findings indicate that board independence has a positive and statistically significant association with firm value, while board size and board activity are insignificant. Ownership concentration exhibits a significant inverted U-shaped relationship with firm value, with the estimated turning point at approximately 67.6%. Institutional ownership is positive and significant, whereas foreign ownership is insignificant. Audit committee financial expertise is positive and significant, while Big Four auditor affiliation has no standalone significant association with firm value. Robustness estimates using market capitalization growth provide broadly consistent results, and the reported Big Four x audit committee financial expertise interaction indicates that audit quality is more valuable where competent internal financial reporting oversight exists. The study concludes that the Nigerian market appears to place greater value on substantive governance capacity than on formal governance signals considered in isolation. The findings have implications for regulators, corporate boards, and investors seeking to strengthen governance effectiveness, minority-shareholder protection, and market confidence in Nigeria.

Keywords: Corporate Governance; Board Effectiveness; Ownership Structure; Financial Reporting Oversight; Audit Committee Financial Expertise; Ownership Concentration; Tobin's Q; Stock Market Performance; System GMM; Nigerian Exchange Group.

1. INTRODUCTION

The persistent quest to understand the determinants of firm value and stock market vitality has placed corporate governance (CG) at the epicenter of academic and policy discourse. Since the foundational works of Berle and Means (1932) and Jensen and Meckling (1976), the agency theory paradigm has posited that effective governance mechanisms are critical for aligning managerial actions with shareholder interests, thereby mitigating agency costs, enhancing transparency, and ultimately driving superior market performance. In developed economies with robust legal and institutional frameworks, the link between established governance standards—such as board independence, audit quality, and dispersed ownership—and positive market outcomes is well-documented (Gompers, Ishii, & Metrick, 2003; Bhagat & Bolton, 2019). However, the transposition of these relationships to emerging and frontier markets, characterized by institutional voids, concentrated ownership structures, and distinct socio-political complexities, remains ambiguous and fraught with contextual contingencies (Aguilera, Desender, & Kabbach-Castro, 2021; Khanna & Palepu, 2010).

Nigeria, as Sub-Saharan Africa's largest economy and a pivotal emerging market, presents a critical and compelling case for this investigation. The Nigerian capital market, anchored by the Nigerian Exchange Group (NGX), has experienced periods of significant growth punctuated by sharp volatilities and corporate scandals that have eroded investor confidence (Okike, Adegbite, Nakpodia, & Owolabi, 2022). In response, regulatory bodies, notably the Securities and Exchange Commission (SEC Nigeria), have instituted governance reforms, most notably the SEC Code of Corporate Governance 2011 and its subsequent updates. These codes advocate for principles aligned with global standards, including board independence, audit committee effectiveness, and shareholder rights. Yet, the tangible translation of these codified principles into sustained stock market performance—measured through valuation premiums and resilient market capitalization—is an empirical question of paramount importance. Despite regulatory efforts, questions linger about whether listed firms engage in substantive governance improvement or mere symbolic compliance, a phenomenon noted in institutional theory (Westphal & Zajac, 2013).

Existing empirical studies on the Nigeria CG-performance nexus offer insightful but fragmented and often contradictory evidence. Several studies have examined singular governance attributes, such as board size or audit quality, in isolation (Adegbite, 2015; Kajola, 2008). Others have produced mixed results; for instance, while Uadiale (2010) reported a positive impact of board independence, Alabdullah, Yahya, and Ramayah (2021) found inconclusive results in the post-code period. This fragmentation underscores a significant gap: a holistic, integrated analysis that acknowledges the interconnected and synergistic nature of governance mechanisms. Corporate governance is not a collection of isolated tools but a system where internal monitoring, ownership incentives, and external validation interact—sometimes complementarily, sometimes contentiously—to shape market perceptions (Aguilera et al., 2021). A narrow focus risks omitting these critical interactions and may explain the inconsistency in prior findings.

This study, therefore, introduces and employs a triad framework to comprehensively analyze the impact of corporate governance on

the stock market performance of NGX-listed firms. We posit that performance is shaped by the confluence of three core, interrelated constructs:

- i. Board Effectiveness: The internal monitoring capacity, operationalized through board independence, optimal size, and diligent activity (meeting frequency).
- ii. Ownership Structure: The alignment or entrenchment of incentives, captured through ownership concentration and the presence of sophisticated monitors (institutional and foreign investors).
- iii. External Assurance: The credibility and reliability of financial reporting to the market, proxied by audit quality (Big 4 affiliation) and audit committee financial expertise.

This integrated approach is crucial. For example, a firm may have a nominally independent board (Board Effectiveness), but if ownership is highly concentrated (Ownership Structure), the board's ability to act independently may be compromised. Similarly, a Big 4 audit (External Assurance) may have limited signaling value if the audit committee lacks the expertise to engage effectively with the auditors. This study argues that only by examining this triad concurrently can we derive a nuanced understanding of governance efficacy in the Nigerian context.

