

# Effect of Financial Leverage on the Firm Value of Listed Consumer Goods Firms in Nigeria

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**Abstract:** *The study investigated the effect of financial leverage on firm values of listed Consumer goods firms in Nigeria. The specific objectives of the study were to examine the effect of debt ratio, debt to equity ratio, interest coverage ratio, debt to EBITDA ratio, and debt to capital ratio (which are proxies for financial leverage) on firm values (proxied by market capitalization) of listed Consumer goods firms in Nigeria. The study adopted ex-post facto research design and secondary data were extracted from the annual reports of sampled Consumer goods firms in Nigeria for the period 2013 – 2022. The panel regression and correlation analysis were used for data analysis. Findings showed that debt ratio has a non-significant negative effect on the market capitalization of Consumer goods firms in Nigeria, Debt to equity ratio has a non-significant negative effect on the market capitalization of Consumer goods firms in Nigeria, interest coverage ratio has a non-significant positive effect on the market capitalization of Consumer goods firms in Nigeria. Debt to EBITDA ratio and Debt to capital ratio have a significant positive effect on the market capitalization of Consumer goods firms in Nigeria. The implication of the findings is that the financial leverage ratios studied have a significant effect on the firm value of the Consumer goods companies in Nigeria. The study concluded that financial leverage ratios have a significant effect on firm value in the sector. The study recommended that firms in the Consumer goods sector should ensure that the proportion of leverage to equity should be properly managed and controlled to prevent the result of diminishing effects on their firm's value.*

**Keywords:** financial leverage, debt ratio, debt-to-equity ratio, capital structure, market value, shareholders' wealth, firm valuation.

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## INTRODUCTION

In the world of business, companies often need to raise money to keep their operations running and to grow over time. They can do this in two main ways: either by using internal funds such

as retained earnings or by borrowing money externally through loans and bonds. When a company chooses to borrow money, this creates debt, and one important way to understand a company's financial position is by looking at its *debt ratio* and *debt-to-equity ratio*. These ratios help to show how much of a company's assets are financed through debt and how much debt is used compared to the company's equity. Financial experts like Adenugba, Ige, and Kesinro (2016) have pointed out that selecting the right balance of debt and equity in the capital structure is crucial for long-term business success.

Debt financing can offer companies several benefits, including tax advantages, since interest on loans is tax-deductible. However, too much debt can put a company at risk. A high *debt ratio* means that a company is heavily reliant on borrowed money to finance its assets, which increases the risk of financial distress, especially if profits drop or interest rates rise. Cecchetti et al. (2011) emphasize that while borrowing may help firms restructure or expand, it must be used with caution to avoid financial troubles. The *debt-to-equity ratio*, on the other hand, compares how much money a company owes versus what it owns in terms of shareholder equity. This ratio is a clear indicator of the level of financial leverage and shows how much of a company's growth is funded by debt rather than owned funds.

In Nigeria, consumer goods companies often turn to debt to finance their operations, hoping that it will improve their profits and boost their value in the eyes of investors. Researchers like Kenn-Ndubuisi and Onyema (2018) argue that when used wisely, higher financial leverage can reduce a firm's average cost of capital and raise its return on equity. However, this strategy is not without risk. For example, if the returns generated by borrowed funds are less than the cost of borrowing, then the company may end up worse off. Kithandi and Katua (2019) explain that financial leverage only works in a company's favor when the return on assets is higher than the interest paid on debt. Otherwise, the company might face shrinking profits and a reduced return on equity.

Despite the potential benefits of debt financing, many Nigerian companies find it difficult to determine the right amount of debt to use. Economic instability in the country, including frequent changes in inflation rates, currency values, and interest rates, makes it challenging to maintain a safe and effective capital structure. This leads to major differences in how companies approach debt financing. While some firms keep their debt levels low to avoid risk, others embrace higher debt levels in pursuit of higher returns. Abubakar (2016) warns that although debt provides tax advantages, it also brings the danger of bankruptcy and financial stress if it is not managed properly.

The study of debt ratios and debt-to-equity ratios is especially important given the mixed findings in existing research. Some studies, such as those by Onuora (2019) and Moghaddam and Abbaspour (2017), suggest a positive link between financial leverage and profitability, while others report no clear relationship. This inconsistency in findings is partly because researchers use different measures for leverage and operate in different economic environments. Even in Nigeria, where the business environment is dynamic and often unpredictable, researchers like Nwanna and Ivie (2017) found varying outcomes depending on the firms studied. These differences underline the need for more detailed and up-to-date studies that focus directly on key leverage measures like debt ratio and debt-to-equity ratio.

