

CORPORATE GOVERNANCE MECHANISMS, FINANCIAL PERFORMANCE, AND FIRM VALUE IN QUOTED MANUFACTURING FIRMS IN NIGERIA

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ARTICLE INFO

Article No.: 0593

Accepted Date: 25/08/2026

Published Date: 23/09/2026

Type: Research

ABSTRACT

This study examined the effect of corporate governance mechanisms on the market-to-book value ratio (MTBV) of quoted manufacturing firms in Nigeria over the period 2015 to 2025. Specifically, the study assessed the effect of board size, board composition, frequency of board meetings, audit committee size, and firm size on firm value, drawing on the theoretical proposition that governance structures exist primarily to reduce the costs that arise when ownership and control of a firm are separated (Fama & Jensen, 1983). An ex-post facto research design was adopted, and secondary data were collected from the audited annual reports of nine purposively sampled manufacturing firms listed on the Nigerian Exchange Group, screened for financial health using the Altman Z-score. Descriptive statistics, Pearson correlation, and panel least squares regression were used to analyse ninety-nine firm-year observations. The results showed that board size, board composition, and audit committee size each had a statistically insignificant effect on MTBV, while frequency of board meetings had a negative and statistically significant effect. Firm size could not be empirically tested, as it was not incorporated as a distinct regressor in the estimated model. The study concludes that governance structure, on its own, is a comparatively weak predictor of firm value among the sampled firms, and recommends that manufacturing firms and regulators prioritise the quality and purpose of board engagement over numerical governance benchmarks.

Keywords: corporate governance, board characteristics, audit committee, firm value, manufacturing firms, Nigeria

1.0 INTRODUCTION

Corporate governance has become a central concern in the running of modern business organisations, as it defines how firms are directed, controlled, and held accountable to shareholders and other stakeholders. Sound governance arrangements are widely regarded as a mechanism for reconciling the sometimes divergent interests of those who manage a firm and those who own it, thereby underpinning investor confidence and the efficient functioning of capital markets. As firms grow in scale and complexity, the separation between the providers of capital and the managers entrusted with deploying that capital widens, creating both the opportunity and the necessity for structured oversight through boards of directors, audit committees, and formal disclosure regimes. The effectiveness of these arrangements is often linked to financial performance and market valuation: firms with credible governance structures are typically better positioned to reassure the market of the integrity of their reporting and decision-making, a dynamic associated in several contexts with a valuation premium for firms perceived to be well governed relative to peers with weaker or less transparent oversight. Whether this theoretical promise is realised in practice, however, remains an empirical question that varies by sector, ownership structure, and regulatory environment, which is part of the motivation for the sector-specific focus adopted in this study (Shleifer & Vishny, 1997).

Nigeria's corporate governance landscape has undergone several reforms intended to correct historical weaknesses and align local practice with global standards. The Nigerian Code of Corporate Governance sets out expectations regarding board structure, composition, meeting frequency, and audit committee arrangements for public companies, with the stated objective of strengthening accountability, transparency, and long-term shareholder value across all sectors of the listed economy. These reforms were introduced against a backdrop of recurring corporate governance failures in the Nigerian capital market, including boardroom conflict, inadequate financial disclosure, and weak internal control, which eroded investor confidence and prompted regulators to tighten the rules governing board composition, meeting frequency, and the independence of oversight committees. The theoretical rationale for these reforms draws heavily on agency theory, which views the firm as a nexus of contracts in which managers, as agents, may pursue interests that diverge from those of shareholders, the principals who bear the residual risk of the enterprise, creating a need for monitoring mechanisms designed to align managerial incentives with shareholder interests. The Code applies uniformly across listed sectors, yet the practical demands of compliance are likely to differ meaningfully between capital-light service firms and capital-intensive manufacturing concerns, whose boards must additionally contend with long investment cycles and heavy fixed-asset bases (Financial Reporting Council of Nigeria [FRCN], 2018).