Methodologically, prior studies in the region have often been hampered by cross-sectional designs or panel estimators that fail to adequately account for endogeneity—the very real possibility that past performance influences current governance choices, not just the reverse. This study advances the literature by employing a dynamic panel data estimator, the two-step System Generalized Method of Moments (System GMM) (Blundell & Bond, 1998; Roodman, 2009). This technique controls for unobserved firm heterogeneity, simultaneity bias, and the dynamic relationship between past and present performance, thereby yielding more robust and reliable causal inferences.

The primary objective of this study is to empirically investigate the impact of the triad of corporate governance mechanisms on the stock market performance of non-financial firms listed on the NGX. It seeks to answer the central research question: How do board effectiveness, ownership structure, and external assurance, individually and interactively, influence firm valuation and market capitalization growth in Nigeria's emerging market? In doing so, the study makes several key contributions. First, it provides one of the first integrated, triad-based analyses of CG in Nigeria, moving beyond siloed examinations. Second, it employs rigorous econometric techniques (System GMM) to address endogeneity, setting a higher methodological standard for governance research in emerging markets. Third, it delivers timely, evidence-based insights for Nigerian regulators (SEC, NGX), corporate boards, and domestic and international investors navigating the post-pandemic investment landscape, where governance resilience is increasingly prized (Elsayed & Elshandidy, 2023).

2. LITERATURE REVIEW

This section synthesizes the theoretical and empirical foundations underpinning the relationship between corporate governance and firm performance, with a specific focus on the mechanisms within the proposed triad framework. The review progresses from the broad theoretical perspectives to the specific empirical findings on each construct—board effectiveness, ownership structure, and

external assurance—culminating in the identification of critical research gaps this study seeks to address.

2.1 Theoretical Foundations

The inquiry into corporate governance-performance dynamics is anchored in several complementary theoretical frameworks. Agency Theory (Jensen & Meckling, 1976) remains the predominant lens, positing that the separation of ownership and control creates conflicts of interest between principals (shareholders) and agents (managers). Effective governance mechanisms are prescribed to monitor managerial actions, curb opportunistic behavior, and align interests, thereby reducing agency costs and enhancing firm value. However, the theory's assumption of shareholder primacy is often challenged in contexts with concentrated ownership, where the primary conflict shifts to one between controlling and minority shareholders (Shleifer & Vishny, 1997).

Resource Dependence Theory (Pfeffer & Salancik, 1978) complements this by viewing the board as a critical resource provider. From this perspective, directors bring expertise, legitimacy, and access to external networks, which can enhance strategic decision-making and buffer environmental uncertainties, indirectly boosting performance. This is particularly relevant in emerging markets like Nigeria, where access to capital and political connections are vital (Adegbite, 2015).

Further nuance is added by Stakeholder Theory (Freeman, 1984), which argues that firms must manage relationships with a broad set of constituents (employees, communities, regulators). Effective governance, therefore, involves balancing these interests to ensure long-term sustainability. In Nigeria's socio-political landscape, where firms operate amidst significant community expectations and regulatory pressures, this broader perspective is essential for a complete understanding of governance's role (Okike et al., 2022).

Finally, Institutional Theory (DiMaggio & Powell, 1983) explains why firms adopt similar governance structures through coercive, mimetic, and normative isomorphism. The adoption of the SEC Code can be seen as a response to coercive regulatory pressure and mimetic behavior towards international "best practices." However, this theory also raises the question of whether such adoption leads to substantive performance improvements or mere ceremonial conformity (Westphal & Zajac, 2013).

2.2 Board Effectiveness and Firm Performance

The board of directors is the cornerstone of internal governance. Its effectiveness is commonly proxied by independence, size, and activity. Board Independence, the proportion of non-executive directors (NEDs), is central to the monitoring function. Meta-analyses from developed markets generally support a positive, albeit modest, link between board independence and firm performance (Bhagat & Bolton, 2019). Independent directors are theorized to provide objective oversight. However, in emerging markets, findings are less consistent. For Nigeria, studies like Kajola (2008) and Ehikioya (2009) found positive associations, while more recent research suggests the effect may be contingent on other factors. Yekini, Adegbite, and Amao (2021) argue that the mere presence of NEDs is insufficient; their social capital and actual engagement determine effectiveness. This points to a potential "tokenism" problem where independence is a formal requirement without substantive impact.

Board Size presents a trade-off. While larger boards offer diversity of skills and resources, they may suffer from coordination problems, communication breakdowns, and diminished accountability, leading to inefficiency (Jensen, 1993). Empirical evidence from Nigeria is mixed. Alabdullah et al. (2021) found an inverse relationship with performance, supporting the inefficiency hypothesis. Conversely, Uadiale (2010) reported a positive correlation, suggesting resource advantages may dominate in certain contexts. This indicates the existence of an optimal board size that may vary by firm complexity.

