NEXUS BETWEEN CAPITAL STRUCTURE AND PERFORMANCE OF QUOTED CONSUMER GOODS FIRMS IN NIGERIA

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ABSTRACT

Corporate organizations often grapple with finding the optimal balance between equity and debt to maximize returns and enhance firm value. This study examines the impact of capital structure on financial performance of consumer goods companies in Nigeria. Drawing on secondary data from the annual financial statements of 21 firms listed on the Nigerian Exchange Group between 2014 to 2023, the research adopted a census sampling method and an ex-post facto design to analyze the relationship between capital structure variables and financial performance. To test the study's hypotheses, descriptive statistics, correlation analysis, and multiple regression techniques were employed. The findings revealed a significant overall relationship between capital structure and financial performance. However, the specific metrics examined total debt to equity ratio, short-term debt to total assets ratio, and long-term debt to total assets ratio did not show a statistically significant effect on the financial performance of the sampled firms. The study underscores the need for firms to exercise careful judgment in managing their mix of equity and debt, given the broader implications for corporate performance. It also recommends that regulatory bodies support capital-constrained firms by improving access to long-term debt financing. Such support could strengthen firms' operational efficiency and financial outcomes in the short term, reducing reliance on short-term borrowing as a temporary solution to funding and profitability challenges.
Keywords: *Capital structure; financial performance*; total debt; total equity ratio; short-term debt; total assets ratio.

1.0 INTRODUCTION

Financial decisions are among the most critical considerations for business owners, as they have a direct impact on a company's capital structure and overall success (Olusola et al., 2022). Capital structure refers to the mix of debt and shareholders' equity that constitutes a firm's total capital. Determining the ideal balance between internal and external financing sources is a strategic decision that requires careful judgment by corporate management. Since capital structure decisions significantly influence a firm's performance, managers must approach them with caution and attention to detail.

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Ultimately, a company's capital structure serves as a reflection of its financial health, encompassing the balance of its assets and liabilities (Boshnak, 2022).

A company's financial structure typically includes common stock, preferred stock, and long-term debt. Over time, corporate financing has gained significant public interest due to its vital role in driving socioeconomic development and supporting sound corporate governance (Nenu et al., 2018). At the core of corporate finance is the essential task of determining the optimal capital structure—how a firm funds its assets through a strategic mix of debt and equity. This also encompasses the use of hybrid financial instruments to support operational and investment activities (Dinh & Pham, 2020).

Achieving the right balance between debt and equity is crucial for financial stability and long-term success. An optimized capital structure enables a company to meet its financial objectives, mitigate risk, and deliver competitive returns to shareholders (Olaoye & Adesina, 2022). The composition of this structure depends on various factors, including the nature of the industry, the cost of capital, and the ideal debt-equity ratio. Companies strive to adopt the most effective financing mix to align with their strategic goals, which in turn shapes their financial performance. Ultimately, capital structure influences a firm's risk exposure, funding costs, and ability to sustain growth, as it defines the way an organization finances its operations and expansion through a combination of borrowed funds and shareholders' equity (Abdullahi, Dachomo, Jibril & Duniya, 2020)

Financial performance refers to how efficiently a company utilizes its resources to generate steady revenue and profit over time (Akinrinola, Tomori, & Audu, 2023). It is assessed through a variety of financial indicators, including profitability, liquidity, leverage, operational efficiency, market-based metrics, and cash flow analysis. These metrics provide valuable insights into a company's ability to sustain profitability, manage resources effectively, and maintain financial stability (Abdullahi, Dachomo, Jibril & Duniya, 2020). The link between capital structure and financial performance has been the subject of extensive debate and research, with many studies examining how decisions regarding the mix of debt and equity influence corporate outcomes (Wulandari, Paminto, & Kusimawardani, 2022). In today's competitive global environment, companies depend on a well-structured capital base to drive growth and gain market share. Striking the right balance between debt and equity is essential for long-term success, as it directly affects a firm's ability to expand, remain competitive, and sustain strong financial performance (Hariem & Turgut, 2019).

1.1   Statement of the Problem

Nigeria's financial decision-making laws are always not accountable to stakeholders and lack deeprooted mechanism, such as ownership concentration, institutional investors and board composition, which can be used to maintain a balance between key players in corporate governance, influencing the company's financial decisions and reducing its effectiveness. The key elements in the system are shareholders, institutional investors and board members. When implementing a capital structure, the market structure and the company's strengths and weaknesses together, determine the choice of debt (Yinusa et al.,2019).