Lastly, the real problem lies in the gap between theory and reality. Ideally, firms in Nigeria's consumer goods sector should carefully manage their use of debt, using it to improve performance while avoiding the risks of over-leveraging. In practice, however, many companies struggle to strike this balance. Economic challenges, regulatory uncertainties, and differing firm strategies make it hard to fully understand how financial leverage affects firm value. As a result, there is still no clear agreement on how debt decisions influence a firm's market success. This study, therefore, seeks to focus specifically on the effects of *debt ratio* and *debt-to-equity ratio* on firm value, shedding light on how consumer goods companies in Nigeria use debt and the outcomes of these decisions in a challenging economic setting.

## REVIEW OF RELATED LITERATURE

### Financial Leverage

Financial leverage is when a company uses borrowed money to try and increase the profits available to shareholders. It measures how much a firm uses fixed financial charges, like interest, to improve earnings before interest and taxes (EBIT), which in turn affects the earnings per share (EPS). If a firm has no fixed financial costs, its earnings can move freely with revenue changes. However, when a company has debts like bank loans or bonds, it takes on financial leverage. This means the business uses a mix of short-term and long-term funding (e.g., loans, shares, debentures) to run its operations (Pandey, 2019). The more a firm relies on debt compared to its own money (equity), the more leveraged it is. Too much debt in this mix can increase the risk of financial trouble.

Financial leverage also means that the company has a fixed financial commitment, like repaying interest regularly, regardless of how much profit it makes. This can create pressure on the business, especially if it doesn't generate enough revenue. When firms borrow from banks or the capital market, they must meet fixed repayment terms, whether through bank interest or bond coupons (SEC, 2015). Analysts often look at the long-term debt ratio or debt-to-equity ratio to check how much risk the company carries. If the debt becomes too high compared to equity, it could reduce the company's value (Mayer, 1984). In good times, debt helps to improve returns, but in bad times, it increases the chance of losses or bankruptcy (Omondi & Muturi, 2013; Njeri & Kagiri, 2013; Alkhatib, 2012). Therefore, financial managers must carefully balance how much debt to use to avoid high risk while still trying to grow profits and satisfy shareholders (Oyinloye, 2020).

### Debt Ratio

The debt ratio is a number that tells how much of a company's assets are financed with debt. It is calculated by dividing total debt by total assets. If the result is more than 1 (or 100%), it means the business has more debts than assets and might be at risk if it can't repay what it owes. If the ratio is below 1, it means the company has more assets than debt, which is usually a healthier position. For example, if a company has ₦100 million in assets and ₦30 million in debt, the debt ratio is 0.3 or 30%, showing that only 30% of its assets are funded by debt. This simple calculation can give investors a quick idea of how risky or financially strong a business is.

Debt ratios can vary from industry to industry. Companies in capital-heavy sectors like electricity or utilities often have high debt ratios, while businesses in fast-moving, high-tech areas usually keep their debts lower because their cash flow may be unpredictable. For example, a 30% debt ratio might be seen as risky for a tech startup but perfectly fine for a power company. Investors use the debt ratio to assess whether a company is safe to invest in or too risky, especially if interest rates are rising. A higher ratio means more pressure on the company to repay its debts, while a lower ratio means it has more breathing room. Used along with other financial tools, the debt ratio helps build a full picture of a company's financial health.

### **Debt to Equity Ratio**

Debt to equity ratio shows how much debt a company uses compared to shareholders' money (equity) to fund its operations. It is calculated by dividing total debt by shareholders' equity. For example, if a company has ₦80 million in debt and ₦40 million in equity, its debt to equity ratio is 2.0, meaning it uses ₦2 of debt for every ₦1 from shareholders. This ratio tells whether a company is relying more on borrowing or on investors' money to grow. A high ratio means more debt, which could lead to higher profits during good times but brings greater risk when business slows down. The interest on debt is also tax-deductible, which is one reason companies sometimes prefer borrowing to issuing more shares (Okonkwo et al., 2020 as cited in Akpokerere et al., 2023).

However, more debt can also mean more financial stress. If interest rates go up or profits drop, companies with high debt levels may struggle to meet interest payments, which can hurt their operations and shareholder value (Sariguna, 2011 as cited in Purwanto & Chelsea, 2016). Financial managers must think carefully about the right balance of debt and equity. A good debt-equity mix can improve returns and even increase the company's value by lowering the cost of capital (Aziz & Abbas, 2019). On the other hand, too much debt increases the risk of failure, especially if the business is not making enough profit. So, while the debt to equity ratio helps companies grow, it must be used wisely to avoid financial problems (Al Momamni & Obeidat, 2017).

