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Article

Too Much to Owe, Too Little to Grow? Debt-to-Asset Ratio and Stock Market Performance of Nigerian Banks

Chiamaka L. Anaike [1], Emmanuel Chukwuebuka Ihekwereme [2] and Gilbert Ogechukwu Nworie [3,*]

1 Nnamdi Azikiwe University, Awka, Anambra State, Nigeria
2 Research Scholar, Southwestern University, Nigeria
3 Ukoro Odah Statisticals, Amansea, Anambra State, Nigeria
* Correspondence: dulcisgil@gmail.com

Abstract

The growing competition in the Nigerian banking industry and the pressure to deliver high returns have encouraged many banks to adopt higher levels of debt, often justified by the need to expand operations or increase market share. However, this increasing reliance on borrowed funds raises critical questions about financial health, risk exposure, and how the market perceives such decisions. Excessive debt can distort a bank's financial position, weaken investor confidence, and trigger a fall in share prices as the market reacts to increased risk. Hence, this study examined the effect of debt-to-asset ratio (DAR) on the stock market performance of listed Deposit Money Banks (DMBs) in Nigeria. From a population of thirteen (13) listed banks on the Nigerian Exchange Group (NGX), a sample of eleven (11) banks were purposively selected. Data were obtained from the audited annual reports and financial statements of the sampled banks (2012-2024). Hypotheses were tested using panel regression analysis under the random effects model, at a 1% significance level. Findings revealed that increase in debt-to-asset ratio has a negative and significant effect on stock market performance of Nigerian banks (β = -58.6227, p = 0.0029). In conclusion, excessive reliance on debt may undermine market valuation, and so bank management needs to review all existing debt obligations and develop a structured debt reduction and optimization plan that sets a target debt-to-asset ratio, prioritizes repayment of high-interest and short-term debt, and links new borrowing to concrete investment projects with clear cash flow projections.

Keywords: Debt-to-Asset Ratio; Stock Market Performance; Deposit Money Banks

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1. Introduction

In the modern financial terrain, the role of banks as key intermediaries in economic development cannot be overstated. Banks mobilize savings, provide credit facilities, and support investments that drive industrial and commercial growth (Sannoh et al., 2025; Samson, 2025). In Nigeria, the banking sector occupies a central position in the nation's economic structure, influencing the pace and direction of development through the allocation of financial resources. Over the years, Nigerian banks have undergone major transformations due to regulatory reforms, recapitalization exercises, and the influence of global financial trends (Efenyumi & Nworie, 2025). These changes have shaped the way banks manage their assets, liabilities, and capital structures. In an environment characterized by fluctuating interest rates, currency instability, and

regulatory pressure, banks are compelled to make strategic financing decisions that balance profitability with sustainability (Ajiboye et al., 2025). Among these decisions, the mix of debt and equity used to finance operations has become an issue of growing concern, particularly as investors, analysts, and regulators seek to understand how debt influences the long-term stability and market value of financial institutions. The growing competition in the Nigerian banking industry and the pressure to deliver high returns have encouraged many banks to adopt higher levels of debt, often justified by the need to expand operations or increase market share. However, this increasing reliance on borrowed funds raises critical questions about financial health, risk exposure, and how the market perceives such decisions.

Debt remains a fundamental tool for corporate financing across the world. In today's business environment, firms rely on a mix of debt and equity to fund expansion, innovation, and day-to-day operations (Wayua, 2023). Debt financing provides access to immediate capital without diluting ownership, making it an attractive option for many corporations. When managed prudently, it enhances profitability by leveraging borrowed funds to generate higher returns on investment (Ikwuo et al., 2025). However, in an economy like Nigeria's, where macroeconomic conditions are volatile and interest rates are often high, the decision to rely heavily on debt becomes a double-edged sword. The availability of credit is vital for growth, but excessive borrowing can quickly erode financial stability (Barde & Ekundayo, 2017), particularly when revenue streams fluctuate or when monetary policies tighten. For banks, debt plays a dual role: they are both lenders and borrowers. They raise funds through deposits and interbank loans while extending credit to customers. The proportion of debt to total assets thus reflects not only a bank's capital structure but also its approach to risk management.