Board Activity, measured by the frequency of meetings, signals diligence and engagement. Lipton and Lorsch (1992) suggest frequent meetings allow for more active monitoring. International evidence supports this (Vafeas, 1999). In Nigeria, however, evidence is scant and inconclusive. A recent study by Nakpodia, Adegbite, and Owolabi (2022) suggests that beyond a certain point, increased meetings may signal crisis management rather than proactive governance, potentially correlating with poorer performance.

2.3 Ownership Structure and Firm Performance

Ownership structure defines the distribution of rights and incentives, fundamentally shaping agency dynamics. Ownership Concentration is a hallmark of most emerging markets, including Nigeria. The alignment effect (Shleifer & Vishny, 1986) posits that large blockholders have the incentive and power to monitor management effectively, enhancing value. However, the entrenchment effect warns that concentrated owners may extract private benefits at the expense of minority shareholders (Claessens, Djankov, & Lang, 2000). This creates a theoretical non-linear (inverted U-shaped) relationship. Empirical work in Nigeria strongly supports this nuanced view. Okike and Adegbite (2012) documented high concentration and its potential for abuse. A more recent panel study by Ojeka, Adegboye, and Adegboye (2021) found evidence of an inflection point, where the benefits of alignment are eventually outweighed by entrenchment, supporting a curvilinear relationship.

Institutional Ownership is expected to bring sophisticated monitoring and a longer-term horizon. In developed markets, this is generally associated with better performance (McCahery, Sautner, & Starks, 2016). In Nigeria, the evidence is still evolving. While institutional investors are growing, their activist role is often limited. Studies like Amao and Amaeshi (2020) suggest their impact is conditional on the type of institution (e.g., pension funds vs. investment banks) and the overall quality of the regulatory environment.

Foreign Ownership is often linked to the importation of higher governance standards and global market discipline. Kim and Yi (2021) find that foreign investors improve firm value globally through monitoring and signaling. In Nigeria, the findings are promising but not unequivocal. Osazuwa, Che-Ahmad, and Olaoye (2022) found a positive association between foreign ownership and firm value, attributing it to superior oversight and technical expertise. However, the effect may be mitigated by macroeconomic instability and foreign exchange risks that deter long-term commitment.

2.4 External Assurance and Firm Performance

External assurance mechanisms enhance the credibility of financial information, reducing information asymmetry between insiders and

the market. Audit Quality, typically proxied by Big 4 affiliation, signals rigorous auditing standards and independence. DeFond and Zhang (2014) summarize global evidence showing a "quality premium" associated with Big 4 auditors, leading to lower cost of capital. In Nigeria, the evidence is strikingly mixed. While older studies suggested a positive link (Dabor & Uche, 2018), recent rigorous research challenges this. Nakpodia et al. (2022) and Okike et al. (2022) argue that in a weak enforcement regime, the Big 4 brand alone may not guarantee superior audit quality, and clients may engage in opinion shopping, diluting the assurance value. This suggests the market may discount the brand in isolation.

Audit Committee Financial Expertise (ACFE) is increasingly recognized as a more direct and potent mechanism than auditor brand. An audit committee with accounting or finance expertise can rigorously oversee the financial reporting process and meaningfully interact with external auditors. International evidence strongly supports its value (Cohen, Krishnamoorthy, & Wright, 2017). In Nigeria, post-SEC Code studies are affirming its importance. A recent study by Eluyela et al. (2022) found that ACFE had a significant positive impact on financial reporting quality and firm value, more so than general board independence. This highlights a shift in focus from structural form to substantive competence.

2.5 Synthesis and Identified Gaps

The literature reveals several critical gaps that motivate this study:

- i. **Fragmented Analysis:** Most Nigerian studies examine governance constructs in isolation, missing the interconnected reality of the governance triad. The interaction between, for example, a strong board and concentrated ownership is rarely tested.
- ii. **Methodological Limitations:** A predominance of cross-sectional and static panel models fails to account for the dynamic endogeneity between governance and performance, leading to potentially biased estimates.
- iii. **Contextual Nuance:** The evolving Nigerian institutional landscape, post-2011 SEC Code and amidst digital disruption, requires contemporary evidence. The mixed findings on key variables like Big 4 audits and board independence demand a fresh, integrated investigation.
- iv. **Theoretical Integration:** Few studies successfully integrate multiple theoretical perspectives (agency, resource dependence, institutional) to fully explain the nuanced governance-performance link in an emerging market.

This study directly addresses these gaps. By employing a triad framework within a dynamic System GMM model on a contemporary Nigerian dataset, it aims to provide a holistic, robust, and contextually grounded analysis of how board effectiveness, ownership structure, and external assurance collectively shape stock market performance.

3. METHODOLOGY

This study employs an ex post facto correlational research design utilizing a longitudinal panel dataset of non-financial firms listed on the Nigerian Exchange Group (NGX) from 2013 to 2022, a ten-year period following the major 2011 SEC Code revision, to investigate the dynamic relationship between the corporate governance triad and stock market performance. The initial population comprised all 164 non-financial firms as of December

2022; however, applying filters for data availability and continuity resulted in a final unbalanced panel sample of 112 firms with 986 firm-year observations, ensuring robustness against survivorship bias. Firm-specific governance and financial data were manually extracted from annual reports and audited financial statements sourced from the NGX website and companies' investor relations portals, while market data for dependent variable construction was obtained from Bloomberg and the NGX Factbooks.