The manufacturing sector occupies a strategic position in the Nigerian economy, contributing significantly to gross domestic product, employment generation, and non-oil export earnings, while also being highly capital intensive and exposed to macroeconomic shocks such as exchange rate volatility and infrastructural deficits. These sector-specific characteristics make sound governance particularly consequential: manufacturing firms typically carry substantial fixed assets and long-term financing obligations, so that board decisions on oversight, risk appetite, and financial reporting integrity have a direct bearing on investor confidence and market valuation. While a growing body of literature has examined governance–performance linkages across various sectors, comparatively little attention has been devoted to how these mechanisms jointly shape firm value within Nigeria's manufacturing sector, a sector whose asset-heavy character differs markedly from the banking and financial services firms that dominate the existing Nigerian governance literature. This sectoral gap motivates the present study, which examines the effect of board size, board composition, frequency of board meetings, audit committee size, and firm size on the market-to-book value ratio of quoted manufacturing firms in Nigeria (Adegbite, 2015).

2.0 STATEMENT OF THE PROBLEM

Corporate governance remains central to the survival, stability, and growth of manufacturing businesses. Firms that embed sound governance codes into their operations tend to carry stakeholders along in the pursuit of sustainable growth, projecting the transparency and accountability that reassures both existing shareholders and prospective investors. However, despite the existence of regulatory codes prescribing minimum standards of board conduct, many Nigerian companies continue to be constrained by inconsistent adherence to governance principles, a situation often attributable to lax enforcement of disclosure requirements and to the absence of meaningful sanctions for firms that fall short of the prescribed standards. This enforcement gap creates a situation in which structural compliance, as reported in annual accounts, may not accurately reflect the substantive quality of oversight actually exercised within the boardroom. Boards of manufacturing firms are, in addition, frequently confronted with unresolved questions regarding the ideal board size, the proportion of non-executive directors needed to provide credible independent oversight, and whether frequent board meetings reflect proactive engagement or reactive responses to underlying performance difficulties, leaving Nigerian manufacturing boards without a clear, sector-specific empirical basis for calibrating these structural choices (Securities and Exchange Commission [SEC], 2011).

A related concern is whether governance sub-structures such as the audit committee are properly resourced and constituted to discharge their oversight responsibilities credibly. Where committee size does not translate into greater independence, technical competence, or diligence, its capacity to provide credible assurance on the integrity of financial reporting is called into question, undermining the very purpose for which such committees are constituted under the Nigerian Code of Corporate Governance. This concern is compounded by the possibility that firm size itself, though frequently cited in the literature as a determinant of governance capacity and market valuation, may interact with these other governance variables in ways that a model omitting it cannot fully capture, leaving an incomplete picture of how firm-specific scale shapes the observed governance–value relationship. Although empirical evidence exists on the relationship between governance practices and firm outcomes in other sectors, findings specific to Nigeria's manufacturing sector remain fragmented, and the extent to which board oversight actually shapes market value, as opposed to merely satisfying the formal separation-of-ownership-and-control concerns that governance codes are designed to address, is not well established for this sector. It is against this background that the present study examines how board size, board composition, frequency of board meetings, audit committee size, and firm size affect the market-to-book value ratio of quoted manufacturing firms in Nigeria (Fama & Jensen, 1983).

3.0 AIM AND OBJECTIVES OF THE STUDY

The aim of this study is to examine the relationship between corporate governance mechanisms, financial performance, and firm value in quoted manufacturing firms in Nigeria. The specific objectives are to:

- i. examine the effect of board size on the Market-to-Book Value Ratio (MTBV) of quoted manufacturing firms in Nigeria;
- ii. assess the effect of board composition on the MTBV of quoted manufacturing firms in Nigeria;
- iii. evaluate the effect of frequency of board meetings on the MTBV of quoted manufacturing firms in Nigeria;
- iv. determine the effect of audit committee size on the MTBV of quoted manufacturing firms in Nigeria; and
- v. determine the effect of firm size on the MTBV of quoted manufacturing firms in Nigeria.

4.0 RESEARCH QUESTIONS

In line with the objectives set out above, the study formulates a corresponding set of research. The study sought answers to the following questions:

- i. What is the effect of board size on the MTBV of quoted manufacturing firms in Nigeria?
- ii. What is the effect of board composition on the MTBV of quoted manufacturing firms in Nigeria?
- iii. How does the frequency of board meetings affect the MTBV of quoted manufacturing firms in Nigeria?
- iv. What is the effect of audit committee size on the MTBV of quoted manufacturing firms in Nigeria?
- v. What is the effect of firm size on the MTBV of quoted manufacturing firms in Nigeria?