The relationship between debt and share price has long been a topic of debate among scholars and practitioners. A company's share price reflects investor perception of its profitability, stability, and future growth potential (Edem et al., 2018). When debt levels are moderate and effectively managed, they can signal strength and efficient capital utilization, leading to positive investor sentiment and higher share prices (Sinebe, 2025). On the other hand, excessive debt often triggers concerns about solvency, liquidity, and the ability to meet financial obligations, especially during economic downturns. Investors tend to interpret rising debt-to-asset ratios as a warning sign, suggesting that a firm might be taking on more risk than it can handle. In the banking sector, this perception becomes even more pronounced, as banks operate in a highly sensitive environment where confidence and credibility determine survival. A decline in market confidence can lead to a fall in share price, making it difficult for banks to raise additional capital. In the Nigerian context, several banks have experienced fluctuations in their market valuation following changes in leverage levels, reflecting the cautious attitude of investors towards highly indebted institutions. Banks are expected to maintain a sound balance between debt and equity in their capital structure. This balance allows them to fund their operations, support lending activities, and generate profit for shareholders without exposing themselves to undue financial risk. When managed properly, debt can be a powerful instrument that enhances return on equity, stimulates growth, and strengthens investor confidence (Anaike et al., 2025a). In such a situation, banks operate efficiently, their financial statements reflect stability, and their share prices mirror steady performance in the capital market. Investors tend to reward banks that demonstrate prudent financial management with rising share valuations, as these institutions are seen as reliable, stable, and capable of sustaining profitability in the long term. A balanced financial structure, therefore, contributes not only to the performance of individual banks but also to the overall stability of the financial sector and the wider economy.

However, many banks in Nigeria have become increasingly dependent on debt to finance expansion, or maintain liquidity (Francis, 2025). The drive to compete, coupled with fluctuating interest rates and macroeconomic instability, has pushed several banks to rely heavily on borrowed funds. This overreliance has led to high debt-to-asset ratios, raising concerns about financial sustainability and risk exposure. Over the years, periods of economic downturn,

currency depreciation, and monetary tightening have revealed the vulnerability of banks with high leverage. Excessive debt can distort a bank's financial position, weaken investor confidence, and trigger a fall in share prices as the market reacts to increased risk. A declining share price reduces a bank's market value and its ability to attract new investment, which in turn constrains its lending capacity and overall contribution to economic growth. Investors may lose faith in the stability of the financial system when bank stocks become volatile or consistently underperform. Furthermore, prolonged financial instability in the banking sector can affect other sectors of the economy, as banks are central to the flow of credit and investment.

Despite the growing body of empirical research linking capital structure and market performance, existing studies such as those by Ajiboye et al. (2025), Sinebe (2025), Francis (2025), Qabajeh et al. (2024), Yimam et al. (2023), Aggreh et al. (2022), Andow and Wetsi (2018), Edem et al. (2018), and Barde and Ekundayo (2017) reveal significant inconsistencies and contextual gaps. While many of these studies have examined the debt–equity mix and its influence on firm profitability or market value, most have focused on debt-to-equity ratios, overlooking the debt-to-asset ratio (DAR) as a more comprehensive indicator of leverage, especially in the banking sector where asset-based financing predominates. Moreover, prior research has largely emphasized profitability metrics such as return on assets (ROA) and return on equity (ROE) (Francis, 2025; Aggreh et al., 2022; Qabajeh et al., 2024) rather than stock market indicators like share price, which more directly capture investor sentiment and market valuation (Andow & Wetsi, 2018; Edem et al., 2018).

Excessive debt can distort a bank's financial position, weaken investor confidence, and depress share prices as the market reacts to heightened risk. Although prior studies acknowledge the link between leverage and market performance, the literature has not clearly addressed whether the debt-to-asset ratio (DAR)—a measure that reflects the proportion of total assets financed through debt—is a more accurate predictor of stock market behaviour in banking institutions. Existing evidence remains fragmented and inconclusive, with most studies focusing on debt-to-equity ratios or profitability indicators such as ROA and ROE, leaving unanswered the question of how asset-based leverage shapes investor assessment and stock valuation. This gap is particularly relevant in the Nigerian banking sector, where assets form the primary basis for lending and risk management, making DAR theoretically more suitable for capturing the true extent of leverage. By examining DAR in relation to share price performance, this study addresses a clear omission in the literature and contributes a more context-appropriate perspective to understanding how leverage affects market outcomes. In addition, while some scholars, including Barde and Ekundayo (2017), controlled for firm size, there remains limited integration of liquidity measures such as the current ratio (CUR) in explaining how internal financial health conditions moderate the DAR–share price relationship. Consequently, a gap persists in the literature regarding a holistic evaluation of how debt-to-asset ratio, alongside firm size and liquidity, influences stock market performance of Nigerian Deposit Money Banks over an extended period. This study addresses this void by examining the long-term interplay between leverage and market valuation, offering new hints into the financing–performance dynamics of Nigeria's banking sector. Hence, the main objective of this study is to examine the effect of the debt-to-asset ratio on the stock market performance of Nigerian banks.