### **Market Value**

Market value refers to the total worth of a company as seen by investors. It shows how much the market believes the company is worth, based on its stock price and total number of shares. For shareholders, this is important because it reflects the return they are getting on their investment. A rising market value means the company is doing well, which increases shareholders' wealth. One of the main goals of any business is to increase this market value by performing better, growing profits, and keeping investors confident in its future. When a company achieves high market value, it usually means it is using its resources well and is seen as financially strong by the market (Adenugba et al., 2016).

Market value also helps in comparing companies in the same industry. Two firms with similar sales and profits might have different market values depending on how investors view their future potential, risk levels, and growth opportunities. For business owners and managers, keeping an eye on market value helps in making better financial decisions, especially when choosing between debt and equity financing or when planning to expand. In short, market value

serves as a key sign of how successful a company is from the point of view of investors and the public.

### **Determining a Firm's Value**

The value of a firm can be measured in different ways, and each method can give a different answer. One common way is through the stock price, which reflects how investors feel about the company. According to Biggs (1978), as cited by Rehand, the stock price is sometimes the only thing used to judge a company's performance, though it is more often just one part of a bigger picture. Another method is the book value, which is based on the company's financial statements and tells how much the company is worth on paper after subtracting debts from assets. Book value is easy to find but doesn't always reflect the market's opinion or future potential.

In many cases, analysts use a mix of methods, including earnings, cash flows, and market capitalization, to get a more accurate picture of a firm's value. The value can also depend on things like how much debt the company has, how stable its income is, and whether it owns valuable assets. All these measures help investors, managers, and other stakeholders understand how strong or weak a company is financially. Ultimately, determining a firm's value is not about one fixed number but involves using several tools to make a good judgment based on facts and expectations.

### **Market capitalization (MCAP)**

Market capitalization, commonly known as market cap, denotes the overall value of a company's outstanding shares of stock. This metric is computed by multiplying the stock price by the total number of outstanding shares. Unlike utilizing sales or total asset figures, the investment community relies on market cap to assess a company's size. In the context of acquisitions, market cap plays a crucial role in evaluating whether a potential takeover candidate represents a favorable value to the acquiring entity. It serves as a key indicator in determining the significance and scale of a company within the financial landscape. Barberis (2003) opines that while a company's size can be measured in terms of its sales, investors also need to assess its size in terms of market value.

Market capitalization often fluctuates and changes. Most investors would agree that the market cap is the most important determinant of a company's size because it reflects the market value and therefore, expectations about a company's future. Market cap measures not only what a company is worth on the open market but also the market's perception of its prospects because it refers to what investors are willing, to pay for its stock. All companies are categorized according to their market capitalization as small-capitalization medium-capitalization or large. Despite these management challenges, the market value of a firm's shares remains the most accepted measure of the shareholder's wealth.

### **Theoretical Framework**

This study is anchored on the Trade-Off Theory, which offers a compelling framework for understanding the effect of capital structure on firm value. The theory posits that firms seek to balance the benefits and costs associated with debt financing to arrive at an optimal capital structure. Benefits include tax deductibility of interest payments and the opportunity to fund

growth-enhancing investments, while the major cost is the risk of financial distress (Brealey & Myers, 2006; Baker & Martin, 2011). De Angelo and Masulis (1990) argue that firms borrow up to the point where the tax shield benefit from additional debt equals the expected cost of bankruptcy. Myers (1984) complements this view by suggesting that firms have a target debt ratio and work progressively toward that goal. According to Frank and Goyal (2009), firms consider expected future financing needs and adjust their capital structure accordingly, weighing both static and dynamic trade-offs. Therefore, the trade-off theory directly supports this study's objective of examining how leverage, as a financing choice, influences firm performance by helping firms maintain an efficient balance between cost and benefit.

