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CAPITAL STRUCTURE AND FIRM VALUE OF LISTED FIRMS IN NIGERIA: CONSUMER GOODS FIRMS EXPERIENCE

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ABSTRACT
This study investigated the effect of capital structure on the firm value of listed consumer goods firms in the Nigerian Exchange Group. Amid Nigeria's challenging economic environment, marked by high interest rates, unstable regulatory frameworks, and limited access to long-term financing, firms often struggle to strike a balance between leveraging debt for growth and mitigating the risks of financial distress. The study specifically seeks to ascertain the effect of debt-to-equity ratio and debt ratio on firm value. Ex-post facto design was used, using panel data derived from annual financial reports of listed consumer goods firms, from 2014-2024. This study uses purposive sampling technique to select thirty-two (32) manufacturing firms sample size. Ordinary Least Square regression technique was used to evaluate the effect of capital structure on firms value through E-view version 10.0 software for data analysis. The study found that Debt-to-equity ratio has significant effect on firm value while Debt ratio has no significant effect on firm value of listed Consumer goods firms in Nigeria. Tis study recommends among others that management of listed Consumer goods firms in Nigeria should aim to reduce their debt-to-equity ratio by seeking alternative financing options such as equity financing or retained earnings. This can help decrease financial risk and improve cash flow stability, ultimately enhancing firm value.

Key words: *Capital structure; Firm value; Debt-to-equity ratio; Debt ratio*

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INTRODUCTION

Every firm whether small scale firms or large scale firms need funds to operate; especially large scale firms, they need funds to expand their operations and activities. The motive of every firm is to make profit, maximize owner's wealth, and to achieve this motive they need to source for fund in order to finance their operations and activities (Nabilatuttaqiyya & Muhadjir, 2024). To finance their investments, firms rely on various sources of capital; however, the critical challenge lies in selecting the most appropriate mix that leads to an optimal capital structure. An efficient capital structure enables firms to make sound financing decisions that enhance profitability and overall value creation. According to Pandey (2010) in Nabilatuttaqiyya and Muhadjir, (2024), Decisions regarding a firm's capital structure play a critical role in shaping shareholder returns and determining the associated level of risk. At the same time, firm value serves as a reflection of investors' perceptions of the efficiency with

which the company utilizes its resources. The value of the firm is very important because it reflects the performance of the company that could affect investors' perception of the company.

Nigeria's unique economic environment, characterized by high interest rates and limited access to long-term debt, poses challenges for listed manufacturing companies in determining an optimal capital structure that maximizes firm value. Despite the growing importance of manufacturing sector in Nigeria's economy, there is limited understanding of how capital structure decisions affect firm value among listed manufacturing companies. Many studies in Nigeria (Umar, & AbdulQudus, 2020 Mbonu and Amahalu, 2021) considered only the current performance of firms using performance indices such as ROE and ROI as against Tobin's q, which is considered a better measure of firm value. The Tobin's Q ratio comprises of two variables namely market value of the firm and the replacement cost of the assets of the firm. This study sets out to evaluate the effect of capital structure on firm value of Nigerian listed Consumer goods firms by adopting Tobin's Q model to measure firm value.

Objectives

The study specifically seeks to ascertain the effect of debt-to-equity ratio and debt ratio on firm value of listed Consumer goods firms in the Nigeria Exchange Group.

This study focused on capital structure and firm value. The study covers the period of Eleven years (11) between 2014 and 2024. The choice of eleven years (2014 – 2024) is because of significant technological advancements such as the use of Fintech and digital finance. This will reflect recent trends, market dynamics and market structure decisions.

LITERATURE REVIEW

Empirical Review and Hypotheses formulation

Onyia, Clifford and Izuchukwu (2025) examined the impact of Capital structure on firms' value within the influence of heterogeneous factors such as firm- specific, industry-specific and country-specific factors. The study employed a sample of eighteen (18) firms from nine (9) sectors of the Nigerian economy. The study covered a period of ten (10) years (2012-2022). The study found out that a firm's market value is positively and significantly influenced by its choice of capital structure; capital structure.

Nwankwo (2025) investigated the effect of financial leverage on firm values 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 found that debt ratio has a non-significant negative effect on the market value of Consumer goods firms in Nigeria, Debt to equity ratio has a non-significant negative effect on the market value. Haerunnisah, Sri Hermuningsih, and Johannes, (2025) analyzed the effect of capital structure and asset growth on firm value with profitability as a mediating variable in manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the period 2021-2023. The study showed that capital structure has a positive and significant effect on firm value.

Afolabi, Ogunleye, Akinleye, Odetayo, and Oladeji, (2025) examined the effect of total debt to assets equity, total debt to assets, long-term debt to assets, and short-term debt to assets on the valuation of publicly listed Information and Communication Technology (ICT) firms in Nigeria from 2014 to 2023. The study found that debt-to-equity ratio negatively impacted Tobin's Q while total debt, long-term debt, and short-term debt demonstrated a positive impact on the market value

Ishiaka and Hamida (2023) evaluated the impact of capital structure on firm value in Nigeria's food and beverage sector. A quantitative research approach is employed, focusing on the association between financial ratios (debt to equity (DER), return on asset (ROA), current ratio, asset growth, and firm size) and stock prices as a proxy for firm value (FV). The study found that debt to equity, and asset growth has insignificant effect on market value.