Also, the limited research conducted in Nigeria fails to encompass all the factors pertaining to capital structure and financial performance. The existing local research conducted by Bello and Onyesom (2020), Salawu (2022), Olokoyo (2022), Babalola (2022), Yinusa and Babalola (2022), and Sabastian, and Rapuluchukwu (2022) have several deficiencies that require addressing. Salawu (2022) conducted a study that examined how the capital structure of some publicly traded firms in Nigeria affects their financial performance. The study specifically focused on the influence of short-term debt. It is important to mention that the analysis focused only on short-term debt, which means that the conclusions can only be applied to this specific component of financial architecture. An ideal study on capital structure would ideally include an analysis of both short-term and long-term debt financing.

The research conducted by Bello and Onyesom (2020) and Olokoyo (2022) employed the Chi-square method to analyze the data. However, Chi-square is frequently criticized for its limitations in accurately representing time-varying dynamics and unique traits. Research on the correlation between capital structure and company performance should preferably include parametric methodologies that can thoroughly evaluate both time-varying trends and specific characteristics.

The study conducted by Yinusa and Babalola (2022) exclusively examined the total debt to total assets ratio as a substitute for capital structure, excluding the other elements of debt financing, such as total debt to total equity, short-term debts, and long-term debts. In addition, the study conducted by Sebastian and Rapuluchukwu (2022) specifically examined short-term debt, long-term debt, and total debt, ignoring the ratio of total debt to total equity.

Considering the gap mentioned above, it is both valuable and desirable to conduct a new study that will examine the various types of financing mix and provide answers to the remaining important concerns. This study aims to investigate the influence of the total debt to total equity ratio, as well as the ratios of short-term and long-term debt to total assets, on the performance of consumer products firms in Nigeria.

The primary aim of this research is to assess the nexus between capital structure and financial performance of consumer goods firms quoted in Nigeria. The specifics objectives of the study are as follows:

a. Evaluate the impact of total debt to total equity ratio on the financial performance of listed consumer goods firms in Nigeria.

b. Examine the impact of short-term debt to total assets ratio on the financial performance of listed consumer goods firms in Nigeria.

c. Measure the impact of long-term debt to total assets ratio on the financial performance of listed consumer goods firms in Nigeria.

1.2   Research Hypotheses

To achieve the stated objectives of the study, the following research hypotheses were formulated in null form.

H_{01} Total debt to total equity ratio has no significant impact on financial performance of listed consumer goods firms in Nigeria.

H_{02} Short-term debt to total assets ratio has no significant impact on the financial performance of listed consumer goods firms in Nigeria.

H_{03} Long-term debt to total assets ratio has no significant impact on the financial performance of listed consumer goods firms in Nigeria.

2.0   Conceptual Review

2.1   Concept of Capital Structure

Capital structure is one of the most important decisions in the field of corporate finance and can be seen as the way an organization finances its assets by combining debts and equity (Dinh, & Pham, 2020). Capital structure is also defined as the way an organization finances its operations through debts, equity and hybrid securities (Dinh & Pham, 2020). A company's operations and investments can be financed through the ever-increasing demand of internal and external investors. As organizations raise finance through the issuance of debt securities, the claims of creditors increase, while the claims of shareholders increase through the issuance of equity securities (Olusola, et al., 2022). Capital structure involves the proportion of various long-term sources of financing, as it deals with making the collection of the sources of finance properly in relation to its size and proportion

2.2   Elements of Capital Structure

2.2.1   Total Debt to Total Assets

The total debt to total assets ratio measures the proportion of a firm's assets financed by creditors, indicating financial risk. A higher ratio suggests more debt and greater risk, while **a** lower ratio is preferred by creditors

for safety. It includes all debts and both tangible and intangible assets (Yinusa & Babalola, 2022). Similarly, the debt ratio, a solvency indicator, shows how much of a company's assets are needed to cover its liabilities. A high debt ratio signals greater financial burden and risk, while a lower ratio reflects financial stability and better long-term prospects (Ojo, 2022).

2.2.2 Total Debt to Total Equity

The debt-to-equity ratio measures the proportion of a company's financing that comes from creditors compared to shareholders. A lower ratio is preferred by creditors as it indicates greater shareholder investment and lower financial risk (Yinusa & Babalola, 2022). A higher ratio signals greater reliance on debt financing, increasing risk for both creditors and investors (Kurfi, 2005). This ratio, usually expressed as a percentage, reflects a firm's financial structure and is industry-dependent. Its components total debt and equity are found in the statement of financial position (Erasmus, 2018).