5.0 RESEARCH HYPOTHESES

The following null hypotheses were formulated to guide the study:

- H1: Board size has no significant effect on the Market-to-Book Value Ratio of quoted manufacturing firms in Nigeria.
- H2: Board composition has no significant effect on the Market-to-Book Value Ratio of quoted manufacturing firms in Nigeria.
- H3: Frequency of board meetings has no significant effect on the Market-to-Book Value Ratio of quoted manufacturing firms in Nigeria.
- H4: Audit committee size has no significant effect on the Market-to-Book Value Ratio of quoted manufacturing firms in Nigeria.
- H5: Firm size has no significant effect on the Market-to-Book Value Ratio of quoted manufacturing firms in Nigeria.

6.0 METHODOLOGY

6.1 Research Design

This study adopted an ex-post facto research design, given its reliance on historical, secondary financial data drawn from the audited annual reports and accounts of selected quoted manufacturing firms in Nigeria over an eleven-year period. The design is appropriate for governance research of this kind because the events and variables under investigation, including board composition decisions, meeting schedules, and audit committee appointments, had already occurred by the time the data were collected, and could not be manipulated, randomised, or experimentally assigned by the researcher without compromising the real-world context that gives the findings their practical relevance. This design further permits the use of panel data techniques capable of exploiting both the cross-sectional variation across the nine sampled firms and the time-series variation across the eleven-year study window, increasing the statistical power available to detect governance effects that might otherwise be obscured in a single cross-section or time series considered in isolation (Gujarati & Porter, 2009).

6.2 Population and Sample

The population of the study comprised the thirty-four (34) manufacturing firms listed on the Nigerian Exchange Group (NGX) as at June 2025. A purposive sampling technique was adopted, guided principally by the availability and consistency of disclosure on the study variables across the entire eleven-year study period from 2015 to 2025, reflecting the recognised principle that non-probability, purposive sampling is appropriate where a study requires specific, verifiable characteristics that are not evenly distributed across the population. Nine (9) firms satisfied these criteria: Guinness Nigeria Plc, Nigerian Breweries Plc, Nestlé Nigeria Plc, Unilever Nigeria Plc, PZ Cussons Nigeria Plc, Dangote Sugar Refinery Plc, UAC of Nigeria Plc, Dangote Flour Mills Nigeria Plc, and Vitafoam Nigeria Plc, together spanning brewing, food and beverages, household and personal care, sugar refining, diversified conglomerate operations, flour milling, and foam manufacturing. Sample selection was further guided by the financial health of each candidate firm, assessed using the Altman Z-score

discriminant model. The analysis indicated that PZ Cussons, Nestlé, Dangote Sugar Refinery, and UAC of Nigeria, with average Z-scores of 3.38, 3.05, 3.67 and 3.43 respectively, were financially very healthy; Unilever, Guinness, Nigerian Breweries, and Vitafoam, with average Z-scores of 2.45, 2.41, 2.67 and 2.83 respectively, fell within the grey zone of financial health; and Dangote Flour Mills was the only sampled firm classified as financially distressed, a classification retained so as to preserve variation in financial condition across the panel (Altman, 1968).

6.3 Sources and Method of Data Collection

Data were obtained entirely from secondary sources, principally the published audited financial statements and annual reports of the sampled firms for the period 2015 to 2025, supplemented where necessary by information drawn from the Nigerian Exchange Group's corporate disclosure portal and the individual corporate websites of the reviewed firms. Reliance on audited annual reports, prepared under statutory disclosure obligations and subject to independent external verification, was considered an appropriate basis for measuring the governance variables examined in this study, since such reports carry a level of assurance that primary survey-based instruments cannot straightforwardly replicate. Board size, board composition, and audit committee size were extracted from the corporate governance sections of each firm's annual report, while frequency of board meetings was drawn from the directors' report, and MTBV was computed from the statement of financial position data reported in the same audited accounts (FRCN, 2018).

6.4 Model Specification

The study adopted a multiple regression framework, estimated first as single-variable models isolating the effect of each governance mechanism individually, and thereafter as a composite panel model capturing their joint effect on firm value. This specification follows the standard approach used in agency-cost-oriented governance studies, which typically model firm value as a function of a vector of board monitoring characteristics, on the premise that each additional monitoring mechanism contributes incrementally to reducing the agency costs arising from the separation of ownership and control within the firm. Estimating both specifications allows the study to distinguish between the isolated relationship of each governance variable with MTBV and the relationship that persists once the other governance variables are held constant, a distinction that matters because governance mechanisms are rarely independent of one another in practice. The five estimated equations are specified as follows (Jensen & Meckling, 1976):