2. Literature Review

2.1. Leverage and Firm Value

Empirical evidence indicates that the relationship between leverage and firm value is nuanced and dependent on how debt is structured and managed. Ajiboye et al. (2025) found that long-term debt positively and significantly influences market value, suggesting that when strategically employed, debt can enhance shareholder wealth and signal financial strength. Similarly, Yimam et al. (2023) reported that the debt-to-asset ratio significantly increases the

market value of Nigerian Deposit Money Banks, even though short-term and long-term debt ratios individually were not significant. Francis (2025) also observed that certain leverage indicators, such as equity-to-total debt, had a positive albeit statistically insignificant effect on performance. Collectively, these findings suggest that moderate and well-managed debt can finance productive investments, improve operational capacity, and strengthen market valuation.

Conversely, excessive leverage can undermine financial performance and erode firm value. Andow and Wetsi (2018) discovered a negative and statistically significant relationship between debt ratio and share prices among Nigerian banks, indicating that overreliance on borrowed funds can diminish market valuation. Aggreh et al. (2022) similarly found that total debt-to-asset ratio significantly reduced the return on assets of construction firms, demonstrating that rising leverage increases financial strain. Edem et al. (2018) reported a negative but statistically insignificant effect of debt-to-total-assets ratio on stock prices, suggesting that while the impact may not always be immediate, high leverage can still act as a deterrent to investors. These studies collectively show that debt, when excessive, compromises firm value by increasing financial risk, reducing operational flexibility, and creating pressure on earnings sustainability.

2.2. Leverage and Market Perception

Beyond firm performance, leverage shapes how investors perceive financial risk, which directly influences stock market outcomes. Barde and Ekundayo (2017) observed that while the debt-equity ratio had a negative but insignificant effect on Nigerian banks' share prices, firm size and age were significant determinants of investor confidence, highlighting that organizational characteristics can moderate the perceived risk of debt. Similarly, Sinebe (2025) reported that debt-to-asset ratio had no significant influence on industrial firms' share prices, whereas market capitalization strongly affected investor valuation, suggesting that investors respond not only to leverage but also to indicators of growth potential and market positioning. These studies imply that high debt levels are often interpreted as a signal of financial vulnerability, prompting investors to demand higher risk premiums or reduce holdings, which can depress share prices. Conversely, moderate debt, if aligned with growth strategies, can signal financial discipline and strategic investment, potentially supporting positive investor sentiment.

2.3. Evidence from Emerging Economies

Studies in emerging economies reinforce the mixed nature of the leverage–market performance relationship. Qabajeh et al. (2024) examined Jordanian banks and found that high debt ratios negatively affected share prices, demonstrating that heavy indebtedness tends to depress market value even in different regulatory and economic contexts. Similarly, research across African and other developing markets indicates that while moderate leverage can support expansion and growth, excessive borrowing raises solvency concerns and market volatility, leading to diminished investor confidence. These findings suggest that the effects of leverage on stock market performance are context-dependent but consistently highlight the importance of debt management. In emerging economies like Nigeria, where banks play a critical role in credit distribution and economic stability, maintaining optimal leverage is essential to safeguard both firm value and investor trust.

2.4 Theoretical Framework and Development of Research Hypothesis

The Trade-Off Theory of capital structure was first developed by economists Kraus and Litzenberger in 1973 (Rodriguez, 2024). Their work built upon the earlier propositions of Modigliani and Miller, who in 1958 and 1963 had argued that firm value is unaffected by capital structure in a perfect market, but later acknowledged the benefits of debt in the presence of corporate taxes. The main argument of the Trade-Off Theory is that companies balance the benefits and costs of debt financing when making capital structure decisions (Abdeljawad et al., 2013). On one hand, debt can enhance firm value because interest payments reduce taxable

income, thus lowering the company's overall tax burden. On the other hand, as debt increases, so does the risk of default, financial distress, and loss of flexibility in future financing decisions (Sardo et al., 2022). The theory assumes that there is an optimal debt level where these opposing forces are in equilibrium. Firms below this optimal point may underutilize the tax advantages of debt, while those above it may suffer from rising financial risk and reduced market confidence. In essence, the Trade-Off Theory provides a framework for understanding how firms weigh the immediate financial benefits of borrowing against the long-term risks associated with excessive leverage (Abel, 2018).