Although the Pecking Order Theory also plays a supporting role in this research, it provides a contrasting perspective on how firms prioritize their sources of finance. Proposed initially by Donaldson (1961) and later refined by Myers and Majluf (1984), this theory asserts that firms prefer internal financing due to lower costs and avoidance of information asymmetry. When internal funds are inadequate, they move to debt, and only as a last resort, do they issue equity (DeJong et al., 2011). This preference hierarchy is driven by the desire to minimize financing costs and preserve control over the firm. Myers (1984) explains that information asymmetry makes managers reluctant to issue equity if they believe the market undervalues their firm. This theory predicts a negative relationship between leverage and firm value, especially for firms that are highly profitable and can rely more on retained earnings than on external debt. While this viewpoint is crucial in understanding alternative financing behaviors, its applicability is limited in studies emphasizing the strategic use of debt to improve firm value, such as this one. By anchoring this study on the trade-off theory, the research highlights the strategic consideration firms undertake in optimizing their capital structure through leverage. The theory provides the foundation for examining how firms maximize value by leveraging the tax benefits of debt while mitigating the risk of insolvency. Jensen (1986) further emphasizes that debt can improve managerial discipline and free cash flow efficiency, making it a useful tool for enhancing firm performance. The dynamic aspect of the trade-off theory also recognizes that firms make continual adjustments to reach an ideal leverage ratio over time. This incremental adjustment aligns well with the objectives of the current study, which seeks to assess how different levels of leverage influence firm performance in practice. While the pecking order theory explains why some profitable firms may avoid debt, the trade-off theory is more relevant here as it assumes that firms use leverage purposefully to balance financial risk and reward, making it the most appropriate theoretical lens for this research.

### **Empirical Review**

Several studies have explored the influence of financial leverage, particularly debt ratio, on firm value and financial performance, yielding mixed results. Dey et al. (2018) employed OLS regression to assess how financial leverage affects performance indicators like ROA, ROE, EPS, and Tobin's Q across 816 observations in a developing country. Their findings showed a negative relationship between leverage and ROA and Tobin's Q, while a positive effect was seen on ROE, and no impact was observed on EPS—signaling complex dynamics consistent with various financial theories. Similarly, Iqbal and Usman (2018) discovered that financial leverage positively influenced ROA but negatively affected ROE in Pakistan's textile sector, suggesting that the cost of debt can hinder equity value while enhancing asset-based performance if managed prudently. Javeed and Tabassam (2018) also reported a positive

relationship between leverage and financial performance metrics like ROA, Net Profit Margin, and Sales Growth but found an inverse association with ROE, reinforcing the notion that financial leverage can enhance overall performance except when measured through equity returns.

Further evidence on the negative implications of financial leverage came from Kenya and Ombok (2018), who found a significant adverse effect of financial leverage on value-added performance in listed firms on the Nairobi Securities Exchange. Similarly, Luthan et al. (2018) observed that while corporate governance and firm size enhanced intellectual capital disclosure, leverage negatively impacted it among Indonesian manufacturing firms. Widyastuti (2019), analyzing the food and beverage industry in Indonesia, concluded that liquidity positively affected financial performance and firm value, but leverage and activity ratios had no significant influence. These results highlight that while leverage may contribute positively under certain conditions, its overall impact varies depending on firm characteristics and industry dynamics.

Other studies provided sector-specific insights. Abdulkareem (2020) focused on Indian pharmaceutical firms, revealing considerable variation in performance linked to different forms of leverage and cost of capital, with Sun Pharma outperforming others. Abubakar (2020) studied Nigerian Oil and Gas firms and found that short-term and long-term debt ratios had no significant effect on performance, but total-debt equity ratio negatively affected ROE, suggesting that excessive financial leverage undermines shareholder wealth. Similarly, Anifowose et al. (2020) examined Nigerian pharmaceutical firms and found that while Debt-Equity Ratio positively impacted ROA and ROE, Debt Ratio and Interest Coverage Ratio had negative effects, underscoring the nuanced role of leverage in determining firm profitability. Cross-country perspectives further emphasize these variations. Appiah et al. (2020) analyzed listed firms in Ghana and found a negative link between debt ratios and performance indicators like ROA and Tobin's Q. Long-term debt showed no significant effect on corporate performance, pointing to the possibility that leverage burdens outweigh its benefits in developing economies. Akhtar et al. (2022) observed an inverted U-shaped relationship between financial leverage and firm performance in Pakistani firms—initial increases in leverage improved performance, but further increases led to declines. Similarly, Anh and Phuong (2022), working with Vietnamese manufacturing firms, found that different forms of debt significantly impacted performance, while audit quality and dividend policies did not play meaningful roles. These findings reflect the contextual dependency of leverage's effects, influenced by firm strategy, debt structure, and regional economic dynamics.

Arfazil et al. (2022) studied Indonesian manufacturing firms and reported that environmental performance, financial leverage, and institutional ownership positively influenced firm value, showing that non-financial and ownership factors can moderate the impact of leverage. Zaher (2020) also investigated industrial firms in Jordan, examining how financial leverage, firm size, and asset structure affect firm value. The study reinforced that leverage has a complex role that may either enhance or diminish firm value based on how it interacts with structural and operational factors. These studies suggest that beyond traditional performance metrics, broader considerations such as sustainability practices and ownership patterns can shape the leverage-firm value relationship.