$$MTBV_t = \beta_0 + \beta_1 BSIZE_t + \varepsilon_t \dots\dots\dots (1)$$

$$MTBV_t = \beta_0 + \beta_1 BCMP_t + \varepsilon_t \dots\dots\dots (2)$$

$$MTBV_t = \beta_0 + \beta_1 FBMT_t + \varepsilon_t \dots\dots\dots (3)$$

$$MTBV_t = \beta_0 + \beta_1 ACSIZE_t + \varepsilon_t \dots\dots\dots (4)$$

$$MTBV_t = \beta_0 + \beta_1 BSIZE_t + \beta_2 BCMP_t + \beta_3 FBMT_t + \beta_4 ACSIZE_t + \varepsilon_t \dots (5)$$

In the equations above, MTBV denotes the Market-to-Book Value Ratio, the study's proxy for firm value; BSIZE denotes board size; BCMP denotes board composition, measured as the proportion of non-executive directors; FBMT denotes the frequency of board meetings held per year; and ACSIZE denotes audit committee size. The term ε represents the stochastic error term, β_0 is the constant term, β_1 through β_4 are the parameter coefficients attached to each explanatory variable, and t denotes the relevant time period, running from 2015 to 2025. Firm size, corresponding to Hypothesis Five, was not incorporated as a distinct regressor in these equations, a scope limitation discussed further in Sections 7.5, 8.4, and 10 (Ross, 1973).

6.5 Description and Measurement of Variables

Variable	Definition	Source of Data
MTBV	Market-to-Book Value Ratio — proxy for firm value, computed as Total Liabilities / Total Assets	Annual Reports and Accounts
BSIZE	Board Size — total number of directors on the board	Annual Reports and Accounts
BCMP	Board Composition — proportion of non-executive directors on the board	Annual Reports and Accounts
FBMT	Frequency of Board Meetings — number of board meetings held per year	Annual Reports and Accounts
ACSIZE	Audit Committee Size — number of members on the audit committee	Annual Reports and Accounts

Source: Author's compilation, 2026.

6.6 Method of Data Analysis

The panel least squares regression technique was used to estimate the effect of the explanatory variables on MTBV, complemented by descriptive statistics and Pearson correlation analysis to characterise the distribution of, and association among, the study variables. The adjusted R-squared statistic was used to assess the explanatory power of each model, the Durbin–Watson statistic to test for serial autocorrelation, and the F-statistic to test the joint significance of the explanatory variables. Correlation coefficients exceeding the conventional 0.80 threshold were treated as a warning sign of harmful multicollinearity, while the Jarque–Bera statistic was used to check for departures from normality. All estimations were carried out using EViews 10.0. The decision rule applied throughout was that the null hypothesis is rejected where the p-value is less than 0.05, the t-statistic exceeds 2 in absolute value, and the correlation coefficient exceeds 0.50 in absolute value (Gujarati & Porter, 2009).

6.7 Limitations of the Method

As with most ex-post facto designs relying on secondary data, the findings of this study are bound by the quality and consistency of the disclosures made in the sampled firms' annual reports, and any inconsistency or delay in a firm's governance disclosures over the eleven-year window could introduce measurement error into the corresponding variables. The purposive sampling approach, while necessary to ensure eleven years of consistent data on all study variables, limits the sample to nine firms out of a wider population of thirty-four listed manufacturing firms, constraining the extent to which the findings can be generalised beyond the specific firms examined. Furthermore, because the study relies on a single proxy, the market-to-book value ratio, to represent firm value, the findings should be interpreted as specific to this particular measure (Hair, Black, Babin & Anderson, 2010).

7.0 RESULTS

This section presents the empirical results of the study in five parts: descriptive statistics, correlation analysis, firm-level regression results, the industry-level pooled panel regression result, and the formal test of hypotheses. This sequencing follows the conventional order of diagnostic and estimation steps in panel data analysis, beginning with univariate description of each series, proceeding through bivariate association via correlation analysis, and concluding with multivariate regression estimated first at the individual firm level and then at the pooled industry level, before the resulting coefficients are mapped explicitly onto the five hypotheses formulated in Section 5, providing the empirical basis for the discussion and conclusions that follow in Sections 8 and 9 (Gujarati & Porter, 2009).