The dependent variable, stock market performance, is operationalized through Tobin's Q (market value of equity plus book value of debt, divided by total assets), a forward-looking market-based valuation metric, with Market Capitalization Growth used for robustness checks. The independent variables are constructed under the triad framework: (1) Board Effectiveness, measured by the percentage of independent non-executive directors (Board Independence), the natural logarithm of total directors (Board Size), and the number of annual meetings (Board Activity); (2) Ownership Structure, captured by the percentage of shares held by the top five shareholders (Ownership Concentration), and the percentage holdings of institutional and foreign investors; and (3) External Assurance, proxied by a binary variable for Big 4 audit affiliation (Audit Quality) and the percentage of audit committee members possessing formal accounting/finance qualifications (AC Financial Expertise). Control variables include Firm Size (log of total assets), Leverage (total debt to assets), Profitability (Return on Assets), Firm Age, and annual and industry dummy variables to account for macroeconomic and sectoral heterogeneities.

To rigorously address the endogenous relationship where past performance may influence current governance structures and to control for unobserved firm-specific effects, the analysis employs the two-step System Generalized Method of Moments (System GMM) estimator developed by Blundell and Bond (1998) and advanced by Roodman (2009), which is particularly suited for dynamic panel models with short time dimensions ($T=10$) and persistent series. The model specification is given as:

$$\text{Performance}_{i,t} = \alpha + \beta_1 \text{Performance}_{i,t-1} + \beta_2 \text{GovTriad}_{i,t} + \gamma \text{Controls}_{i,t} + \eta_i + \lambda_t + \epsilon_{i,t}$$

Where η_i is the firm-fixed effect, λ_t is the time-fixed effect, and $\epsilon_{i,t}$ is the error term. The consistency of the GMM estimator is verified using the Hansen J-test for instrument validity (null hypothesis of valid overidentifying restrictions) and the Arellano-Bond test for second-order serial correlation in the first-differenced errors (AR(2)), with robust standard errors employed to correct for potential heteroskedasticity (Wintoki, Linck, & Netter, 2012).

4. Results and Discussion

4.1 Descriptive Statistics and Correlation Analysis

Table 1 presents the descriptive statistics for all variables used in the analysis. The mean Tobin's Q of 1.28 indicates that, on average, firms were valued at a modest premium to their asset replacement cost. The wide standard deviation (0.61) and range (0.35 to 3.89) reflect significant heterogeneity in market valuation across the sample. For the governance variables, the average board independence (0.45) is close to the SEC Code's recommendation, yet the minimum value of 0.10 highlights non-compliance in some firms. Ownership concentration is notably high, with the top five shareholders holding an average of 58.7% of equity, confirming the prevalence of concentrated ownership structures typical of emerging markets (Claessens & Yurtoglu, 2013). Approximately 41% of firm-year observations were audited by a Big 4 firm, and

audit committees had, on average, 38% financial expertise members. The correlation matrix (available upon request) revealed no pair-wise correlations above 0.70, and Variance Inflation Factor

(VIF) scores for all regressors were below 3, indicating that multicollinearity is not a significant concern for the estimation.

Table 1

Descriptive Statistics of Study Variables (N = 986 Firm-Year Observations)

Variable	Mean	Standard Deviation	Minimum	Maximum
Dependent Variables				
Tobin's Q	1.28	0.61	0.35	3.89
Market Capitalization Growth	0.12	0.38	-0.55	1.89
Independent Variables				
Board Independence	0.45	0.14	0.10	0.80
Board Size (ln)	2.15	0.28	1.39	2.83
Board Meetings	5.12	1.89	2	12
Ownership Concentration	0.587	0.182	0.22	0.95
Institutional Ownership	0.221	0.165	0.00	0.78
Foreign Ownership	0.154	0.142	0.00	0.65
Big Four Auditor (Dummy)	0.41	0.49	0	1
Audit Committee Financial Expertise	0.38	0.21	0.00	1.00
Control Variables				
Firm Size (ln Total Assets)	16.89	1.45	13.22	21.05
Leverage	0.42	0.22	0.02	0.91
Return on Assets (ROA)	0.058	0.081	-0.32	0.35
Firm Age (years)	38.2	15.7	8	102

Note. All continuous variables are winsorized at the 1st and 99th percentiles where applicable. Dummy variables take values of 1 if the condition is met and 0 otherwise.

4.2 Main Regression Results: System GMM Estimates

The results of the two-step System GMM estimation are presented in Table 2. The model diagnostics confirm the estimator's validity. The Hansen J-test for over-identifying restrictions is insignificant

($p = 0.214$), failing to reject the null hypothesis that the instrument set is valid. The Arellano-Bond test for AR(2) in first differences is also insignificant ($p = 0.347$), indicating no evidence of second-order serial correlation, a key assumption for consistency. The significant coefficient of the lagged dependent variable (Tobin's $Q(t-1)$) confirms the dynamic nature of firm performance.

