

## **EFFECT OF DEBT FINANCING ON THE SHAREHOLDERS ASSET VALUE OF LISTED CONSUMER GOODS IN NIGERIA**

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**Abstract:** This study examines the effect of debt financing on shareholders assets value of listed consumer goods in Nigeria from 2014 to 2023. Debt assets and debt-to-equity mix are proxies to measure debt financing, while shareholders' assets value is proxied by Tobin's Q. The secondary data were sourced from the individual financial reports of Nigeria's listed consumer goods firms. The sample adopted 18 listed consumer goods firms out of the 20 listed consumer goods firms in Nigeria. This study employed a fixed-effect regression model to estimate the key relationship between debt financing and the value of the assets of the shareholders of listed consumer goods in Nigeria. The result shows that debt financing using debt assets and the debt-to-equity mix had a significant positive effect on the assets value of listed consumer goods in Nigeria. The study recommended that managers of consumer goods firms should employ optimal use of debt to enhance firm value since debt appears to be cheaper than equity. However, to avoid overleveraging, the quality of debt use (purpose, structure, and cost) must be managed. Consumer firms may need to incorporate a debt-to-equity mix into their strategic planning, focusing on optimizing their capital structure for long-term growth.

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**Keywords:** Debt Financing, Debt Asset, Debt to Equity Mix, Shareholders Assets Value, Tobin's Q, Listed Consumer Goods Firms.

### **Introduction**

Globally, financing choices are among the most crucial considerations for a company's financial officer. This decision-making process effectively combines various financing options (debt versus equity) to reduce the weighted average cost of capital (WACC). Consequently, a financing choice presents a framework for utilizing debt-to-assets, debt-to-equity, debt-to-capital, and other ratios, such as debt-to-earnings before interest and taxes, returns, dividends, amortization, and assets-to-equity, to support corporate operations, enhance profitability, optimize shareholder returns, and maximize overall firm returns (Dada & Ghazali, 2016). Furthermore, financing decisions assist the firm in maximizing output relative to the input obtained through either debt or equity. Numerous financial considerations emphasize the necessity for a company to operate using a mix of both debt and equity. The financing decision is one of the most significant elements in a firm's financing policy due to its critical influence on firm performance (Sudiyatno et al., 2020).

Debt financing is anticipated to positively impact a company's performance, thereby increasing its value. Debt reflects how much a company relies on borrowed capital relative to its total assets. It serves as an indicator of a

company's financial health and how well it can cover external obligations. Investors usually prefer this ratio to be low; a lower ratio suggests that a greater portion of a firm's financing is sourced from shareholders, providing a larger safety margin in case of declining asset values or significant losses. In 2017, consumer goods companies such as Jos International Breweries Plc, PS Mandrides Plc, Premier Breweries Plc, and UTC Nigerian Plc were removed from the Nigerian Exchange Group because they could not manage their debt, leading to their assets being seized by creditors. The companies were unable to distribute dividends and failed to submit their quarterly and annual financial reports as required by regulations. External debt financing is crucial for enhancing companies' future productivity and, more importantly, for fostering future growth. Leverage adjustments lead to variations in return levels and associated risks or obligations (Laghari et al., 2023).

Maximizing shareholders' wealth is an objective of financial decision-making by making wise financial choices that correspond with the company's risk profile. The market valuation of a company is a crucial indicator of its shareholders' wealth. Evaluating a firm is vital for determining stock prices and holds significance in various models. Essentially, a company's value represents the totality of its creditors and shareholders' claims. Consequently, one straightforward method to assess a firm's value is by summing up the market values of its debt, equity, and minority interests and deducting cash and cash equivalents to arrive at the net worth (Masturah et al., 2022).

The devaluation of the naira has negatively impacted consumer goods companies, with many of them experiencing considerable losses. A report by NGX (2024) indicates that nine leading consumer goods firms incurred a total loss of N50.62 billion in the first nine months of 2023, contrasting with a profit of N150.4 billion in 2022. The firms under analysis include Nestle Nigeria, Unilever Nigeria, International Breweries, Cadbury Nigeria, Nigerian Breweries, BUA Foods, Nascon Allied Industries, Dangote Sugar Refinery, and Champion Breweries. Unilever Nigeria reported a loss per share of N0.19, while Champion Brewery recorded (-N0.99), International Breweries, Dangote Sugar, Nigerian Breweries, Nestle Nigeria, and Cadbury Nigeria recorded losses of N0.99, N1.06, N2.22, N6.89, N54.33, and N545.34, respectively. The challenges these companies face stem from high exchange rates and the volatility of the naira's value, which have had a profound impact on Nigeria's consumer firms' production costs and overall financial stability.