In terms of Debt-Equity Ratio specifically, Ahmed et al. (2018) analyzed optimal capital structure in KSE-listed firms and found that capital structure variables including leverage and interest coverage significantly influence profitability measures like ROA, ROE, and Tobin's Q. Al-Rdaydeh et al. (2018) discovered that competitive strategy moderates the relationship between leverage and performance in Jordanian industrial firms; firms with cost leadership strategies benefited from debt financing through tax advantages and operational efficiency. In Indonesia, Daryanto et al. (2018) found that both current ratio and debt-asset ratio negatively affected ROA in the real estate sector, whereas interest coverage had a positive impact, illustrating the importance of balancing debt obligations with earnings. Mahzura (2018) also affirmed that while multiple factors influence firm value in Indonesia's food sector, leverage and ROE were particularly significant. Together, these studies establish that while debt-equity structures play a vital role in firm value, their impact varies by sector, strategy, and financial health.

### **Gap in Empirical Review**

Many past studies on financial leverage in Nigeria have focused mainly on sectors like cement, oil and gas, pharmaceuticals, and manufacturing, but consumer goods firms have been largely ignored. Most of these studies examined how leverage affects profitability, not firm value, and mainly used data that ended in 2019. For example, researchers have looked at Dangote Cement and other cement companies, but not much has been done on firms that produce everyday consumer products. This leaves a gap in knowledge, especially concerning how key leverage ratios like the debt ratio (total debt compared to total assets) and debt-to-equity ratio (total debt compared to shareholder equity) affect the value of consumer goods firms.

To fill this gap, the current study will focus on how debt ratio and debt-to-equity ratio influence the firm value of listed consumer goods companies in Nigeria. By using updated data up to the year 2022, this research will offer fresh insights that reflect current economic realities. The study is important because it shifts attention to a neglected sector and helps stakeholders understand whether higher or lower debt levels improve or reduce the value of these firms. This can guide financial decision-making within the consumer goods sector and support better corporate financing strategies.

### **METHODOLOGY**

The study adopted an ex-post facto research design, which enables empirical investigation of issues influenced by environmental factors and allows future replication. The study area is Nigeria, focusing on consumer goods firms listed on the Nigerian Exchange Group (NGX) as of December 31, 2022. Data were sourced from audited annual reports of selected firms between 2013 and 2022, alongside publications from the NGX, SEC, and other credible sources, ensuring reliability and consistency. The population comprised 21 consumer goods firms with active trading on NGX, while the sample was reduced to 17 firms based on availability of complete data within the period. Firms with incomplete or recent listings were excluded. Finally, the model specification was guided by best practices to avoid errors such as omitted variables or incorrect functional forms, ensuring a well-fitted model based on tested hypotheses and established econometric guidelines.

Firm Value (MCAP) = f (Financial Leverage Ratios) [Equation (1)]

MCAP = F (DR, DER) [Equation (2)]

$MCAP_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 DER_{it} + c_{it} + \varepsilon_{it}$  [Equation (3)]

Where;

MCAP - Market Capitalization

DR - Debt Ratio

DER: - Debt-Equity Ratio

$\beta_0$  is the constant term or intercept for firm  $i$  in the year  $t$ .

$\beta_1$ , and  $\beta_2$ , are linear regression coefficients to be estimated.

$c_{it}$  is the non-observable individual effect while  $\varepsilon_{it}$  is the disturbance or error term for firm  $i$  in the year  $t$ .

Testing the stated hypotheses necessitates determining the effect of each independent variable, i.e., each stated hypothesis on the regress and (MCAP):

$H0_1: MCAP_{it} = \beta_0 + \beta_1 DR_{it}$  [Equation (4)]

$H0_2: MCAP_{it} = \beta_0 + \beta_1 DER_{it}$  [Equation (5)]

## DATA ANALYSIS AND DISCUSSION

**Table 4.2.1: Descriptive Statistic**

	LMCAP	DR	DER	LNTA
Mean	7.508252	0.176576	-0.659105	7.611961
Median	7.680000	0.170262	-0.610924	7.810000
Maximum	9.100000	1.680517	0.008600	8.960000
Minimum	5.180000	-0.619789	-2.000000	5.420000
Std. Dev.	0.975414	0.327735	0.369452	0.804527
Skewness	-0.477222	0.860314	-0.923929	-0.750463
Kurtosis	2.614187	2.765748	2.976705	2.952450
Jarque-Bera	5.595350	6.003778	6.977955	16.16113
Probability	0.082423	0.180987	0.066889	0.000309
Sum	1291.419	30.37112	-113.3660	1309.257
Sum Sq. Dev.	162.6950	18.36718	23.34057	110.6822
Observations	172	172	172	172