The relevance of the Trade-Off Theory to this study lies in its ability to explain how the debt-to-asset ratio affects the stock market performance of Nigerian banks. Nigerian banks, like many financial institutions, rely heavily on debt to fund operations, expand lending activities, and meet regulatory capital requirements. However, excessive debt can expose them to financial distress, particularly in an economy characterized by fluctuating interest rates, currency depreciation, and unstable macroeconomic conditions. The theory helps to clarify why moderate use of debt may enhance a bank's value and attract investors, while too much debt may lead to a decline in share prices as investors react to increased risk. Therefore, this study applies the Trade-Off Theory as a guiding framework to examine whether Nigerian banks maintain a debt level that maximizes their market value or whether their borrowing practices have surpassed the optimal point, leading to weaker stock market performance. In the light of the above, we hypothesise that:

Ha: Increase in debt-to-asset ratio will negatively affect stock market performance of Nigerian banks.

3. Methodology

This study adopted an ex-post facto research design. This design is appropriate because the study relied on historical data that already exist in the annual reports of Nigerian Deposit Money Banks (DMBs), making it impossible to manipulate the independent variables (Nworie et al., 2023; Nworie & Orji-Okafor, 2024; John-Akamelu et al., 2025; Anaike et al., 2025b; Elom et al., 2025). The approach allows for an objective examination of the relationship between debt-to-asset ratio (DAR) and stock market performance, measured by share price (SP), while controlling for firm size (FSZ) and current ratio (CUR). The ex-post facto design is also justified because it facilitates the identification of statistical relationships among variables as they have occurred over time, thereby enabling a data-driven assessment of how leverage influences market valuation in the Nigerian banking sector.

The population of this study consisted of all thirteen (13) Deposit Money Banks listed on the Nigerian Exchange Group (NGX) as of 2024. These include: Access Holdings Plc, Ecobank Transnational Incorporated, First City Monument Bank Plc, First Bank of Nigeria Holdings Plc, Fidelity Bank Plc, Guaranty Trust Holding Company Plc, Jaiz Bank Plc, Stanbic IBTC Holdings Plc, Sterling Bank Plc, Union Bank of Nigeria Plc, United Bank for Africa Plc, Unity Bank Plc, and Zenith Bank Plc.

A purposive sampling technique was employed to select banks that had complete and accessible annual reports covering the study period, 2012–2024. Out of the thirteen listed banks, eleven (11) satisfied this criterion. Jaiz Bank Plc and Unity Bank Plc were excluded because their 2024 audited reports were not publicly available at the time of data collection. Consequently, the study focused on eleven (11) listed Deposit Money Banks with consistent financial disclosures, thereby ensuring robustness and comparability of results across years, despite that this resulted in a sample bias.

The study relied exclusively on secondary data obtained from the audited annual reports and financial statements of the sampled banks. The data covered a 13-year period from 2012 to 2024, which was considered adequate to capture trends in capital structure and market performance within the Nigerian banking sector. Only banks that had published their 2024 annual reports were

included in the sample size. Data relating to the variables under study were extracted from the statement of financial position and the statement of profit or loss of each bank.

The dependent variable, Share Price (SP), was obtained from the NGX official daily listing, representing the closing market price per share at the end of each financial year. The independent variable, Debt-to-Asset Ratio (DAR), was computed as the ratio of total liabilities to total assets, serving as a proxy for leverage. Two control variables were included: Firm Size (FSZ), measured as the natural logarithm of total assets, and Current Ratio (CUR), calculated as current assets divided by current liabilities, representing liquidity position. The selection of these variables aligns with previous empirical literature emphasizing their influence on firm value and market performance. The study's analytical framework was anchored on the theoretical linkage between capital structure and market performance, as proposed by the Trade-Off Theory and Signaling Theory. These theories posit that a firm's leverage level can either enhance or diminish investor confidence, thereby affecting share price movements. Based on this theoretical foundation, the following econometric model was formulated:

$$SPit = \beta 0 + \beta 1\ DARit + \beta 2\ FSZit + \beta 3\ CURit + \alpha i + \epsilon it \_\_\_\_\_ eqi$$

Where:

SPit = Share price of bank i at time t

DARit = Debt-to-asset ratio of bank i at time t

FSZit = Firm size (natural logarithm of total assets) of bank i at time t

CURit = Current ratio (liquidity indicator) of bank i at time t

β0 = Constant term

β1 ,β2 ,β3 = Coefficients of the explanatory variables

μi = Unobserved individual-specific effect

αi = unobserved time-invariant bank-specific effect

ϵit = idiosyncratic error term that varies across banks and time

The model seeks to determine the effect of leverage, proxied by DAR, on stock market performance, proxied by SP, while controlling for firm size and liquidity. Panel data analysis was employed because it combines both time-series and cross-sectional dimensions, allowing the model to control for individual heterogeneity across banks. Descriptive statistics were first computed to summarize the data and identify patterns or outliers. For the inferential analysis, panel regression models. The Hausman specification test was conducted to determine the most appropriate model for the data. The test result favored the random effects model, indicating that variations across banks were random and uncorrelated with the explanatory variables. Hence, the random effects estimator was adopted as the basis for hypothesis testing. The random effects model is conceptually preferred because it assumes that individual-specific effects, such as differences across banks, are uncorrelated with the explanatory variables, allowing the inclusion of time-invariant characteristics like bank size, regulatory status, or ownership structure. It captures both within-bank variation over time and between-bank differences, producing more efficient and generalizable estimates than fixed effects when these assumptions hold. By retaining time-invariant variables, the model provides a clearer understanding of how structural features of Nigerian banks, alongside leverage changes, influence stock market performance, which aligns with the focus on debt-to-asset ratios.

The study conducted multicollinearity and heteroskedasticity tests to ensure that the independent variables were not highly correlated and that the model's error terms had constant variance, respectively, thereby validating the reliability and efficiency of the regression estimates. Finally, all hypotheses were tested at the 1% level of significance, ensuring strict control for Type I error. Statistical analyses were carried out using EViews software.

4. Data Analysis

4.1 Descriptive Analysis

Table 4.1 Descriptive Statistics

	SP	DAR	FSZ	CUR
Mean	13.44645	0.883440	9.445877	1.378711
Median	9.600000	0.882955	9.404763	1.045500
Maximum	65.00000	1.186647	10.63651	6.406601
Minimum	0.520000	0.795189	8.390413	0.001480
Std. Dev.	13.42854	0.042624	0.446510	1.078837
Skewness	1.578128	2.530452	0.283338	2.000527
Kurtosis	5.614901	19.53184	2.896059	8.471167
Jarque-Bera	100.0980	1781.032	1.977726	273.7384
Probability	0.000000	0.000000	0.371999	0.000000
Sum	1922.842	126.3320	1350.760	197.1556
Sum Sq. Dev.	25606.23	0.257982	28.31068	165.2722
Observations	143	143	143	143

Source: Eviews 10 Output (2025)

Table 4.1 shows that the average share price (SP) of listed Deposit Money Banks (DMBs) in Nigeria during the study period was 13.45, with a maximum of 65.00 and a minimum of 0.52. This wide range, coupled with a high standard deviation of 13.43, suggests considerable variation in market valuation among the sampled banks.

As presented in Table 4.1, the mean debt-to-asset ratio (DAR) was 0.88, indicating that on average, 88% of the total assets of the sampled banks were financed through debt. The maximum DAR of 1.19 and minimum of 0.80 show that while some banks used slightly more debt financing, most remained within a moderate leverage range. The standard deviation of 0.04 suggests relatively low variation in debt levels across banks.

From Table 4.1, the average firm size (FSZ), measured as the natural logarithm of total assets, stood at 9.45, with values ranging from 8.39 to 10.64. The low standard deviation of 0.45 indicates minimal variation in firm size among the sampled banks, suggesting that the banks are relatively comparable in scale.

As indicated in Table 4.1, the average current ratio (CUR) was 1.38, showing that the sampled banks, on average, maintained liquid assets about 1.4 times their current liabilities, which suggests satisfactory short-term solvency. The maximum value of 6.41 and minimum of 0.001 show substantial differences in liquidity management among banks. The standard deviation of 1.08 supports this wide spread.

Table 4.2 Hausman Specification Test

Correlated Random Effects - Hausman Test
Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.509750	3	0.1381

Source: Eviews 10 Output (2025)

Table 4.2 presents the result of the Hausman Specification Test used to determine the appropriate model between the fixed effects and random effects estimators. The test produced a probability value of 0.1381, which is greater than the 0.05 significance level. This means the null hypothesis—that the random effects model is more suitable—cannot be rejected. Therefore, the random effects model was adopted for the analysis, implying that variations across the sampled banks are assumed to be random and uncorrelated with the independent variables. This choice ensures efficient and unbiased estimates for examining the effect of debt-to-asset ratio on stock market performance.

Conceptually, the random effects model is preferred because it assumes that the individual-specific effects (here, differences across banks) are uncorrelated with the explanatory

variables, allowing for the inclusion of time-invariant characteristics such as bank size, regulatory status, or ownership structure, which may influence both leverage and stock market performance. This approach captures both the within-bank variation over time and the between-bank differences, providing more efficient and generalizable estimates than fixed effects when these individual effects are not correlated with the predictors. Moreover, by retaining time-invariant variables in the model, random effects allow for a broader understanding of how structural characteristics of Nigerian banks, in addition to leverage changes, affect their stock market outcomes, aligning with the theoretical focus on debt-to-asset ratios as a determinant of market valuation.