Hence, this study aims to address the following questions: Does debt financing truly hold significance? Does debt financing impact the value of shareholders' assets? This study primarily aims to assess whether debt financing has a notable effect on the value of shareholders' assets within Nigeria's consumer goods firms from 2014 to 2023. Thus, the hypotheses are as follows:

**H<sub>01</sub>:** Debt assets have no significant effect on the assets value of listed consumer goods in Nigeria.

**H<sub>02</sub>:** The debt-to-equity mix has no significant effect on the assets value of listed consumer goods in Nigeria.

## Literature Review

### Debt Financing Concepts

Debt financing refers to the process by which a firm raises capital by borrowing funds from external sources, such as banks and financial institutions, or by issuing bonds. Unlike equity financing, where ownership is diluted, debt financing allows firms to retain full control while gaining access to capital for operations, expansion, or investment. One of the primary advantages of debt financing is the tax deductibility of interest payments, which reduces the effective borrowing cost. It also provides a predictable repayment schedule and does not require investors to share profits. However, it increases the firm's financial risk because regular interest payments and principal repayments are mandatory regardless of business performance (Brealey et al., 2020).

Debt financing is often guided by the trade-off theory, which suggests that firms balance the tax benefits of debt with the potential costs of financial distress. Firms with stable cash flows are better positioned to effectively use debt. However, excessive reliance on debt can lead to over-leverage, reduced creditworthiness, and even bankruptcy during downturns (Rahji & Kamaldeen, 2020). However, debt financing is one of the financing options available to companies for running and growing their business. Debt assets is the use of external funds to finance an organization's activities to increase its profitability; it is the proportion of debt in the capital structure. External debt financing plays an important role in increasing firms' future productivity for future growth. Debt financing is the use of fixed cost of assets or sources of funds to magnify the returns accruing to a firm's owners. Changes in leverage result in changes in the return level and associated risk or degree of obligations (Okpala & Osundina, 2019).

### **Shareholder Asset Value Concepts**

Abideen (2023) opined that the asset value of shareholders refers to the portion of a company's net assets attributable to its shareholders. It represents the residual interest in the company's assets after deducting liabilities. This value is critical for investors because it reflects the underlying worth of their equity holdings and influences their investment decisions. It is typically represented as shareholders' equity on the balance sheet, comprising share capital, REE, and other reserves (Kraus & Litzenberger, 1973). Changes in the asset value of shareholders can result from various factors, including profits or losses, dividend payments, share buybacks, and capital infusion. An increase in net income, for example, increases retained earnings, thereby enhancing shareholder value. Conversely, high levels of debt, poor financial performance, or equity dilution can negatively impact the value attributable to shareholders. Maximizing shareholder asset value is often considered a core objective in corporate finance, as it aligns with increasing firm value and long-term sustainability (Damodaran, 2012).

Most financing decisions are driven by necessity, which involves a comprehensive examination of these choices, their associated risks, and their long-term effects. Yemi and Seriki (2018) posited that businesses' shareholder value hinges on profitability and the returns they generate on their net worth. Seidu and Andani (2018) contended that choosing among various funding sources, whether internal or international, could serve as a firm's financing strategy. Internal financing uses retained earnings, whereas external financing involves raising capital through debt instruments and new security offerings. Identifying financial factors that significantly influence a company's value creation can help establish criteria for effective strategic planning (Rajput et al., 2020). Tobin's Q is a financial ratio that compares a firm's asset market value to its replacement cost. Developed by economist James Tobin, the ratio is calculated as follows:

Tobin's Q = Firm's market value/replacement cost of assets

### **Empirical Review**

Fasasi et al. (2025) examined the effect of debt financing on the profitability of Nigeria's listed agricultural companies. Study sample of 5 listed Agricultural companies in Nigeria on the Nigeria Stock Exchange (NSE). Secondary data for the study were extracted from the annual reports of listed agricultural firms. The data were analyzed using multivariate regression analysis, and the results showed that long-term debt had a significant negative effect on the profitability of listed agricultural companies in Nigeria. The results also show that short-term debt has a significant positive effect on the profitability of listed agricultural companies in Nigeria. The study concluded that debt financing has an effect on profitability, but long-term debt in the debt financing of agricultural companies should be kept at a moderate level to improve profitability. The author did not explicitly

demonstrate how this study differs from other research, even though the author has shown evidence of similar empirical literature.