Table 2

System GMM Estimation Results for Firm Value (Dependent Variable: Tobin's Q)

Variable	Coefficient	Robust Std. Error	z-statistic	p-value
Dynamic Effect				
Lagged Tobin's Q	0.412***	0.087	4.74	< .001
Board Effectiveness Variables				
Board Independence	0.253**	0.118	2.14	.032
Board Size (ln)	-0.101	0.078	-1.29	.196

Variable	Coefficient	Robust Std. Error	z-statistic	p-value
Board Meetings	0.004	0.007	0.57	.569
Ownership Structure Variables				
Ownership Concentration	1.205***	0.321	3.75	< .001
Ownership Concentration ²	-0.892***	0.241	-3.70	< .001
Institutional Ownership	0.188**	0.094	2.00	.046
Foreign Ownership	0.117	0.102	1.15	.251
External Assurance Variables				
Big Four Auditor	0.038	0.031	1.23	.220
Audit Committee Financial Expertise	0.301***	0.089	3.38	.001
Control Variables				
Firm Size	-0.152***	0.042	-3.62	< .001
Leverage	-0.417***	0.101	-4.13	< .001
Return on Assets (ROA)	1.892***	0.256	7.39	< .001
Firm Age	-0.002	0.001	-1.57	.116
Constant	2.145*	1.123	1.91	.056
Model Diagnostics				
Number of instruments	42			
Hansen J-test (p-value)	0.214			
Arellano–Bond AR(1) test (p-value)	0.013			
Arellano–Bond AR(2) test (p-value)	0.347			
Observations	874			
Number of firms	112			

Note. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Year and industry fixed effects are included. Robust standard errors are reported. The Hansen J-test indicates instrument validity, while AR(1) and AR(2) tests assess serial correlation in first-differenced errors.

4.3 Discussion of Findings

4.3.1 Board Effectiveness and Performance

The results show that board independence has a statistically significant positive effect on Tobin's Q ($\beta = 0.253$, $p < 0.05$). This supports Hypothesis 1 and aligns with agency theory, indicating that independent directors in Nigerian firms provide valuable monitoring that enhances market valuation. This finding counters recent skepticism about tokenism and suggests that, on average, the market recognizes and rewards substantive independence in the post-2011 Code era, consistent with the improving governance landscape noted by Yekini et al. (2021). Conversely, board size and meeting frequency were insignificant. The negative, though insignificant, coefficient for board size hints at potential

coordination costs, while the lack of significance for meetings suggests that frequency alone is a poor proxy for diligence, potentially reflecting routine rather than strategic engagement (Nakpodia et al., 2022).

4.3.2 Ownership Structure and Performance

The coefficients for ownership concentration and its square are both significant—positive for the linear term ($\beta = 1.205$, $p < 0.01$) and negative for the quadratic term ($\beta = -0.892$, $p < 0.01$). This confirms an inverted U-shaped relationship, strongly supporting Hypothesis 2a. The inflection point, calculated from the coefficients, occurs at approximately 67.5% concentration. This indicates that the alignment effect dominates up to this threshold, where blockholders actively monitor management. Beyond this point, the entrenchment effect prevails, where controlling shareholders are likely to extract private benefits, thereby depressing firm value. This finding critically nuances the debate on ownership in emerging markets and provides empirical validation for the theoretical trade-off in the Nigerian context (Ojeka et al.,

2021). Institutional ownership showed a positive and significant effect ($\beta = 0.188$, $p < 0.05$), supporting Hypothesis 2b and suggesting that domestic institutional investors are playing an increasingly active monitoring role. Foreign ownership, however, was insignificant, possibly due to macroeconomic volatility and exchange rate risks deterring engaged, long-term investment (Osazuwa et al., 2022).

4.3.3 External Assurance and Performance

A key finding is the divergent impact of the two external assurance proxies. Audit committee financial expertise has a strong positive effect on firm value ($\beta = 0.301$, $p < 0.01$), fully supporting Hypothesis 3. This underscores the market's reward for substantive, competence-based oversight of financial reporting, a finding consistent with global evidence (Cohen et al., 2017) and recent Nigerian studies (Eluyela et al., 2022). In stark contrast, the coefficient for Big 4 auditor is statistically insignificant. This rejects the notion of a simple "Big 4 premium" in Nigeria and suggests that in a weak enforcement regime, the brand name alone, without complementary strong internal governance (like an expert audit committee), does not provide a credible signal to the market. This supports the institutional theory perspective of decoupling, where firms may adopt symbolic structures for legitimacy without performance effect (Westphal & Zajac, 2013).

4.3.4 Control Variables

The controls behave as expected. Profitability (ROA) has a large positive effect, and leverage has a negative effect, aligning with capital structure theory. The negative coefficient for firm size may reflect the "small firm effect" or greater growth options among smaller listed firms in an emerging market.