Based on the literatures that have been documented in this study, it can be deduced that most previous studies in Nigeria investigated capital structure focused on financial leverage and ignore overall financing mix. However, many of those studies in Nigeria have focused on sectors like financial sector, Oil and gas and pharmaceutical, but manufacturing sector of the economy have been largely ignored. 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 manufacturing firms on Nigeria Exchange Group by using updated data up to the year 2024.

The study was guided by the following null hypotheses:

H_{01}: *Debt-to-equity ratio has no significant effect on firm value of listed Consumer goods firms in the Nigeria Exchange Group.*

H_{02}: *Debt ratio has no significant effect on firm value of listed Consumer goods firms in the Nigeria Exchange Group.*

MATERIALS AND METHOD

The research design adopted for this study is *ex- post facto* research design. The population of the study is made up of manufacturing firms listed on the Nigerian Exchange Group (NGX). As at 31st December 2024, Forty (40) manufacturing firms were listed on the Nigerian Exchange Group floor. This study uses purposive sampling technique to select the sample size of thirty-two (32) manufacturing firms that have their financial statements available either on their website or in the office of the Nigerian Exchange Group as at 31st December, 2024. The linear regression model guiding this study which was adopted from Nwankwo (2025); Ogunsola and Ogheneoparobo (2022) state that:

Firm value = f (capital structure)

Firm Value (MCAP) = f (capital structure (CS))

MCAP) = f (CS) …… Eqn 1.

MCAP = F (DR, DER) …… Eqn 2.

MCAPit = β0 + β1DRit + β2DERit +cit+ εit …… Eqn 3.

This study developed the following regression model from adapted model above. The adapted model for this study is:

Firm value = f(capital structure)

MKTV = f(CAPS) …… Eqn 4.

MKTV = f(DEQR, TDR, LDTA) …… Eqn 4.

The econometric form of the model is:

$MKTV = \beta_0 + \beta_1 DEQR + \beta_2 TDR + \beta_3 LDTA + \mu_i$ …… Eqn 5.

Where;

MKTV = Firm Value (Tobin's Q)

DEQR = Debt to Equity Ratio

TDR = Total Debt to Assets Ratio

LTDA = Long Term Debt to Assets Ratio

β_0 = the intercept of the model

$\beta_1 - \beta_4$ = Parameters of the regression coefficients

μ_i = Stochastic error term

The Ordinary Least Square (RLS) multiple regression technique was used to evaluate the effect of capital structure on firms value of listed manufacturing firms on Nigeria Exchange Group. The study used E-view version 10.0 software for data analysis.

RESULTS AND DISCUSSION

Test of Hypotheses

Hypothesis One

H_0: Debt-to-equity ratio has no significant effect on firm value of listed Consumer goods firms in the Nigeria Exchange Group

H_1: Debt-to-equity ratio has significant effect on firm value of listed Consumer goods firms in the Nigeria Exchange Group.

Table 1: Hypothesis One

Dependent Variable: MKTV
Method: Panel EGLS (Period SUR)
Date: 0730/25 Time: 19:25
Sample: 2014 2024
Periods included: 11
Cross-sections included: 32
Total panel (balanced) observations: 352
Linear estimation after one-step weighting matrix
Period SUR (PCSE) standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEQR	-1187.695	229.9884	-5.164151	0.0000
C	2396.048	735.7769	3.256488	0.0012
	Weighted Statistics			
R-squared	0.619903	Mean dependent var		-0.006194
Adjusted R-squared	0.617558	S.D. dependent var		0.649876
S.E. of regression	0.642303	Sum squared resid		172.4470
F-statistic	8.488389	Durbin-Watson stat		2.049051
Prob(F-statistic)	0.003766			

Source: Eviews 10 Output (2025)

In Table 1; the coefficient for DEQR (Debt to Equity Ratio) on Firm Value (Tobin's Q) is -1,187.695, with a p-value of 0.0000. The marginal effect of this coefficient means that for every one-unit increase in Debt to Equity Ratio), Firm value (Tobin's Q) decreases by 1,187.695 units. Given that the p-value is 0.0000, the effect is statistically significant at the 5% level. Thus, debt to equity ratio significantly reduces firm value (Tobin's Q), indicating that firms were likely financed mostly through equity, which can imply a lower risk of default

but may also mean the company isn't leveraging debt to fuel growth or optimize its capital structure.

The R-squared of 0.6199 indicates that the model explains only about 61.99% of the variation in Firm value, which suggests that other variables might be influencing firm value more strongly. However, the Prob(F-statistic) value of 0.003766 indicates that the overall model is significant, making the relationship between debt-to-equity ratio and Firm value statistically valid, even though the explanatory power is relatively low. In summary, since p value is less than 0.05, we reject null hypothesis and accept alternate hypothesis that stated that debt-to-equity ratio has significant effect on firm value of listed Consumer goods firms in the Nigeria Exchange Group.