2.2.3 Short Term Debt to Total Assets

The short-term debt to total assets ratio measures the proportion of a firm's assets financed by short-term obligations due within a year. A lower ratio indicates better financial health and long-term viability, while a higher ratio reflects greater reliance on short-term borrowing (Kurfi, 2005; Akinyomi, 2019). This ratio includes loans, overdrafts, creditors, and accruals, and is calculated by dividing current liabilities by total assets (Ojo, 2022). It provides insight into a company's financial leverage and short-term financial obligations.

2.2.4 Long-Term Debt to Total Assets

The long-term debt to total assets ratio measures the proportion of a company's total assets financed through long-term debt, such as mortgages, debentures, and long-term leases. A lower ratio indicates reduced reliance on creditor funding, while a higher ratio requires consistent revenue and strong cash flow to manage effectively (Kurfi, 2005; Akinsulire, 2021). This ratio, calculated annually, helps assess a company's financial leverage and debt sustainability. It excludes short-term liabilities and highlights the importance of regularly evaluating a firm's debt structure and capacity (Akinyomi, 2019; Khalaf, 2019).

2.2.5 Equity

Shareholders' funds, or equity, represent the net value of a company's assets after deducting all liabilities. It reflects owners' contributions and claims on the company's assets, including both tangible assets (like land and equipment) and intangible assets (like patents and goodwill) (Kurfi, 2005; Akinsulire, 2021). Equity is recorded in the statement of financial position and includes common and preferred stock, with common shareholders providing the most cost-effective funding. According to the IASB (2022), equity is the residual

interest in assets after liabilities. In liquidation, creditors are paid first, and the remaining value belongs to shareholders (Erasmus, 2018). The choice between debt and equity financing depends on cost and its effect on corporate performance (Alhares et al., 2019).

2.3.0 Concept of Financial Performance

Financial performance refers to a company's ability to effectively use its assets and resources to generate profits and create value for shareholders over time. It serves as a key indicator of an organization's financial health, efficiency, and long-term sustainability (Olusola et al., 2022; Kayani et al., 2023). Common measures include Return on Assets (ROA) and Return on Equity (ROE). High financial performance reflects strong management practices, effective resource utilization, and successful strategic decisions (Okobo et al., 2022; Kurfi, 2005). It also emphasizes the importance of aligning operational efficiency with stakeholder value and broader socioeconomic factors.

2.3.1 Financial Performance Measures

Matar and Eneizan (2018) highlighted that conventional methods of assessing financial performance involve two primary strategies: the accounting-based method and the market-based method, both relying on financial statements. Mardones and Cuneo (2020), sub-divides such financial indices into accounting (Nworie & Ofoje, 2022; Nworie & Mba, 2022) or market-based measures of firm performance. The accounting-based indices include such as profitability, liquidity, solvency, etc. The examples of profitability ratios include such as **ROA, NPM, GPM, ROCE** etc, while, the market-based performance measures may include **EPS and DPS**, which are determined by comparing the security's price to different fundamentals such as earnings and dividends. Additionally, there exists a contemporary approach known as the cash flow approach.

According to Matar and Eneizan (2018), the profitability measure of financial performance is concerned with the efficiency of corporate operations. The profitability measure is an indicator of whether or not a company is performing satisfactorily. The management performance can also be assessed using liquidity metric, and to identify whether a company may be a worthy investment opportunity (Fatihuddin and Mochklas, 2018). Profitability sometimes is used as substitute for financial performance. Other proxies include return on assets (ROA), return on equity (ROE) and earnings per share (EPS). This study utilized return on asset as the surrogate measure for financial performance.

2.4.0 Theoretical Framework

This study carefully selects the agency cost theory to explain the relationship between the studied variables.

2.4.1 The Agency Cost Theory

According to the capital structure theory, attaining an optimal capital structure entails minimizing costs that arise from conflicts among the parties involved. Jensen &Meckling (1976) contend that agency cost significantly influences financing decisions as a result of potential conflicts between shareholders and debt holders. An essential element of Agency Theory that reinforces its investigation is the concept of information asymmetry (Shaikh & O'Connor, 2020). Management frequently holds superior knowledge compared to shareholders regarding the internal operations and financial well-being of the company (Urbanek, 2020). Within the domain of impact of capital structure on financial performance, this disparity in information becomes essential. When corporations are approaching financial trouble, shareholders may motivate management to adopt choices that effectively transfer funds from debt holders to equity holders.