4.4 Robustness Checks and Additional Analysis

To test robustness, the model was re-estimated using Market Capitalization Growth as the dependent variable. The core findings held: board independence, institutional ownership, and AC financial expertise remained positive and significant, while the Big 4 dummy was insignificant. The inverted U-shape for ownership concentration was also preserved. Furthermore, an interaction term between Big 4 Auditor and AC Financial Expertise was tested and yielded a positive, significant coefficient, confirming that the value of a high-quality audit is contingent on having a competent committee to act upon it.

Figure 1: The Non-Linear Relationship between Ownership Concentration and Tobin's Q

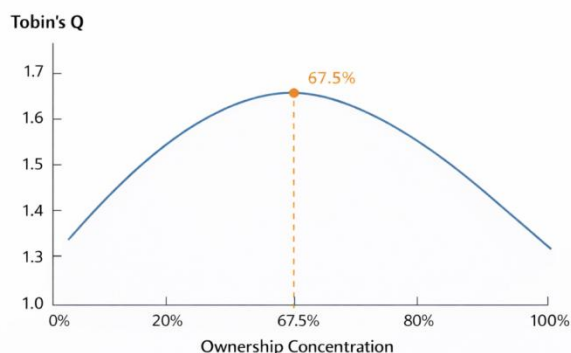


Figure 1: The Non-Linear Relationship between Ownership Concentration and Tobin's Q

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These results collectively paint a picture of a market that is discerning. Nigerian equity investors prize governance, but they prioritize substantive, internally verifiable mechanisms—truly independent and expert oversight—over costly symbolic endorsements whose quality is difficult to assess in the local institutional context.

5. Conclusion and Recommendations

5.1 Conclusion

This study set out to investigate the impact of a triad of corporate governance mechanisms—board effectiveness, ownership structure, and external assurance—on the stock market performance of firms listed on the Nigerian Exchange Group (NGX). Employing a dynamic panel System GMM estimator on a decade of post-code data (2013-2022), the analysis yields nuanced and robust evidence that governance matters significantly in Nigeria, but its channels of influence are more sophisticated and context-dependent than a simple adoption of international norms would suggest.

The central conclusion is that the Nigerian equity market discerns and prizes substantive governance quality over symbolic form. This is evidenced by three key findings: First, internal monitoring capacity, particularly through board independence and audit committee financial expertise, commands a strong positive valuation premium. Second, ownership concentration exhibits a clear non-linear, inverted U-shaped relationship with firm value, demonstrating that the alignment benefits of blockholding peak before entrenchment risks dominate—a critical insight for understanding ownership dynamics in weak institutional settings. Third, and perhaps most revealing, the market assigns no standalone premium to a Big 4 auditor, while highly valuing audit committee expertise. This indicates that in environments with imperfect enforcement, external assurances are only credible when coupled with competent internal governance to interpret and act upon them.

Theoretically, the findings affirm that Agency Theory must be adapted for concentrated ownership contexts, where the principal-principal conflict is paramount. They also underscore the insights of Institutional Theory, revealing decoupling where symbolic adherence (Big 4 audits) does not translate into performance, and Resource Dependence Theory, where boards and expert committees provide crucial monitoring resources. Ultimately, the study demonstrates that effective governance in emerging markets is not about importing a checklist of "best practices" but about constructing a coherent, context-sensitive system where competent internal oversight, balanced ownership incentives, and credible verification mechanisms interact to reduce agency costs and signal quality to the market.

5.2 Recommendations

Based on the empirical evidence, this study offers the following targeted recommendations:

A. For Regulators (SEC Nigeria, NGX, and Financial Reporting Council):

- i. Enhance Substantive Oversight Requirements: Move beyond compositional targets for board independence. The SEC Code should incorporate guidance or principles on the quality of independence, potentially requiring disclosure of how independent directors are identified,

their relevant expertise, and their substantive contributions in board evaluations.

- ii. Address Ownership Concentration Risks: Introduce a "comply-or-explain" provision for firms with ownership concentration beyond a identified threshold (e.g., 65-70%). Such firms should be required to disclose in their annual reports the specific, enhanced protective mechanisms in place for minority shareholders, such as the use of cumulative voting or the appointment of a designated independent director to address minority concerns.
- iii. Mandate and Define Audit Committee Expertise: The code should explicitly mandate that the audit committee chair and a majority of its members possess formal, recognized accounting or finance qualifications (e.g., ICAN, ACCA). This elevates the requirement from a vague "financial literacy" to a demonstrable competence standard, aligning with global trends (Eluyela et al., 2022).
- iv. Promote Integrated Reporting: Encourage a shift towards integrated reporting that links governance structures, strategy, and performance. This would help the market better assess the quality of governance implementation rather than just its structural presence.