Bamgboye (2024) examined the effect of debt financing on the financial performance of Nigeria's listed deposit money banks. One of the most important topics in corporate finance is how debt financing affects Nigerian listed deposit money banks' financial performance. These banks are financial intermediaries, and their stability, profitability, and expansion depend on a balanced capital structure. Debt financing presents certain risks and expenses associated with financial hardship, interest commitments, and liquidity limits, even though it is advantageous for leveraging profits and optimizing tax shielding. Determining the ideal leverage for these institutions requires an understanding of how debt levels affect performance indicators, such as ROE, ROA, and net interest margin. This study adopted an ex-post facto research design. Of the of the twenty-two deposit money banks that made up the research population, 13 were selected for sampling. Secondary data were utilized by extracting relevant data from financial statements for a 10-year period (2014–2023). The findings revealed that debt financing has a significant effect on debt and has a significant effect on ROA and ROE on Nigeria-listed deposit money banks. The study concludes that the effect of debt financing on financial performance is significant for listed deposit money banks in Nigeria.

Akani (2024) examined the impact of debt financing on the net profit margin of Nigerian publicly traded consumer goods manufacturing companies. The research used the long-term debt ratio, short-term debt ratio, and total-debt ratio as proxies for debt financing, while the net profit margin represented profitability. The study was based on the Miller and Modigliani theory, the pecking order theory, and the trade-off theory. Both deductive and inductive approaches were utilized, and an ex-post facto research design was implemented. The study population included all 20 CGM firms listed on the Nigerian Exchange Group as of December 31, 2022. A convenience sampling technique was employed, resulting in a sample size of ten (10) consumer goods manufacturing firms. Panel data were obtained from the Nigerian Exchange Group. Data analysis was conducted using a panel least squares regression technique, and the p-value was used to test the developed hypotheses at a 5% significance level. The results indicated that the long-term debt ratio positively and significantly impacts the net profit margin of publicly traded consumer goods manufacturing firms in Nigeria, while the short-term debt ratio also has a positive and significant effect on these firms' net profit margin. Additionally, the total debt ratio has a positive and significant effect on the net profit margin of Nigerian consumer goods manufacturing companies. However, this study included only 10 consumer goods firms, while the current research aims to encompass 18 listed consumer goods firms in Nigeria.

Ghardallou (2023) investigated the impact of debt financing on the performance of publicly listed companies in Saudi Arabia. The research focused on how this relationship varies based on company profitability and size. A sample of 120 non-financial firms listed on the Tadawul Stock Exchange was analyzed, covering the period from 2017 to 2020, using data sourced from the companies' financial statements. This study employed the GMM and quantile regression methods. The first approach assesses how leverage choices influence company performance, whereas the second evaluates how this relationship varies. The results revealed that leverage negatively impacts company performance, specifically regarding ROA, ROE, and Tobin's Q. Findings from the quantile regression indicated that this relationship is not uniform; in particular, leverage exerts a greater negative impact on the performance of highly profitable firms compared to those with lower profitability. Furthermore, leverage adversely affects larger companies, while its influence is negative for smaller enterprises. This research is distinctive because it examines capital structure issues from a novel perspective, considering leverage decisions

at different firm profitability and size levels. In addition, most previous studies have been conducted in developed nations, making this investigation unique in Saudi Arabia; the findings may not be applicable to emerging markets such as Nigeria.

Rizqa et al. (2023) investigated the relationship between debt and firm value and examined the potential mediating role of firm performance, specifically return on equity and earnings per share. The study employs a quantitative approach, utilizing the partial least squares-structural equation modeling (PLS-SEM) tool, with a sample of 687 companies listed on the Indonesia Stock Exchange (IDX) for the 2021 period. The sampling was conducted using a purposive sampling method. The findings indicate that leverage does not have a direct impact on firm value; rather, the mediating role of return on equity is significant in this relationship. In contrast, earnings per share did not mediate the relationship between leverage and firm value. This study was limited to listed companies in Indonesia, whereas the current study focuses on consumer goods firms in Nigeria.

Abideen (2023) investigated the association of financial leverage, firm liquidity, and firm size with the performance of companies in China. The study adopted a quantitative approach and gathered secondary data from 2010 to 2022 from firms listed on the China Stock Exchange from 2010 to 2022 via the wind database. Using a fixed effect model, the study's outcomes indicate that firm liquidity and firm size significantly affect a company's performance in China. Moreover, the study claims that financial leverage also significantly influences firm performance. In conclusion, the findings indicate the importance of considering factors such as financial liquidity and firm size when making decisions related to firm performance, particularly in an emerging stock market. However, this study was conducted in China, and the results might differ from those of studies conducted in Nigeria.