Table 4.3 Multicollinearity Test

Variance Inflation Factors
Date: 11/29/25 Time: 09:40
Sample: 1 143
Included observations: 143

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
DAR	493.4374	464.9550	1.072277
FSZ	4.840251	521.3589	1.154261
CUR	0.838835	3.088417	1.167783
C	735.9637	886.4987	NA

Source: Eviews 10 Output (2025)

The multicollinearity test assesses whether independent variables in the model are highly correlated, which can distort coefficient estimates and inflate standard errors. Table 4.3 reports the Variance Inflation Factors (VIF) for the key variables: debt-to-asset ratio (DAR = 1.072), firm size (FSZ = 1.154), and current ratio (CUR = 1.168). Since all VIF values are well below the commonly accepted threshold of 10, there is no evidence of multicollinearity, indicating that the explanatory variables provide distinct information and that the model estimates are reliable.

Table 4.4 Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.052231	Prob. F(3,139)	0.3716
Obs*R-squared	3.175420	Prob. Chi-Square(3)	0.3654
Scaled explained SS	9.928649	Prob. Chi-Square(3)	0.0192

Source: Eviews 10 Output (2025)

The heteroskedasticity test examines whether the variance of the error terms is constant across observations, as violation of this assumption can lead to inefficient estimates and biased inference. Table 4.4 presents the Breusch-Pagan-Godfrey test results, with an F-statistic of 1.052 and a p-value of 0.372, which is greater than the 0.05 significance level. This indicates no evidence of heteroskedasticity, suggesting that the model errors are homoskedastic and that standard errors and test statistics can be interpreted with confidence.

4.2 Test of Hypothesis

Ha: Increase in debt-to-asset ratio will negatively affect stock market performance of Nigerian banks.

Table 4.5 Test of Hypothesis

Dependent Variable: SP
Method: Panel EGLS (Cross-section random effects)
Date: 09/14/25 Time: 07:32
Sample: 2012 2024
Periods included: 13
Cross-sections included: 11
Total panel (balanced) observations: 143
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DAR	-58.62267	19.30915	-3.036005	0.0029
FSZ	17.58296	2.114242	8.316435	0.0000
CUR	0.152524	0.692362	0.220295	0.8260
C	-101.0607	20.30087	-4.978145	0.0000

Effects Specification

	S.D.	Rho
Cross-section random	8.429376	0.6112
Idiosyncratic random	6.722788	0.3888

Weighted Statistics

R-squared	0.362415	Mean dependent var	2.904136
Adjusted R-squared	0.348654	S.D. dependent var	8.404840
S.E. of regression	6.783209	Sum squared resid	6395.657
F-statistic	26.33675	Durbin-Watson stat	0.850407
Prob(F-statistic)	0.000000		

Source: Eviews 10 Output (2025)

The result of the regression model appears moderately robust in explaining the variation in stock market performance of Nigerian banks. The adjusted R-squared is 0.3487, indicating that approximately 34.87% of the variation in bank share prices is explained by the independent variables in the model: debt-to-asset ratio (DAR), together with the control variables, firm size (FSZ), and current ratio (CUR). While this is not extremely high, it is reasonable in finance studies where share prices are influenced by multiple macroeconomic and firm-specific factors beyond the included variables.

The F-statistic probability is 0.0000, which is statistically significant at the 1% level. This indicates that, collectively, the independent variables in the model significantly explain the variation in share prices, affirming the overall validity of the model.

The constant term (C) is -101.0607 with a p-value of 0.0000, indicating significance at the 5% level. This coefficient represents the predicted share price when all explanatory variables (DAR, FSZ, and CUR) are zero. While this scenario may not be realistic (banks cannot have zero assets or zero debt), it provides a baseline for the model. The negative value suggests that, in the absence of debt, size, and liquidity effects, the baseline stock price level would be substantially negative, underscoring the importance of these variables in shaping stock market performance.

The coefficient for FSZ is 17.5830 with a p-value of 0.0000, significant at the 1% level. This implies that a 1% increase in firm size (as measured by the natural logarithm of total assets) is associated with an increase in share price by approximately 17.58 units, holding other variables constant. This positive marginal effect indicates that larger banks are rewarded in the stock market, likely because greater size signals stability, market dominance, and resilience to shocks, thereby boosting investor confidence and stock performance.