7.1 Descriptive Statistics

The analysis is based on ninety-nine (99) firm-year observations, drawn from the nine sampled manufacturing firms over the eleven-year period 2015–2025. Table 2 presents the descriptive statistics for the study variables. MTBV averaged 0.59, with a median of 0.62, ranging from a minimum of 0.18 to a maximum of 0.97 and a standard deviation of 0.17. On average, sampled firms maintained a board of approximately 10 members, a board composition of about 59 percent non-executive directors, roughly 5 board meetings per year, and an audit committee of about 6 members. MTBV, BSIZE, and BCMP recorded skewness coefficients below 1 and kurtosis values close to 3, alongside statistically insignificant Jarque–Bera probabilities, consistent with an approximately normal distribution. FBMT and ACSIZE, in contrast, exhibited skewness above 1 and elevated kurtosis, most pronounced for ACSIZE at over 23, indicating a departure from normality that is not unusual for count-based governance variables with limited discrete variation, such as audit committee size, which in this sample ranged narrowly between 6 and 8 members across all nine firms and eleven years. This departure from normality in two of the four explanatory variables is one of the reasons the study complements the descriptive analysis with both correlation and panel regression evidence, rather than relying on a single diagnostic test (Hair et al., 2010).

Statistic	MTBV	BSIZE	BCMP	FBMT	ACSIZE
Mean	0.5902	9.9694	0.5926	4.8469	6.0816
Median	0.6200	10.0000	0.6250	4.0000	6.0000
Maximum	0.9700	15.0000	0.8750	8.0000	8.0000
Minimum	0.1800	6.0000	0.2500	3.0000	6.0000
Std. Dev.	0.1705	2.0632	0.1272	1.1429	0.3709
Skewness	-0.6259	0.4518	-0.3192	1.0934	4.6041
Kurtosis	2.9418	2.3599	2.6184	3.0985	23.1366
Jarque-Bera	6.4127	5.0071	2.2583	19.5680	2001.958
Probability	0.1405	0.0818	0.3233	0.0001	0.0000
Observations	99	99	99	99	99

Source: Computed by the researcher using EVIEWS 10.0 statistical software.

7.2 Correlation Analysis

Table 3 presents the Pearson correlation matrix for the study variables. MTBV recorded weak positive associations with BSIZE (0.10) and ACSIZE (0.14), and a weak negative association with BCMP (-0.35). FBMT recorded by far the strongest relationship with MTBV, a moderate-to-strong negative correlation of -0.63, indicating that higher board meeting frequency was associated with lower market-to-book value, a pattern that anticipates the panel regression result reported later in this section. Correlation coefficients among the explanatory variables themselves remained below the conventional 0.80 threshold used to flag harmful multicollinearity, with the highest, between BCMP and FBMT, standing at only 0.38, supporting the treatment of the four governance variables as sufficiently distinct for inclusion together in the composite regression that follows (Hair et al., 2010).

	MTBV	BSIZE	BCMP	FBMT	ACSIZE
MTBV	1.0000	0.1002	-0.3526	-0.6288	0.1448
BSIZE	0.1002	1.0000	-0.3232	-0.0414	0.0302
BCMP	-0.3526	-0.3232	1.0000	0.3824	0.1567
FBMT	-0.6288	-0.0414	0.3824	1.0000	-0.1648
ACSIZE	0.1448	0.0302	0.1567	-0.1648	1.0000

Source: Computed by the researcher using EVIEWS 10.0 statistical software.

7.3 Firm-Level Regression Results

Table 4 summarises the estimated coefficients, with p-values shown in parentheses, together with the adjusted R-squared and Durbin–Watson statistics obtained from separate ordinary least squares regressions of MTBV on the governance variables for each of the nine sampled firms individually, with an asterisk denoting statistical significance at the 5 percent

level. The firm-level estimates reveal considerable heterogeneity in both the strength and the direction of the governance–value relationship across firms. Frequency of board meetings was the variable most frequently associated with statistical significance at the individual firm level, attaining significance at Unilever Nigeria Plc and, at the 10 percent level, at Guinness Nigeria Plc, while UAC of Nigeria Plc stood out as the only firm at which board size, board composition, and audit committee size were all simultaneously statistically significant, with its model explaining approximately 84 percent of the variation in its own MTBV. Explanatory power varied widely across the nine firm-level models, ranging from as low as 8 percent for Dangote Sugar Refinery Plc to as high as 88 percent for Unilever Nigeria Plc, and the sign of the FBMT coefficient was not uniform across firms, being negative for five firms but positive for the remaining four, underscoring that the strong negative relationship observed at the pooled industry level is driven disproportionately by a subset of firms rather than reflecting a universal pattern (Yermack, 1996).