Khan and Siddiqui (2023) examined how financial leverage, supply chain finance, and liquidity affect a firm's performance in Pakistan's cement, textile, sugar, and pharmaceutical sectors. The financial reports for all 50 companies in four industries, which were available on their official websites, were used to compile data for the past decade. Data were collected from 2011 to 2020. The World Bank is another source used to collect data. Data analysis was conducted using the generalized method of moment (GMM), and the results show that financial leverage has a negative impact on company performance in the cement industry, but a positive impact in the textile, sugar, and pharmaceutical industries. Supply chain finance (SCF) has a detrimental effect on firm performance in the cement industry, whereas supply chain financing has a positive impact on the textile, sugar, and pharmaceutical sectors. Liquidity (LIQ) has a favorable impact on firm performance in the cement, textile, sugar, and pharmaceutical sectors. The results also reveal the critical role of supply chain finance in boosting firm performance. The innovative conclusion of this study is that increased debt levels and their inefficient use have a detrimental effect on firm performance. The findings indicate that financial leverage improves a company's performance as long as debt levels do not exceed equity. Due to the many market and industry conditions and scenarios that businesses in a given industry must deal with, several factors have varying effects on how well a firm performs. However, this study was conducted in Pakistan, and the results might differ from those of studies conducted in Nigeria.

Kalash (2023) examined how financial distress risk and currency crisis affect the relationship between financial leverage and financial performance. The study used data from 200 firms listed on the Istanbul Stock Exchange from 2009 to 2019, resulting in 1950 firm-year observations. Pooled ordinary least squares, random effects, firm fixed effects, and two-step system GMM models were used to investigate the hypotheses of this study. The results revealed that financial leverage has a significant negative effect on financial performance, and this effect is

stronger for firms with higher financial distress risk. Furthermore, the findings provide moderate evidence that the currency crisis intensifies the negative association between leverage and performance. The results of this study have important implications for firms in emerging markets. Managers can enhance firm performance by reducing financial leverage, especially in firms with higher financial distress risk. To the best of the author's knowledge, this research is the first to examine the effect of currency crisis on the relationship between financial leverage and financial performance and is one of few that investigate the role of financial distress risk in determining the linkage between leverage and firm performance.

Ali et al. (2022) investigated the relationship between debt financing and firm performance. The study used accounting-based variables to measure performance, namely, return on assets (ROA) and return on equity (ROE) as dependent variables and leverage, ownership proxies, and other control variables as independent variables. The ownership proxies included managerial, institutional, and family owned ownership, whereas the control variables included firm size and net income of the selected firms. This study has used panel data analysis while using data of 70 firms listed on the Pakistan Stock Exchange from 2010 to 2016. This study found a negative but statistically significant relationship between leverage and firm performance and both ROA and ROE. The study was conducted in Pakistan, so the researcher took data from the Pakistan Stock Exchange, which is a developing country. However, the author did not elaborate on the research design.

Evbayiro-Osagie and Enadeghe (2022) examined the impact of capital structure on nonfinancial firms' return on assets (ROA) performance in Sub-Sahara Africa for a period of nine (9) years (2012-2020). A total of forty (40) non-financial firms were studied using their capital structure variables of long-term debt to equity (LTDQ), total debt (TD), total debt to equity (TDQ), and total debt to total assets (TDTA) as well as their ROA performance. The panel data analysis technique was employed. LTDQ, TD, and TDQ had a positive impact on ROA performance, while TDTA had a negative impact on ROA performance, and all variables were significant at the 1% level. The major weakness of this study is the lack of evidence of pre- and post-estimation analysis.

Opoku-Asante et al. (2022) used a sectorial analysis to investigate the relationship between capital structure and financial performance and considered the effect of debt maturity on the relationship between capital structure and financial performance. They used 425 cross-sectional firm-year samples from firms in Ghana and Nigeria from 2014 to 2019. The study found a significant negative relationship between capital structure and financial performance. Debt maturity had no effect on the relationship between capital structure and financial performance. However, the industry influences the relationship between capital structure and financial performance. In addition, debt maturity influences the capital structure performance relationship in specific sectors but not the market. This study extends previous studies on the relationship between capital structure and financial performance by incorporating sectoral and debt maturity on firms in Ghana and Nigeria. The use of a nonparametric tool, such as the chi-square test, makes the study relatively elementary and not robust enough to capture policy-making analysis.