*Source: E-views 10 software, 2023*

Table 4.2.1 presents the normality test results for market capitalization (LMCAP), debt ratio (DR), and debt-to-equity ratio (DER), using skewness, kurtosis, and the Jarque-Bera test. LMCAP shows slight leftward skewness and near-normal kurtosis, with a Jarque-Bera p-value of 0.0824, indicating no strong deviation from normality. DR is moderately right-skewed with kurtosis close to 3 and a Jarque-Bera p-value of 0.1810, suggesting an approximately normal distribution. DER exhibits a moderate leftward skew but also maintains near-normal kurtosis and a p-value of 0.0669, supporting the assumption of normality. Overall, LMCAP, DR, and DER are approximately normally distributed despite minor asymmetries.

**Table 4.2.2: ADF Panel Unit Root Tests Result**

		<u>At Level</u>		
Null Hypothesis:		LMCAP	DR	DER
With Constant	t-Statistic	0.4233	0.2882	0.1410
	Prob.	0.2562	0.1520	0.1144
With Constant & Trend	t-Statistic	0.2960	0.1307	0.4167
	Prob.	0.8484	0.5313	0.1091
Without Constant & Trend	t-Statistic	0.3128	0.0049	0.2219
	Prob.	0.7064	0.4938	0.7412
<u>At First Difference</u>				
		d(LMCAP)	d(DR)	d(DER)
With Constant	t-Statistic	0.0233	0.0458	0.0134
	Prob.	0.2088	0.0115	0.0045
With Constant & Trend	t-Statistic	0.1082	0.1620	0.0366
	Prob.	0.2353	0.0377	0.0153
Without Constant & Trend	t-Statistic	0.0019	0.0040	0.0005
	Prob.	0.0242	0.0004	0.0002

*Source: E-Views 10.0 Output, 2025*

Table 4.2.2 presents the Augmented Dickey-Fuller (ADF) unit root test results for market capitalization (LMCAP), debt ratio (DR), and debt-to-equity ratio (DER). At their level forms, the ADF test statistics for these variables, whether tested with a constant, with a constant and trend, or without both, generally show low t-statistics and high p-values. This indicates that the null hypothesis of a unit root cannot be rejected, suggesting that LMCAP, DR, and DER are non-stationary at level across all test conditions.

However, when first differenced, the results change significantly for DR and DER. With a constant and with a constant and trend, the p-values for DR and DER fall below the 0.05 threshold, indicating that these variables become stationary after differencing. This suggests that while DR and DER are non-stationary in their original forms, they achieve stationarity in first differences, making them suitable for further time series analysis. In contrast, LMCAP remains non-stationary even after differencing, as its p-values continue to exceed 0.05 across the test variations.

**Table 4.2.3: Kao Residual Cointegration Test**

	t-Statistic	Prob.
ADF	3.062006	0.0053
Residual variance	0.031888	
HAC variance	0.025148	

*Source: E-views 10 software, 2025*

The Kao Residual Cointegration Test in Table 4.2.3 reveals a significant long-term relationship among the variables LMCAP, DR, and DER. With an ADF t-Statistic of 3.062006 and a p-value of 0.0053, the test provides strong evidence to reject the null hypothesis of no cointegration. This suggests that despite potential non-stationarity in each series, they move

together over time. The reported residual variance is 0.031888, while the HAC variance, adjusted for heteroskedasticity and autocorrelation, is 0.025148. These findings confirm the presence of cointegration, highlighting a shared stochastic trend among the variables, which is valuable for modeling and forecasting in financial analysis.

**Table 4.2.4: Correlated Random Effects - Hausman Test**

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	61.383687	6	0.0000

*Source: E-views 10 software, 2025*

Table 4.2.4 provided results from the Correlated Random Effects - Hausman Test in, a critical tool in panel data analysis. The Correlated Random Effects - Hausman Test is a statistical tool designed to assess whether the assumption of random effects in a regression model is suitable or if fixed effects would be more appropriate. This test is particularly relevant in panel data analysis, where researchers need to make informed decisions about the model specifications to ensure efficiency and consistency in their estimations. In the presented test summary, the Chi-Square Statistic of 61.383687, with 6 degrees of freedom, yields a highly significant p-value of 0.0000. This low p-value suggests a rejection of the null hypothesis, indicating a statistically significant correlation between the random effects and the regressors.

The subsequent section of the test provides a more granular analysis by offering insights into the random effects of each variable. For DR, a variance difference (Var(Diff.)) of 0.001956 and a probability of 0.0000 indicate a significant correlation between the random effect and the regressors. On the other hand, for DER, the small variance difference of 0.000044 and a probability of 0.1801 suggest that the random effect for DER is not significantly correlated with the regressors.