Firm	BSIZE	BCMP	FBMT	ACSIZE	Adj. R ²	D-W
Guinness Nigeria Plc	0.0209 (0.482)	0.3370 (0.186)	0.0559 (0.050)*	0.0077 (0.733)	0.467	1.963
Nigerian Breweries Plc	-0.0082 (0.611)	-0.0500 (0.769)	-0.0408 (0.205)	-0.0505 (0.283)	0.198	1.531
Nestlé Nigeria Plc	0.0321 (0.539)	-0.0229 (0.967)	-0.0093 (0.889)	-0.0543 (0.602)	0.264	2.120
Unilever Nigeria Plc	0.0073 (0.708)	0.4727 (0.101)	-0.4898 (0.0006)*	-0.0341 (0.391)	0.879	1.924
PZ Cussons Nigeria Plc	0.0611 (0.480)	-0.1936 (0.617)	0.2203 (0.089)	0.1012 (0.347)	0.158	1.643
Dangote Sugar Refinery Plc	-0.0073 (0.905)	0.0052 (0.968)	0.0162 (0.503)	0.0102 (0.909)	0.079	1.846
UAC of Nigeria Plc	-0.0665 (0.038)*	0.8559 (0.019)*	-0.0666 (0.080)	0.0765 (0.044)*	0.842	2.110
Dangote Flour Mills Nig. Plc	-0.0236 (0.417)	-0.9388 (0.107)	0.0142 (0.736)	-0.0127 (0.928)	0.169	2.568
Vitafoam Nigeria Plc	-0.0247 (0.631)	-0.2178 (0.611)	0.0283 (0.775)	0.0765 (0.184)	0.195	1.552

Source: Computed by the researcher using EViews 10.0 statistical software.

7.4 Industry-Level (Panel) Regression Result

Table 5 presents the composite panel least squares regression estimating the joint effect of board size, board composition, frequency of board meetings, and audit committee size on MTBV across the pooled sample of 99 firm-year observations. Board size ($\beta = 0.0042$, $p = 0.5450$), board composition ($\beta = -0.0994$, $p = 0.3365$), and audit committee size ($\beta = 0.0272$, $p = 0.4786$) each had a statistically insignificant effect on MTBV, with t-statistics below the conventional critical value of 2 in absolute terms. Frequency of board meetings, by contrast, exerted a negative and highly statistically significant effect on MTBV ($\beta = -0.0876$, $t = -6.727$, $p = 0.0000$), making it the only governance variable in the composite model to clear the significance threshold applied throughout this study, a result broadly consistent with the proposition that meeting frequency can reflect the monitoring costs a board incurs in response to underlying performance pressures rather than functioning as a straightforward marker of value-enhancing oversight (Jensen, 1986).

Variable	Coefficient	t-Statistic	Prob.
BSIZE	0.004181	0.607507	0.5450
BCMP	-0.099354	-0.966011	0.3365
FBMT	-0.087637	-6.726899	0.0000
ACSIZE	0.027189	0.711409	0.4786
C (Constant)	0.866014	3.450689	0.0008
Model Fit Statistic		Value	
R-squared		0.4084	
Adjusted R-squared		0.3830	
F-statistic (Prob.)		16.0522 (0.0000)	
Durbin-Watson stat		0.9466	
Observations		99 (9 cross-sections, 11 periods)	

Source: Author's computation using EViews 10.0 software.

7.5 Test of Hypotheses

Table 6 summarises the decision reached on each hypothesis, based on the panel regression and correlation results reported in Table 5 and Table 3, applying the decision rule stated in Section 6.6, under which the null hypothesis is rejected only where the p-value is below 0.05, the t-statistic exceeds 2 in absolute value, and the correlation coefficient exceeds 0.50 in absolute value. Applying this rule, Hypotheses One, Two, and Four, covering board size, board composition, and audit committee size, were each retained, while Hypothesis Three, covering frequency of board meetings, was rejected in favour of the alternative that meeting frequency has a significant effect on MTBV (Klein, 1998).