## **Theoretical framework**

### **Trade-Off Theory**

Robichek and Myers (1966) propounded this theory. Trade-off theory claims that firms have an incentive to use debt to benefit from debt tax shields. Therefore, a firm has an incentive to turn to debt as the generation of annual profits allows benefiting from the debt tax shields. The theory expresses that there is an ideal capital structure that expands a firm's estimation. It is of the view that administration will set an objective influence proportion and progressively move toward that. Davis and Cosenza (2014) have shown that organizations select objective

influence proportions based on a compromise between the advantages and expenses of expanded influence. They cited duty, money-related pain expenses, and office costs as three factors that impact the decision of this objective influence proportion. In this way, directors will select the blend of obligation and value that accomplishes harmony between the advantages of obligation through duty advantage and the different expenses related to obligation. The theory recommends that organizations focus on an ideal degree of liquidity to adjust the advantage and cost of holding money. The expense of holding money incorporates the low rate of return of these advantages considering the liquidity premium and perhaps charge inconvenience. The advantages of holding money are in twofold: First, organizations spare exchange expenses to raise reserves. Second, the firm can utilize fluid advantages to account for its exercises and speculation if different financing sources are not accessible or are amazingly costly (Abdullah & Tursoy, 2019).

Falope and Ajilore (2009) presented an office issue related to free-income. Jensen (1986) proposes that the free income issue can be constrained in one way or another by expanding the stake of chiefs in the business or by expanding obligation in the capital structure, thereby diminishing the measure of free money accessible to supervisors. As a hypothesis, the use of the compromise model cannot be overlooked, as it clarifies that organizations with high influence draw in significant expense of overhauling the obligation accordingly, influencing its financial execution, and it becomes difficult for them to raise assets through different sources. Holding money on that point isn't just done by the small firm but also by larger firms.

The optimal capital structure for every firm can be determined by balancing the costs and benefits of equity. As a result, a firm decides how much debt capital and equity capital to include in its capital structure by balancing the costs and benefits of each source. Debt capital results in benefits, such as tax savings, though high debt levels in the capital structure can result in bankruptcy and agency expenses. Agency expenses result from divergence of interest among different firm stakeholders and information asymmetry (Jensen & Meckling, 1976).

Thus, including the cost of agency into the trade-off theory signifies that a corporation ascertains its optimal financial structure by balancing the benefit of debt (the tax advantage of debt) against excessive debt expenses (financial distress) and the resultant equity agency expenses against debt agency costs. The theory further asserted that the marginal cost associated with debt increases as a firm increases debt in its capital structure, while the marginal benefits associated with debt decrease until an optimal point is reached. Beyond this point, the marginal costs of debt exceed the marginal benefits, resulting in reduced firm value. In this regard, the firm should set an optimal financial structure to enhance its performance.

### **Methodology**

The research design for this study was an expo-facto research design. Expo-facto design involves describing the relationship between past factors and the present trend or occurrence. The study population includes 20 consumer firms listed on the floor of the Nigerian Exchange Group (NGX) 2025. Such as Cadbury Nigeria Plc and Champion Brew. Plc, Dangote Sugar Refinery, Dunlop, Flourmill, Goldbrew, Guinness, Honyflour, International Breweries Plc, Mcnichols, Multitrex, . Flour Mills Plc, Nascon, Nestle, and Nigerian Brew Co., Ltd. Plc, Enamelwa, PZ Cussons Nigeria Plc, Unilever, Uniondicon, and Vitafoam. Eighteen (18) firms were sampled, as two (2) companies were exempted from the sampled consumer firms, Multitrex Plc and Uniondicon Plc, due to incomplete data.

Panel data were extracted from the 2014–2023 published annual reports of listed consumer firms in Nigeria, from 2014-2023. Panel data were analyzed using E-views version 12. Descriptive statistics, correlation matrix, normality test, and regression analysis were performed, and post-estimation analyses, such as heteroskedasticity

test, serial correlation, and Hausman test, were also performed. The specific model given below for the Hausman test describes a convenient version for regression applications that involves testing whether certain transformations of the original regressors have zero coefficients.  $H_n \equiv n (\theta_{1n} - \theta_{2n}) S' [S V_n S]^{-1} S' (\theta_{1n} - \theta_{2n})$ .

**The Model Specification:**

The model adopted for this study is given as follows:

$$TOQ_{it} = a_0 + a_1DEA_{it} + a_2DER_{it} + e_{it}$$

Where;

TOQ = Tobin Q

DEA = Debt–Accounts ratio

DER = Debt-to-Equity ratio

a0 = constant,

e<sub>it</sub> = error term

a1, a2 = slope or coefficient of independent variables.