**Table 4.2.5: Spearman Rank Order Covariance Analysis Result**

	DR/MCAP	DER/MCAP
Correlation	0.104937	0.016274
t-Statistic	1.375814	0.212220
P-Values	0.1707	0.8322
Observation	172	172

*Source: E-views 10 software, 2025*

Table 4.2.5 presents the outcomes of a Spearman Rank Order Covariance Analysis, a method employed to explore the relationships between different financial leverage variables and Market Capitalization (MCAP). Each correlation coefficient is indicative of the strength and direction of a monotonic relationship, offering insights into how these financial metrics might vary concerning the company's market value. Beginning with the Debt Ratio (DR) to Market Capitalization (MCAP) correlation, the coefficient of 0.104937 suggests a weak positive association. This implies that there is a slight tendency for the Debt Ratio to increase with larger

Market Capitalization, though the correlation is not statistically significant with a p-value of 0.1707. In contrast, the Debt-Equity Ratio (DER) exhibits a very weak positive correlation of 0.016274 with MCAP, and the correlation is not statistically significant (p-value: 0.8322). This suggests minimal movement in the Debt-Equity Ratio concerning changes in Market Capitalization.

**Table 4.2.6 Multiple Regression Result (Dependent Variable: MCAP)**

Variable	Coefficient	Standard Error	t-Stat	p-Value
DR	-0.130678	0.150288	-0.869517	0.3860
DER	-0.048588	0.059317	-0.819118	0.4140
LNTA	0.250199	0.098184	2.548272	0.0118
C	5.136982	1.105840	4.645323	0.0000

$R^2 = 0.94$ , Adjusted  $R^2 = 0.93$ , F-Stat = 119.4305, Prob(F-stat) = 0.00000, D.W. Stat. = 1.87, Obs = 172

*Source: E-views 10 software, 2025*

The results from the multiple regression analysis, as presented in Table 4.2.6, provide insights into the relationship between various financial variables and Market Capitalization (MCAP). This analysis is crucial for understanding the factors that influence the valuation of companies in the dataset. Examining the individual coefficients, it is observed that the Debt Ratio (DR) and Debt-Equity Ratio (DER) do not show statistically significant relationships with Market Capitalization, as evidenced by their high p-values of 0.3860 and 0.4140, respectively. These results suggest that changes in these ratios are not strongly associated with variations in Market Capitalization. Assessing the overall model fit, the high  $R^2$  and Adjusted  $R^2$  values of 0.94 and 0.93, respectively, suggest that the chosen independent variables collectively explain a substantial proportion of the variance in Market Capitalization. The F-Stat of 119.4305 with a p-value of 0.00000 further supports the overall statistical significance of the regression model. The Durbin-Watson Statistic (D.W. Stat.) of 1.87 is close to the ideal value of 2, indicating no significant autocorrelation in the residuals. This suggests that the model adequately accounts for the serial correlation of errors.

### Test of Hypotheses

The four hypotheses formulated in chapter one of this study was tested using the following decision rule:

#### Restatement Decision Rule

As stated by Gujarati and Porter (2009), the decision rule for accepting the alternate hypothesis (H1) is based on three criteria:

- i. If the coefficient for the independent variable has a positive or negative sign,
- ii. If the absolute value of the t-Statistic is greater than 2.0,
- iii. If the P-value of the t-Statistic is less than 0.05.

If these criteria are met, H1 is accepted; otherwise, H0 is accepted and H1 is rejected.

### ***Hypothesis One***

H<sub>0</sub>: Debt ratio does not have a significant effect on the market capitalization of consumer goods firms in Nigeria.

H<sub>1</sub>: Debt ratio does not have a significant effect on the market capitalization of consumer goods firms in Nigeria.

**Decision:** The coefficient for Debt Ratio (DR) is -0.130678 with a p-value of 0.3860. The p-value is greater than the conventional significance level of 0.05. Therefore, based on the regression results, there is insufficient evidence to reject the null hypothesis. The Debt Ratio does not have a statistically significant effect on the market capitalization of consumer goods firms in Nigeria.

### ***Hypothesis Two***

H<sub>0</sub>: Debt-to-equity ratio has a non-significant effect on the market capitalization of consumer goods firms in Nigeria.

H<sub>1</sub>: Debt-to-equity ratio has a non-significant effect on the market capitalization of consumer goods firms in Nigeria.