The coefficient for CUR is 0.1525 with a p-value of 0.8260, which is not statistically significant at the 5% level. This indicates that changes in liquidity, as measured by the current

ratio, do not have a statistically detectable effect on stock prices of Nigerian banks during the study period. The positive coefficient suggests a slight positive relationship, but the effect is too weak to draw meaningful conclusions.

The coefficient for DAR is -58.6227 with a p-value of 0.0029, which is significant at the 1% level. This means that for every marginal increase in the debt-to-asset ratio, the share price of Nigerian banks decreases by approximately N58.62, holding all other factors constant. This provides direct evidence for the study hypothesis (Ha) that increases in debt-to-asset ratio negatively affect stock market performance. The negative marginal effect indicates that higher leverage is associated with lower investor confidence and reduced stock prices, likely because increased debt raises financial risk and perceived vulnerability in the Nigerian banking sector.

4.2.1 Robustness Check

Table 4.6 Robustness Check Using Market Capitalisation

Dependent Variable: MCAP
Method: Panel Least Squares
Date: 11/29/25 Time: 09:49
Sample: 2012 2024
Periods included: 13
Cross-sections included: 11
Total panel (balanced) observations: 143

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DAR	-4.241964	0.616475	-6.881003	0.0000
FSZ	0.867762	0.061057	14.21240	0.0000
CUR	-0.022898	0.025418	-0.900883	0.3692
C	3.891200	0.752883	5.168400	0.0000

R-squared	0.641469	Mean dependent var	8.308882
Adjusted R-squared	0.633731	S.D. dependent var	0.499639
S.E. of regression	0.302382	Akaike info criterion	0.473324
Sum squared resid	12.70947	Schwarz criterion	0.556201
Log likelihood	-29.84267	Hannan-Quinn criter.	0.507001
F-statistic	82.89781	Durbin-Watson stat	0.647005
Prob (F-statistic)	0.000000		

Source: Evies 10 Output (2025)

The robustness check, presented in Table 4.6, re-examined the effect of debt-to-asset ratio (DAR) on the stock market performance of Nigerian banks using market capitalization (MCAP) as an alternative measure of performance. This approach is important because it tests whether the original findings are consistent when a different, yet related, dependent variable is used, thereby strengthening the credibility of the results. The panel least squares regression shows that DAR has a negative and highly significant effect on market capitalization (β = -4.242, p = 0.000), confirming that higher leverage is associated with lower market value, consistent with the earlier findings using stock price as the performance measure.

The model also demonstrates good explanatory power, with an R-squared of 0.641 and an adjusted R-squared of 0.634, indicating that over 63% of the variation in market capitalization is explained by DAR, firm size (FSZ), and current ratio (CUR). Among the control variables, firm size is positively and significantly associated with market capitalization (β = 0.868, p = 0.000), while the current ratio is not significant (β = -0.023, p = 0.369). This suggests that larger banks tend to have higher market value, while liquidity, as proxied by CUR, does not significantly influence investor valuation in this context.

Thus, the robustness check supports the main conclusion that an increase in debt-to-asset ratio negatively affects the market perception and valuation of Nigerian banks. By demonstrating

similar results with a different dependent variable, the analysis provides stronger evidence of the negative impact of high leverage on stock market performance. These findings reinforce the earlier inference that excessive debt increases financial risk and undermines investor confidence, which can ultimately depress the market value of banks.

4.3 Discussion of Finding

The negative and significant relationship between debt-to-asset ratio and stock market performance ($\beta = -58.6227$, $p = 0.0029$) reflects more than a statistical association; it indicates that investors in the Nigerian banking sector interpret high leverage as a signal of elevated financial risk, including greater vulnerability to interest rate fluctuations, liquidity shortages, and regulatory pressures. In this context, banks with higher debt levels are perceived as less capable of sustaining stable earnings and meeting obligations, which increases uncertainty about future cash flows and market value. Consequently, investors demand a higher risk premium or reduce their holdings, leading to lower share prices and diminished market capitalization, highlighting the economic mechanism through which excessive leverage translates into market penalties.