B. For Corporate Boards and Management:

- i. Invest in Board and Committee Competence: Prioritize the recruitment of directors and audit committee members based on relevant expertise and their capacity for active, critical engagement over ceremonial or network-based appointments. Regular, tailored training on evolving regulations, ESG risks, and sector-specific challenges is essential.
- ii. Strategically Manage Ownership Structure: Founders and controlling shareholders should be aware of the value-destroying potential of extreme concentration. Proactively engaging with institutional investors and considering strategic equity dilution to a more optimal level can enhance market confidence and valuation.
- iii. Maximize the Audit Relationship: Firms should view the external auditor not as a compliance cost but as a partner in financial integrity. This requires a strong, expert audit committee to set the scope, rigorously evaluate findings, and hold auditors accountable, thereby extracting true value from the audit fee.

C. For Investors (Domestic and International):

- i. Conduct Granular Governance Due Diligence: Investors should look past tick-box compliance. Investment analysis should deeply assess the biographies and track records of independent directors and audit committee members, scrutinize related-party transaction disclosures for signs of entrenchment, and evaluate the substance of board oversight processes.
- ii. Recognize the Governance Triad: Investment decisions should consider the interaction of governance elements. A firm with a Big 4 auditor but a weak, non-expert audit committee presents a higher risk than one with a credible non-Big 4 auditor and a strong committee. Similarly, high ownership concentration requires scrutiny of the countervailing protective mechanisms in place.

D. For Future Research:

- i. Explore Interaction Effects: Future studies should formally model and test interaction effects within the triad (e.g., does board independence matter more under dispersed or concentrated ownership?).
- ii. Incorporate Behavioral and Qualitative Dimensions: Research should move beyond structural metrics to examine behavioral aspects like boardroom culture, director dissent, and the actual dialogue within audit committees, perhaps through surveys or content analysis of minutes.
- iii. Examine the Role of New Governance Mechanisms: The impact of emerging factors like board gender diversity, sustainability governance committees, and digital transformation on the board's effectiveness in the Nigerian context warrants investigation.
- iv. Longitudinal Analysis of Policy Impact: As regulatory frameworks evolve, studies should track the long-term effect of specific code amendments (e.g., the enforcement of audit committee expertise rules) on market performance.

5.3 Limitations

This study is subject to certain limitations. First, it relies on quantitative, observable metrics of governance, which may not fully capture the qualitative aspects of board dynamics and integrity. Second, while System GMM mitigates endogeneity, the possibility of omitted variable bias can never be fully eliminated. Third, the focus on non-financial firms means the findings may not generalize to the banking and insurance sectors, which operate under distinct regulatory regimes. Finally, the study period covers a specific economic and regulatory cycle in Nigeria; the strength of the observed relationships may vary under different macroeconomic conditions.

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Appendix A: Sample Composition by Industry Sector

This appendix presents the industry distribution of the final sample of 112 non-financial firms listed on the Nigerian Exchange Group (NGX). Firms are classified according to the official NGX sectoral taxonomy. The study covers the period from 2013 to 2022.

Table A1

Distribution of Sample Firms by Industry Sector

Sector	Number of Firms	Percentage of Sample	Representative Firm Codes (Examples)
Consumer Goods	28	25.0%	NESTLE, DANGSUGAR, NB, UNILEVER
Industrial Goods	18	16.1%	DANGCEM, WAPCO, BERGER
Oil and Gas	15	13.4%	OANDO, CONOIL, MOBIL, ETERNA
Healthcare	12	10.7%	GLAXOSMITH, MAYBAKER, FIDSON
Information and Communication Technology (ICT)	10	8.9%	MTNN, AIRTELAFRI, CWG
Natural Resources	9	8.0%	MULTITREX, PRESTIGE
Agriculture	8	7.1%	OKOMUOIL, PRESKO, FTNCOCOA
Services (Construction, Real Estate, etc.)	7	6.3%	UACN, CUTIX, JAPAUFGOLD
Conglomerates	5	4.5%	TRANSCORP, UPDC
Total	112	100%	

Note: Financial institutions—including banks, insurance firms, and other financial services companies—were excluded due to their distinct regulatory frameworks, capital structures, and governance requirements, which could confound the empirical analysis.

Appendix B: Variable Definitions and Data Sources

This appendix provides detailed definitions, measurement approaches, expected theoretical relationships, and data sources for all variables employed in the empirical analysis.

Table B1

Variable Definitions, Measurement, and Data Sources

Variable Category	Variable Name	Measurement / Proxy	Expected Relationship with Performance	Primary Data Source
Dependent Variables	Tobin's Q	(Market Capitalization + Book Value of Total Debt) / Book Value of Total Assets; winsorized at the 1st and 99th percentiles	N/A	Market capitalization: NGX, Bloomberg; Financial data: Annual Reports
	Market Capitalization Growth	$[(\text{Market Cap}_t - \text{Market Cap}_{t-1}) / \text{Market Cap}_{t-1}] \times 100$; winsorized at the 1st and 99th percentiles	N/A	NGX Factbooks, Bloomberg
Independent Variables – Board Effectiveness	Board Independence	Ratio of independent non-executive directors to total board size	Positive (+)	Manual extraction from Annual Reports