Hypothesis	P-value	t-Statistic	r	Decision	Remark
H1 — Board Size	0.5450	0.6075	0.1002	Accept H0	No significant effect
H2 — Board Composition	0.3365	0.9660	-0.3526	Accept H0	No significant effect
H3 — Frequency of Board Meetings	0.0000	6.7269	-0.6288	Reject H0	Significant negative effect
H4 — Audit Committee Size	0.4786	0.7114	0.1448	Accept H0	No significant effect

Hypothesis Five, concerning firm size, could not be empirically tested, as firm size was not incorporated as a distinct explanatory variable in the panel model estimated for this study, an omission acknowledged as a limitation in Section 10. Taken together, of the four governance mechanisms that could be tested, only the frequency of board meetings demonstrated a statistically robust relationship with firm value among the sampled manufacturing firms, echoing the broader observation that structural board-composition variables alone rarely provide a complete account of how the separation between ownership and control, which governance mechanisms are designed to address, actually translates into measurable market value (Fama & Jensen, 1983).

8.0 DISCUSSION OF FINDINGS

8.1 Board Size and Firm Value

The regression and correlation results reveal that board size has a positive but statistically insignificant effect on the firm value of manufacturing companies in Nigeria, implying that variations in board size were not systematically associated with meaningful changes in MTBV over the period studied. This finding aligns with prior evidence suggesting that larger boards do not automatically translate into higher market valuation, and may in some contexts be associated with diminished firm value, owing to the coordination costs and free-rider problems that tend to accompany the addition of further directors to an already functioning board. For Nigerian manufacturing firms, whose boards must contend with long production cycles and capital-intensive decisions, this suggests that the value of an additional director depends far more on the expertise and engagement the individual brings than on the sheer numerical size of the board itself (Eisenberg, Sundgren & Wells, 1998).

8.2 Board Composition and Firm Value

Board composition, proxied in this study by the proportion of non-executive directors serving on the board, recorded a negative but statistically insignificant effect on firm value, indicating that a higher share of non-executive representation did not translate into measurably improved market valuation among the sampled firms. This finding is broadly consistent with governance theory cautioning that the performance effects of board composition depend on considerably more than the numerical balance of executive and non-executive directors alone, including the depth of sector-specific knowledge non-executive directors bring and the extent to which they are genuinely independent of the controlling shareholders or founding families that characterise many Nigerian manufacturing firms. Where the primary objective of board independence is to discipline underperforming management rather than to directly enhance

valuation, an insignificant relationship of this kind is not altogether unexpected, and it suggests that Nigerian firms should resist treating the proportion of non-executive directors as a stand-alone proxy for governance quality (Baysinger & Butler, 1985).

8.3 Frequency of Board Meetings and Firm Value

Frequency of board meetings was the only governance variable examined in this study to record a statistically significant effect on firm value, with a negative coefficient indicating that firms holding more frequent board meetings tended, on average, to record lower market-to-book value ratios over the period studied. One plausible explanation, consistent with a well-established strand of the governance literature, is that boards tend to convene more frequently in response to emerging performance or financial difficulties, so that meeting frequency functions less as a direct cause of lower valuation and more as a proxy for the underlying distress that prompted the additional meetings, a form of reverse causality that is difficult to rule out entirely within the panel regression framework adopted here. Frequent meetings may also signal reactive, crisis-driven governance rather than proactive strategic oversight, underscoring the importance of assessing the substantive purpose of board meetings, rather than their frequency alone, when evaluating governance effectiveness in the Nigerian manufacturing sector (Jensen, 1986).

8.4 Audit Committee Size and Firm Size

Audit committee size recorded a positive but statistically insignificant effect on firm value, suggesting that, while a larger audit committee may in principle enhance capacity for scrutiny and specialisation among its members, this theoretical benefit did not translate into a statistically measurable effect on market valuation for the firms sampled, consistent with evidence that the performance effects of board committee structure operate through channels other than raw committee size alone, such as the independence and diligence of individual members. As noted in Section 7.5, firm size was not incorporated as a distinct regressor in the estimated panel model, and Hypothesis Five could therefore not be empirically validated, a gap that is significant since firm size is frequently treated in the governance literature as a proxy for the extent to which ownership and control are separated within a firm. This gap is carried forward as a specific recommendation for further research in Section 10 (Klein, 1998).