This means that for every unit increase in the debt-to-equity ratio, firm value is expected to decrease by 1.187 units. The negative sign suggests that higher levels of debt relative to equity may be detrimental to firm value. The probability value (p-value) of 0.00 indicates that the relationship between the debt-to-equity ratio and firm value is statistically significant. The R-squared value of 0.61 indicates that about 61% of the variation in firm value can be explained by the debt-to-equity ratio. This suggests a moderate to strong relationship between the debt-to-equity ratio and firm value. However, about 39% of the variation in firm value remains unexplained, indicating that other factors may also influence firm value. This finding is consistent with Nwankwo (2025); Afolabi, Ogunleye, Akinleye, Odetayo, and Oladeji, (2025); Ishiaka and Hamida (2023); Zaher, and Al-Sleha, (2020) who ascertained that debt-to-equity ratio has significant effect on firm value of listed Consumer goods firms in the Nigeria Exchange Group

Hypothesis Two

H_0: Debt ratio has no significant effect on firm value of listed Consumer goods firms in the Nigeria Exchange Group.

H_1: Debt ratio has significant effect on firm value of listed Consumer goods firms in the Nigeria Exchange Group.

Table 2: Hypothesis Two
Dependent Variable: MKTV
Method: Panel EGLS (Period SUR)
Date: 0730/25 Time: 19:25
Sample: 2014 2024
Periods included: 11
Cross-sections included: 32
Total panel (balanced) observations: 352
Linear estimation after one-step weighting matrix
Period SUR (PCSE) standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TDR	5334.789	368.7612	6.331438	0.1740
C	140.7335	785.9673	0.179058	0.8580
	Weighted Statistics			
R-squared	0.069859	Mean dependent var		0.031364
Adjusted R-squared	0.067633	S.D. dependent var		0.651021
S.E. of regression	0.626864	Sum squared resid		164.2568
F-statistic	31.39406	Durbin-Watson stat		1.942442
Prob(F-statistic)	0.000000			

Source: Eviews 10 Output (2025)

In Table 2, the coefficient for TDR (Total Debt to Assets Ratio) on firm value (Tobin's Q) is 5,334.789, with a p-value of 0.1740. The marginal effect of this coefficient suggests that for every unit increase in total debt to assets ratio, firm value (Tobin's Q) decreases by 5,334.789 units. Since the p-value is 0.1740, this effect is not statistically significant at the 5% level. The R-squared value of total debt to asset ratio of 0.171 indicates that approximately 17.1% of a company's assets are financed by debt. This suggests the company has a relatively low reliance on debt and a strong equity position, which can imply financial stability and lower financial risk. In summary, since p value is greater than 0.05, we reject alternate hypothesis and accept null hypothesis that stated that debt ratio has no significant effect on firm value of listed Consumer goods firms in the Nigeria Exchange Group.

This means that for every unit increase in the debt ratio, firm value is expected to increase by 5.334 units. The positive sign suggests that higher levels of debt may be beneficial to firm value. The probability value (p-value) of 0.174 indicates that the relationship between the debt ratio and firm value is not statistically significant at the conventional 5% level. The R-squared value of 0.69 indicates that about 69% of the variation in firm value can be explained by the debt ratio and other factors in the model. This suggests a strong relationship between the debt ratio and firm value, as well as other factors in the model. This finding is consistent with Shahenda (2024); Mahmoud (2021); Ajayi, and Zahiruddin, (2020) who found that debt ratio

has no significant effect on firm value of listed Consumer goods firms in the Nigeria Exchange Group.

CONCLUSION AND RECOMMEDNATIONS

The findings imply that firms may benefit from maintaining an optimal debt-to-equity ratio to maximize firm value. However, the positive coefficient suggests that debt financing may have a beneficial effect on firm value, but the lack of statistical significance means that this relationship is not conclusive. The findings imply that firms may not necessarily benefit from increasing their debt ratio, and other factors may play a more significant role in determining firm value.

Based on findings and conclusion of this study, the following recommendations beneficial to stakeholders are put forward:

1. The study recommends that management of listed Consumer goods firms in Nigeria should aim to reduce their debt-to-equity ratio by seeking alternative financing options such as equity financing or retained earnings. This can help decrease financial risk and improve cash flow stability, ultimately enhancing firm value. Moreover, policy makers, such as Nigeria Exchange Group and National Assembly, can offer financial incentives, such as tax breaks or subsidies, to consumer goods firms that prioritize equity financing and maintain a healthy debt-to-equity ratio.
2. The study recommends that management of listed consumer good firms in Nigeria should prioritize effective debt management, ensuring that debt levels are manageable and aligned with their financial goals and risk tolerance. While policymakers should provide financial support, such as subsidies or guarantees, to help consumer goods firms access affordable financing options and manage debt effectively.

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