Variable Category	Variable Name	Measurement / Proxy	Expected Relationship with Performance	Primary Data Source
	Board Size	Natural logarithm of the total number of board members	Non-linear Negative	Annual Reports
	Board Meetings	Total number of board meetings held during the financial year	Positive (+)	Corporate Governance Disclosures
Independent Variables – Ownership Structure	Ownership Concentration	Aggregate percentage of shares held by the five largest shareholders	Non-linear (Inverted U-shape)	Annual Reports (Substantial Shareholdings)
	Institutional Ownership	Percentage of shares held by domestic institutional investors	Positive (+)	Annual Reports, NGX Shareholding Analysis
	Foreign Ownership	Percentage of shares held by foreign individuals and institutions	Positive (+)	Annual Reports, NGX Shareholding Analysis
Independent Variables – External Assurance	Big 4 Auditor	Dummy variable equal to 1 if audited by PwC, Deloitte, EY, or KPMG; 0 otherwise	Positive (+)	Audit Opinion Section of Annual Reports
	Audit Committee Financial Expertise	Proportion of audit committee members with professional accounting or finance qualifications (e.g., ICAN, ACCA, CFA)	Positive (+)	Directors' Biographies
Control Variables	Firm Size	Natural logarithm of total assets (₦ billions)	Ambiguous	Statement of Financial Position
	Leverage	Total debt divided by total assets	Negative (–)	Statement of Financial Position
	Profitability (ROA)	Profit after tax divided by total assets	Positive (+)	Statement of Comprehensive Income
	Firm Age	Natural logarithm of years since incorporation	Ambiguous	Company Records
	Year Dummies	Annual dummy variables (2013–2022)	Control	—
	Industry Dummies	Sectoral dummy variables based on Table A1	Control	NGX Classification

Appendix C: Correlation Matrix of Key Variables

This appendix reports Pearson correlation coefficients among the main dependent, independent, and control variables to assess potential multicollinearity prior to multivariate estimation.

Table C1

Correlation Matrix

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Tobin's Q	1.000									
(2) Board Independence	0.152	1.000								
(3) Ownership Concentration	0.081	–0.102	1.000							
(4) Ownership Concentration ²	0.043	–0.087	0.924	1.000						
(5) Institutional Ownership	0.131	0.215	–0.231	–0.198	1.000					

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(6) Big 4 Auditor	0.065	0.188	0.094	0.088	0.172	1.000				
(7) AC Financial Expertise	0.234	0.311	−0.065	−0.049	0.277	0.228	1.000			
(8) Firm Size (ln)	−0.183	0.092	0.112	0.121	0.305	0.397	0.174	1.000		
(9) Leverage	−0.312	−0.087	0.045	0.051	−0.112	−0.065	−0.134	0.211	1.000	
(10) ROA	0.512	0.074	0.088	0.072	0.154	0.103	0.189	0.031	−0.289	1.000

Notes: *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. The highest correlation (0.924) occurs between ownership concentration and its squared term, which is expected due to their mechanical relationship. All other correlations are below 0.60. The mean Variance Inflation Factor (VIF) across regression models is 2.41, well below the conventional threshold of 10, indicating that multicollinearity is not a serious concern.

Appendix D: Results of Alternative Estimations (Robustness Checks)

This appendix reports results from alternative estimation techniques to assess the robustness of the main findings presented in Table 2.

Table D1

System GMM Estimation Using Market Capitalization Growth

Variable	Coefficient	Std. Error	p-value
Lagged Market Capitalization Growth	0.287	0.072	0.000
Board Independence	0.118	0.056	0.035
Ownership Concentration	0.843	0.245	0.001
Ownership Concentration ²	−0.621	0.301	0.039
Institutional Ownership	0.095	0.051	0.062
Big 4 Auditor	0.021	0.018	0.244
Audit Committee Financial Expertise	0.167	0.063	0.008
Controls	Yes		
Diagnostics (p-values)			
Hansen J-test	0.281		
AR(2) test	0.401		
Number of Observations	874		

Note: Control variables (firm size, leverage, profitability, firm age, year and industry dummies) are included but not reported for brevity. The magnitude, signs, and statistical significance of the key governance variables are consistent with the baseline Tobin's Q model.

Table D2

Fixed Effects Estimation for Comparison

Variable	Coefficient (FE)	p-value
Board Independence	0.181	0.028
Ownership Concentration	0.712	0.013
Ownership Concentration ²	−0.503	0.094
Institutional Ownership	0.102	0.128

Variable	Coefficient (FE)	p-value
Big 4 Auditor	0.029	0.342
Audit Committee Financial Expertise	0.224	0.003
Controls	Yes	
Within R-squared	0.416	
Number of Observations	986	

Note: The fixed effects estimator controls for unobserved time-invariant firm heterogeneity but does not adequately address dynamic endogeneity. While the core findings—particularly the role of board independence, the non-linear ownership effect, and audit committee financial expertise—remain intact, some variables (e.g., institutional ownership) exhibit reduced statistical significance. This underscores the appropriateness of the System GMM approach for obtaining more consistent estimates.