**Decision Rule**

The decision rule to test the hypothesis of the study is as follows: The null hypothesis is rejected if the p-value of the t-coefficient is less than 5% (0.05); otherwise, it is accepted.

**Table 1 Table of Variable Measurement**

Variables	Description	Source
<b>Tobin Q</b>	Market Capitalization + Total Liabilities-Cash flow divided by total assets	Olaoye et al. (2022).
<b>Debt assets</b>	Long-term debt + short-term debt = total assets	Khan et al. (2023)
<b>Debt-to-Equity Ratio</b>	Measured as total debt/shareholder’s equity X 100	Fasasi et al. (2023)

Source: Researcher’s Computation 2025 data

**Results and Discussions**

**Table 2: Descriptive statistics**

	TOQ	DEA	DER
<b>Mean</b>	1.381722	24.17774	9.731222
<b>Median</b>	1.390000	24.51180	9.762438
<b>Maximum</b>	1.820000	27.55640	17.25123
<b>Minimum</b>	0.410000	18.86750	-3.652293
<b>Std. Dev.</b>	0.225925	1.991344	3.719332
<b>Skewness</b>	-1.095791	-0.723114	-0.484169
<b>Kurtosis</b>	5.598173	2.926009	3.643151
<b>Jarque-Bera</b>	86.65150	15.72787	10.13490
<b>Probability</b>	0.000000	0.000384	0.006298
<b>Sum</b>	248.7100	4351.994	1751.620
<b>Sum Sq. Dev.</b>	9.136566	709.8160	2476.184
<b>Observations</b>	180	180	180

Source: E-Views 13, 2025

The descriptive statistics of the variables used in the study indicate that Tobin’s Q is a ratio comparing a firm’s market value to the replacement cost of its assets, often used to measure firm performance or value. With a mean of 1.3817, firms have a Tobin’s Q greater than 1, suggesting that market value exceeds the replacement cost, which may indicate positive investor sentiment or expected growth. Skewness: -1.0958 – The distribution is negatively skewed, indicating a longer tail to the left (some firms have very low Q values). Jarque-Bera (JB): 86.6515 (p = 0.0000) – Strongly rejects normality. The distribution is not normal.

Debt assets represent the proportion of a firm’s capital financed through debt. The mean is 24.18, on average, finance about 24% of their capital with debt. Skewness: -0.7231 – Slight left skew; more values at the higher end of the range. Finally, the debt-to-equity mix represents the ratio of debt to equity, indicating the firm’s capital structure. Mean: 9.73 – Firms, on average, have approximately 9.73 units of debt for every unit of equity (or per some scaling factor). All three variables show some degree of nonnormality, as indicated by significant Jarque-Bera tests.