**Decision:** The coefficient for the Debt-to-Equity Ratio (DER) is -0.048588 with a p-value of 0.4140. Similar to the Debt Ratio, the p-value is higher than 0.05. Thus, there is no significant evidence to reject the null hypothesis. The Debt-to-Equity Ratio does not have a statistically significant effect on market capitalization.

## **DISCUSSION OF FINDINGS**

The study revealed that the Debt Ratio does not significantly influence the market capitalization of consumer goods firms in Nigeria. This result may be attributed to the unique characteristics of the industry, which is often marked by stable consumer demand and moderate capital requirements. Unlike capital-intensive industries where debt levels directly impact firm value, consumer goods firms may not rely heavily on external debt to fund operations. Their stable revenue streams reduce the need for aggressive financial leverage, making the Debt Ratio less relevant in influencing market capitalization. Moreover, many of these firms tend to prioritize financial soundness by avoiding excessive debt, relying more on equity and internally generated funds to support their activities.

The economic environment in Nigeria adds further complexity to the relationship between the Debt Ratio and market capitalization. With frequent fluctuations in inflation rates, interest rates, and currency exchange values, firms in the consumer goods sector are likely to adopt risk-averse financial policies. This cautious stance is reflected in their capital structures, where low debt levels are maintained to protect against economic shocks. Consequently, the limited use of debt reduces the variability of the Debt Ratio across firms, thereby minimizing its effect on market capitalization. Investor sentiment also contributes to this trend, as investors in this sector often value stability and steady performance over aggressive growth financed by borrowing.

Competitive pressure within the industry further encourages firms to remain financially flexible rather than heavily leveraged. In an effort to remain agile and responsive to market changes, many companies avoid large-scale debt that could restrict operational freedom. As a result, they

focus on innovation, brand positioning, and customer satisfaction to drive growth, rather than using debt as a means of expanding their market value. Regulatory factors may also play a role, as financial authorities in Nigeria could impose limits on corporate borrowing. Such regulatory restrictions reduce the range of possible Debt Ratios across firms, weakening its influence on market capitalization from a statistical perspective.

Similarly, the Debt-to-Equity Ratio was found to have no significant impact on the market capitalization of consumer goods firms. These firms typically maintain conservative capital structures to preserve financial stability and protect against economic volatility. Equity financing and retained earnings are often preferred sources of capital, leading to relatively low and consistent Debt-to-Equity Ratios across the industry. This uniformity reduces the ability of the ratio to explain variations in market value. Additionally, investors in consumer goods sectors may associate higher debt levels with increased risk, prompting firms to avoid debt financing in favor of options that align more closely with investor preferences. This deliberate financial strategy, along with possible time lags in how changes in capital structure affect market performance, helps to explain the absence of a significant relationship between the Debt-to-Equity Ratio and market capitalization.

## CONCLUSION AND RECOMMENDATIONS

A significant number of corporate failures have been blamed on the inability of finance managers to plan and handle the financial burden of their respective enterprises. This study examined how these financial burden in the form of debt and leverages affect market value of consumer goods firms in Nigeria. The analysis revealed that each financial leverage metric, whether exhibiting statistical significance or not, contributes to the broader understanding of how consumer goods firms manage their capital structures. The Debt-to-Equity Ratio, despite its non-significant effect, reflects a cautious approach to leverage among consumer goods firms. The conservative financial strategies within this sector prioritize stability, financial flexibility, and align with investor preferences for companies that mitigate risk, even if the statistical analysis does not confirm a significant correlation. The study therefore concludes that in the Nigerian consumer goods sector, how companies handle their money impacts how investors see them, with a careful mix of safe financial choices, smart business operations, and strategic borrowing playing a key role in determining how valuable the market thinks they are.

### Recommendations

The study made the following recommendations:

- i. Consumer goods firms should carefully manage their debt levels to grow without taking on too much risk. Even though the debt ratio didn't show a strong effect on market value, it is still important. Companies should regularly check how much debt they can handle and prepare for different market situations to stay financially stable.
- ii. Firms should keep a good balance between debt and equity based on their risk level. Even though the debt-to-equity ratio wasn't statistically significant, it still matters. Companies should review it often, compare it with others in the industry, and include it in their overall financial planning to help manage risk and stay strong financially.

### ***Contribution to Knowledge***

This study explains how consumer goods companies in Nigeria manage their debts, especially by looking at two important measures: the debt ratio and the debt-to-equity ratio. These measures help show how much of the company's money comes from borrowing compared to what owners have invested. The study shows that using the right mix of debt and equity can help companies grow while staying financially safe. It also gives useful advice to companies on how to plan their finances, avoid too much risk, and make better decisions about borrowing. This helps companies in Nigeria and other growing markets handle money matters more wisely.

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