This result aligns with the Trade-Off Theory, which posits that while debt can provide tax advantages, excessive leverage increases the likelihood of financial distress, thereby negatively influencing market valuation. Empirical evidence from Andow and Wetsi (2018) supports this view, showing that higher debt ratios in Nigerian deposit money banks significantly reduced share prices. Similarly, Aggreh et al. (2022) observed a significant negative relationship between total debt-to-asset ratio and return on assets in Nigerian construction firms, reinforcing the idea that excessive debt can erode performance and investor perception. Francis (2025) also found that leverage measures such as long-term debt-to-total assets negatively and significantly affect bank performance, indicating that high debt can undermine profitability, which in turn may reduce market valuation. Contrastingly, Yimam et al. (2023) reported a positive effect of debt-to-asset ratio on market value in Nigerian banks, although this effect was specific to their sample and period and may reflect differences in investor confidence or macroeconomic conditions. Nonetheless, the preponderance of evidence, particularly within the Nigerian banking context, emphasizes that high leverage tends to signal financial vulnerability, triggering negative responses from the market. High debt levels may also heighten the sensitivity of share prices to external shocks, including interest rate fluctuations, regulatory pressures, and economic volatility, which investors interpret as elevated risk. Therefore, the observed negative effect reflects both the real financial strain associated with high debt and the market's risk-averse response, corroborated by multiple studies that consistently highlight the detrimental consequences of elevated debt-to-asset ratios on bank valuation in Nigeria.

5. Conclusion and Recommendation

The finding that a higher debt-to-asset ratio negatively and significantly affects the stock market performance of Nigerian banks underscores how investor confidence is closely tied to financial leverage, reflecting concerns about risk and solvency in the sector. This demonstrates that a bank's capital structure can strongly influence market reactions to its operational and strategic decisions, particularly in an environment where economic fluctuations or policy shifts may amplify vulnerabilities. Meanwhile, the positive and significant effect of firm size suggests that larger banks are perceived as more stable and better equipped to absorb market shocks, highlighting the role of scale in fostering investor trust. The lack of significance for liquidity measures, despite their conventional importance in assessing short-term financial health, implies that investors may place greater weight on long-term stability and strategic positioning when evaluating market performance.

Taken together, these findings illustrate that stock prices in the banking sector are shaped by the combined effects of leverage, institutional size, and market perceptions. Investors appear to assess not only the numerical financial indicators but also the broader implications of these

metrics for sustainability, competitive strength, and exposure to economic volatility. In this context, share performance reflects both actual financial outcomes and expectations about a bank's capacity to manage risk and maintain resilience over time. The results highlight a complex interaction in which market valuation is influenced as much by perceived strategic soundness and confidence in growth potential as by traditional accounting measures. Ultimately, this suggests that effective risk management, prudent leverage, and institutional scale are central to shaping investor sentiment and sustaining stock market performance in Nigerian banks.

We therefore recommend that bank management needs to review all existing debt obligations and develop a structured debt reduction and optimization plan that sets a target debt-to-asset ratio, prioritizes repayment of high-interest and short-term debt, and links new borrowing to concrete investment projects with clear cash flow projections. The plan should be overseen by the board's risk management committee, with quarterly reporting to shareholders on progress, ensuring that leverage levels do not negatively affect stock market valuation or investor confidence.

5.1 Contribution to Knowledge

This study contributes to existing literature by filling the gaps identified in earlier works by Ajiboye et al. (2025), Sinebe (2025), Francis (2025), Qabajeh et al. (2024), Yimam et al. (2023), Aggreh et al. (2022), Andow and Wetsi (2018), Edem et al. (2018), and Barde and Ekundayo (2017). Unlike most previous studies that concentrated on the debt-to-equity ratio and profitability measures such as return on assets and return on equity, this research focused on the debt-to-asset ratio as a more inclusive measure of leverage and examined its direct effect on stock market performance using share price as the main indicator. It further extended the scope of existing studies by incorporating firm size and current ratio as control variables, thereby accounting for differences in bank scale and liquidity conditions that could influence market valuation. By analyzing data from eleven listed Deposit Money Banks over a twelve-year period, the study provided stronger empirical evidence on how leverage decisions shape market outcomes in the Nigerian banking sector, offering a broader and more realistic understanding of the capital structure–performance relationship.

5.2 Limitations of the Study and Suggestion for Further Studies

This study was limited by its reliance on secondary data obtained from the audited annual reports of the sampled banks. Some banks were excluded because their recent financial statements were not available, which may have affected the general coverage of the study. In addition, the study focused only on listed Deposit Money Banks, so the findings may not apply to unlisted banks or other financial institutions. The study also used only three variables, which may not fully capture all the factors influencing share prices in the Nigerian banking sector.

Future studies should consider including other indicators of financial performance, such as earnings per share, return on equity, or market capitalization, to provide a more detailed understanding of stock market performance. Researchers can also extend the study to include other sectors of the economy to allow comparison across industries. Moreover, future research could use primary data or qualitative methods to understand management perspectives on debt and investment decisions that influence market value.

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