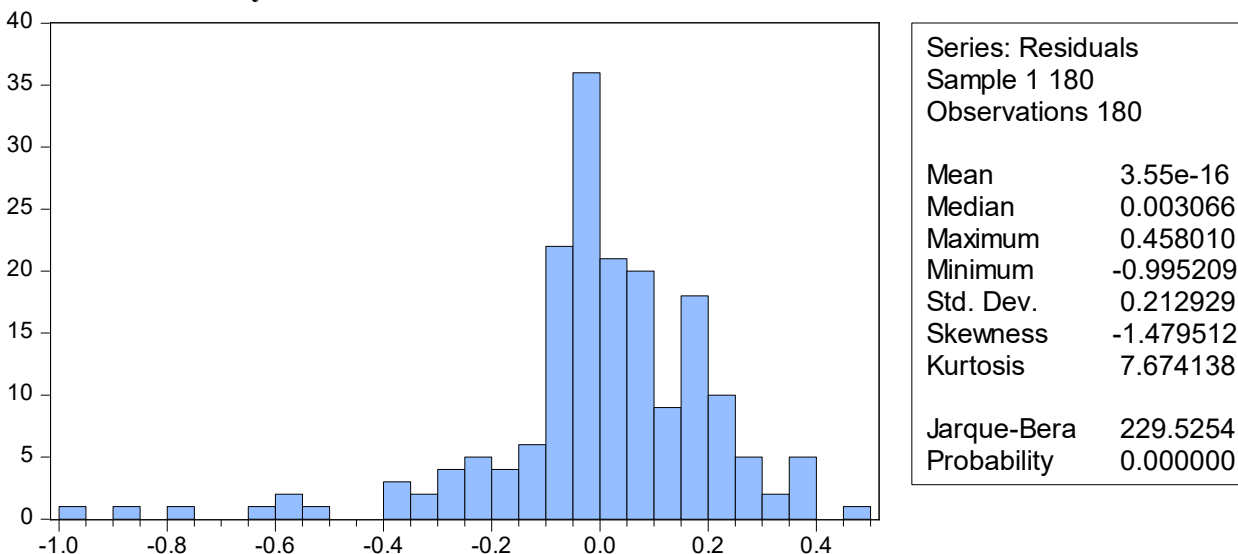
**Table 3: Correlation matrix**

	TOQ	DEA	DER
TOQ	1	-0.0313	0.33250
DEA	-0.0313	1	-0.19564
DER	0.3325	-0.1956	1

Source: E-Views 13, 2025

Table 3 presents the analysis of correlation between the variables. A TOQ and DEA of -0.0313 has a very weak, almost negligible negative correlation. A TOQ and DER of 0.3325 has a moderate positive correlation. Suggests that a higher debt-equity mix is associated with a higher Tobin’s Q. DEA and DER of -0.1956 has a weak negative correlation. Indicates that as debt asset increases, the debt-equity mix decreases slightly.

**Table 4: Normality test results**



Source: E-Views 13, 2025

The normality test in Table 4 reveals that the data are not normally distributed, as indicated by the Jarque-Bera statistic of 229.5254 and its corresponding p-value of 0.000. This result shows that the data are skewed,

confirming a deviation from normality. However, since the series has fulfilled the pre-test requirements for using a panel data model, the relevant regression models are generated.

**Table 5: The Hausman test**

Test Summary	Chi-Sq. Statistic	Chi-Sq. d. f.	Prob.
Cross-section random	28.217675	2	0.0000

**Source: E-Views 13, 2025**

Since the p-value is < 0.05, the study rejects the null hypothesis that the random-effects model is appropriate. The fixed effects model is preferred. This implies that the unobserved individual effects (across firms) are correlated with the regressors, and the estimates would be biased using RE. The fixed effects estimator was adopted for the regression analysis to ensure robust and reliable results.

**Table 6: Fixed-Effect Model**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.584757	0.523607	-3.026612	0.0029
DEA	0.112777	0.020312	5.552285	0.0000
DER	0.024641	0.005570	4.424214	0.0000

Effects Specification

Fixed cross-section (dummy variables)				
R-squared	0.499086	Mean var dependent	1.381722	
Adjusted R-squared	0.439602	S.D.-dependent var	0.225925	
S.E. of the regression	0.169127	Akaike information criterion	-0.611893	
Sum squared resid	4.576637	Schwarz criterion	-0.257120	
Log likelihood	75.07039	Hannan-Quinn writer.	-0.468048	
F-statistic	8.390311	Durbin-Watson stat	0.589739	
Prob(F-statistic)	0.000000			