8.5 Overall Assessment

Viewed as a whole, the discussion above suggests that the internal architecture of the board, encompassing how many directors it has, what proportion are non-executive, and how large its audit committee is, matters comparatively less for market valuation among the sampled manufacturing firms than how the board actually behaves, as proxied here by the frequency with which it convenes. This conclusion is consistent with the broader survey finding that no single governance mechanism reliably predicts firm value across contexts, and that the relationship between governance structure and firm outcomes is better understood as contingent on sector, ownership pattern, and institutional environment than as a fixed, universally applicable rule. For Nigerian manufacturing firms operating in a capital-intensive, cyclically sensitive environment, this implies that stakeholders concerned with firm value would do well to look beyond compliance-oriented structural benchmarks towards the substantive quality of board engagement and the strategic content of board deliberations (Shleifer & Vishny, 1997).

9.0 CONCLUSION

This study examined the effect of corporate governance mechanisms on the market-to-book value ratio of nine quoted manufacturing firms in Nigeria over the period 2015 to 2025, using secondary data drawn from published annual reports and analysed through descriptive statistics, Pearson correlation, and panel least squares regression. The findings show that corporate governance mechanisms exert mixed effects on firm value among the sampled firms: frequency of board meetings was the only variable with a statistically significant, and negative,

effect on MTBV, while board size, board composition, and audit committee size each had statistically insignificant effects. This pattern cautions against treating the mere presence of governance structures as a guarantee of stewardship-quality oversight, and instead points to the conduct and substantive engagement of the board as the more decisive factor in shaping firm value among Nigerian manufacturing firms (Davis, Schoorman & Donaldson, 1997).

From a theoretical standpoint, the findings lend qualified support to agency-theoretic concerns about the costs of monitoring: frequent board meetings, ordinarily interpreted as evidence of active oversight, were instead associated with lower firm value among the sampled firms, while the largely insignificant effects of board size, board composition, and audit committee size suggest that structural compliance with governance codes, on its own, offers no guarantee of enhanced market valuation. This conclusion is consistent with the broader agency-cost framework within which board monitoring mechanisms are typically situated, which predicts that governance structures reduce agency costs primarily when they are substantively exercised rather than merely formally present (Jensen & Meckling, 1976).

More broadly, the study reaffirms that corporate governance research must be sensitive to sector context, given that findings from the banking and financial services literature, which dominates the existing Nigerian corporate governance evidence base, cannot be assumed to transfer automatically to manufacturing firms with their distinct asset structure and financing needs. By focusing squarely on quoted manufacturing firms over an eleven-year window spanning several periods of macroeconomic turbulence in Nigeria, this study contributes sector-specific evidence capable of informing more targeted governance policy, board practice, and future scholarship (Adegbite, 2015).

10.0 RECOMMENDATIONS

The recommendations are as follows:

- i. Boards of manufacturing firms should be constituted at a size that balances diverse expertise against coordination costs, rather than pursuing an ever-larger board on the assumption that additional directors automatically enhance oversight, given the evidence that larger boards do not consistently enhance market valuation (Yermack, 1996).
- ii. Regulators and boards should note the negative, if statistically weak, relationship between board composition and firm value observed in this study, and should pursue non-executive board independence as part of a broader package of complementary governance reforms rather than as a stand-alone lever for enhancing valuation (Baysinger & Butler, 1985).
- iii. Manufacturing firms should prioritise the quality and strategic content of board meetings over their sheer frequency, and should examine whether an unusually high number of meetings reflects reactive responses to underlying performance challenges rather than proactive strategic oversight (Jensen, 1986).
- iv. Given the statistically insignificant effect of audit committee size found in this study, manufacturing firms should focus on strengthening the independence and financial literacy of individual audit committee members, rather than simply expanding committee size (Klein, 1998).
- v. Future research on Nigerian manufacturing firms should explicitly incorporate firm size as a distinct regressor alongside the governance variables already examined in this study, given its theoretical link to the separation between ownership and control within a firm (Fama & Jensen, 1983).
- vi. Future studies should complement quantitative panel analysis of the kind reported here with qualitative approaches, such as structured engagement with directors, to better understand the behavioural dynamics of board conduct (Hair et al., 2010).
- vii. Regulators should consider periodically reviewing the emphasis placed on structural governance benchmarks such as minimum board size and meeting frequency, so that

governance codes evolve to reward substantive oversight quality rather than mere compliance (FRCN, 2018).

- viii. Institutional and retail investors considering positions in quoted manufacturing firms should pay attention to the substantive content of board activity, rather than relying on governance structure alone, when judging the likely quality of oversight (Petra, 2005).

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