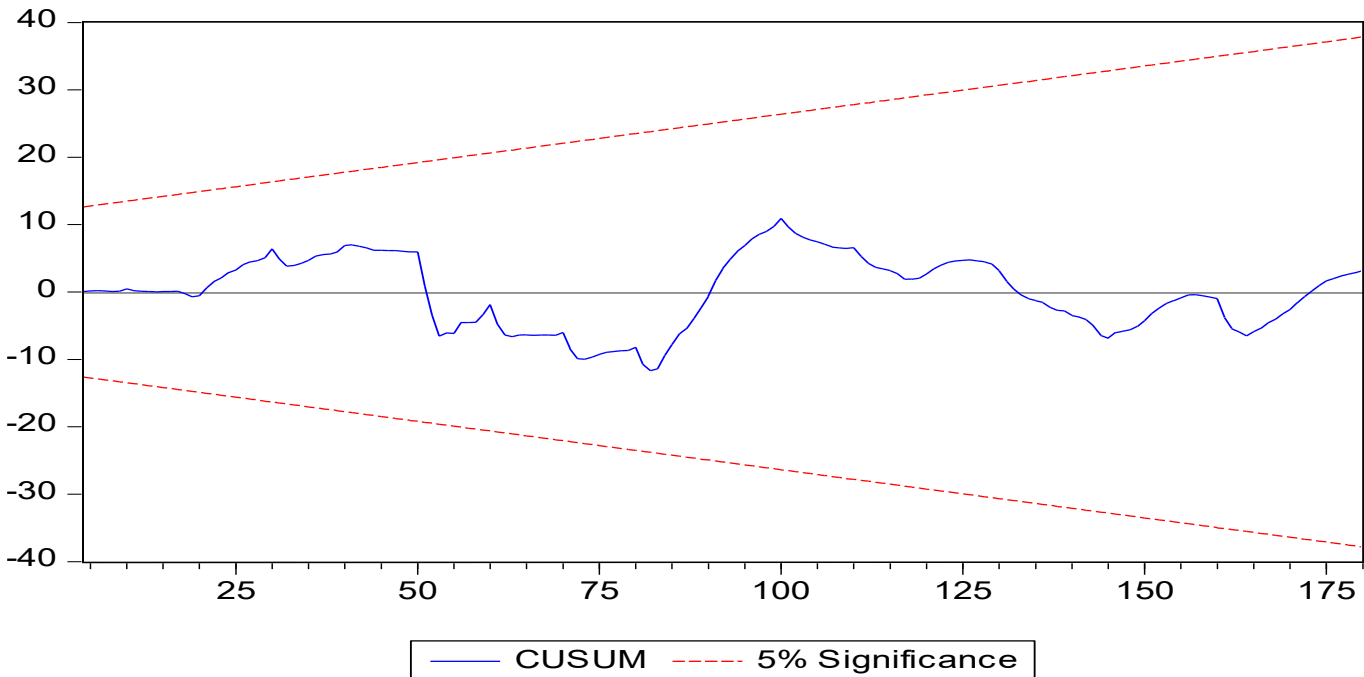
**Source: E-Views 13, 2025**

Both debt assets and the debt-to-equity mix positively and significantly affect the assets value of shareholders, as measured by Tobin’s Q. The use of fixed effects controls for unobserved heterogeneity across consumer firms. However, the very low Durbin-Watson statistic (0.5897) indicates positive autocorrelation, which may affect the reliability of the results. This should be checked and corrected using robust standard errors or generalized least squares techniques. The fixed-effects model confirms that higher debt financing and a greater debt-equity mix are both positively associated with the value of shareholders’ assets.

The coefficient of determination (R<sup>2</sup>) value of 0.49 indicates that the independent variables included in the model explain 49% of the variation in the dependent variable (TOQ). Furthermore, the probability value of the F-statistic

(0.0000) confirms that the independent variables have a significant impact on the dependent variable. Therefore, the model is deemed to be statistically fit and appropriate for analyzing the relationship.

**Table 7: CUSUM stability test results**



The CUSUM stability test assesses whether the regression model coefficients remain stable over the analysis period. The test involves plotting and comparing the cumulative sum of recursive residuals against critical boundaries. If the CUSUM line stays within the critical bounds, the model is stable and free from irregular variations or sudden shifts in the relationship between the variables. In this context, the CUSUM test confirms that the data do not exhibit any structural breaks or outliers that could compromise the regression results’ reliability. While the phrase “data are normal” is used here, it more accurately suggests that the data behave predictably within the model’s framework and do not deviate unexpectedly.

**Discussion of the Findings**

Based on the findings of the research, the study is consistent with the research of Fasasi et al. (2022) and Khan and Siddiqui (2023) that the relationship between debt assets and Tobin’s Q is significant, implying that firms efficiently use debt to finance operations or investments that contribute to higher earnings. Debt may be an effective tool for enhancing firm performance. This could be due to debt’s tax benefits (interest is tax-deductible). Firms may opt for a higher level of debt to enhance their capital structure, as this can increase shareholder value. A balanced debt-equity mix may be a sign of financial health.

This study is consistent with the research of Akani (2024) and Rizqa et al. (2023), who found that the relationship between debt-equity mix and the assets value of shareholders is significant. Debt-equity mix has positive and statistically significant effects on Tobin’s Q. This suggests that firms that use more debt (either in absolute terms or relative to equity) tend to have higher market value. Companies might prioritize projects that leverage both debt and equity financing to capitalize on growth opportunities, knowing that it can positively impact their market valuation.

## Conclusions and Recommendations

This study evaluates the effect of debt financing on the assets of listed consumer firms in Nigeria. Thus, the study concluded that a positive relationship exists between debt assets and shareholders' assets value, suggesting that an increase in debt assets will increase the value of shareholders' assets of listed consumer firms in Nigeria. Furthermore, the study concluded that a positive relationship exists between debt-to-equity mix and shareholders' assets value, suggesting that an increase in debt-to-equity mix will increase shareholders' assets value of listed consumer firms in Nigeria.

Drawing from our research findings, the recommendations are as follows:

- i. Managers of consumer goods firms should employ optimal use of debt to enhance firm value since debt appears to be cheaper than equity. However, to avoid overleveraging, the quality of debt use (purpose, structure, and cost) must be managed.
- ii. Consumer firms may need to incorporate a debt-to-equity mix into their strategic planning, focusing on optimizing their capital structure for long-term growth.

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