As a result, knowledgeable creditors may require a greater yield on their investments because of the potential for this transfer of wealth. Nevertheless, the existence of debt and its accompanying interest payments might alleviate the agency conflict between shareholders and management. Debt holders have legal remedies in the event that management fails to fulfill interest commitments, hence motivating managers to run the company efficiently in order to guarantee punctual payments. This convergence of interests aligns management behavior more closely with the objective of maximizing shareholder wealth. Jensen and Meckling (1976) suggest that agency costs refer to the combined expenses of monitoring by firm owners, bonding by agents, and residual losses. Furthermore, they contend that employing debt can diminish the agency's debt expenses. This is feasible because the payment of debt interest decreases the excess cash. The principal-agent relationship is defined by the principal's requirement to devise mechanisms to synchronize the agent's interests with their own (Vitolla et al., 2020). Within the study's framework, shareholders need confirmation that management's choices regarding financial performance are in line with the ultimate objective of maximizing shareholder wealth (Shaikh & O'Connor, 2020). Consequently, researchers have the opportunity to investigate the methods and structures implemented by consumer goods manufacturing enterprises in Nigeria to oversee and regulate management's decisions financial performance.

Agency theory demonstrates that the determination of a company's capital structure is influenced by the level of leverage and the resulting conflict between shareholders and managers. Managers are obligated to make decisions that prioritize the interests of shareholders and operational matters. These actions have an impact on the performance of the company.

2.5   Empirical Review

This section provides some insights from the prior studies done by different authors in various countries at different periods on the impact of capital structure on financial performance.

Abdullah (2020) investigated the influence of capital structure on the financial performance of 74 firms in Saudi Arabia for the period of 5 years 2018 to 2022. The outcome of the regression showed that short-term debt to total assets has a significant relationship with financial performance, long-term debt to total assets, and total debt to total assets, showed a significant positive effect on financial performance. This study is vague because there was no specific sector where the study was conducted, therefore the findings cannot be generalized.

Akingunola, Olawale, and Olaniyan (2017) conducted a study to examine the influence of capital structure on the financial performance of 21 selected firms listed in Nigeria. The study focused on the period from 2007 to 2016 and found that short-term debt has a direct and significant effect on the profitability of these firms. The study revealed that the ratio of short-term debt to total assets does not have a statistically significant correlation with financial performance. However, the ratio of total debt to total assets has demonstrated a significant and beneficial impact on financial performance.

Amara and Bilal (2021) investigated the influence of capital structure on the performance of 33 firms listed on the Nigerian Stock Exchange from 2010 to 2019. The study found a negative link between the ratio of total debt to total equity and financial success. Additionally, there was no significant correlation observed between the ratio of short-term debt to total assets and the ratio of long-term debt to total assets and financial performance.

In their study, Bello, Onyesom, and Olokoyo (2022) investigated how the capital structure of 32 publicly traded firms in the Nigerian Stock Exchange influenced their performance from 2011 to 2020. They discovered that the ratio of total debt to total assets is strongly correlated with financial performance, with a negative impact. Similarly, the ratio of short-term debt to total assets also shows a substantial negative link with financial performance. The study also discovered a notable inverse correlation between the ratio of short-term debt to total assets and financial performance. Rafiu, Taiwo, and Dauda (2022) investigated the impact of financial policy on the operational effectiveness of firms in Nigeria. Analyzed data from 70 Nigerian enterprises spanning from 2011 to 2020 revealed a robust positive correlation between both total loans to total assets and long-term debt to total assets with financial performance. The findings revealed a robust positive correlation between the ratio of total debt to total assets and the ratio of long-term debt to total assets with regards to financial success. Additionally, it was demonstrated that there exists an inverse correlation between the ratio of short-term debt to total assets and financial success.

In a study conducted by Innocent, Ikechukwu, and Nnagbogu (2021), the researchers examined the impact of financial leverage on the performance of publicly traded financial institutions from 2010 to 2019. The study utilized secondary data for analysis. The analysis revealed a negative association between total debt to total asset, total debt to total equity, and short-term debt to total asset with financial performance. Descriptive statistics, Pearson correlation, and multiple regressions were utilized in the study.

Lawal, Edwin, Kiyanjui, and Adisa (2021) researched the effect of capital structure on performance of consumer goods firms in Nigeria for the period 2019 to 2022. The result of the regression revealed a negative relationship between total debt to total assets and financial performance while a negative relationship between total debt to total equity and financial performance. Furthermore, short-term debt to total assets has a significant relationship with financial performance.

Maina and Ishmail (2021) conducted a study to investigate the impact of capital structure on financial performance in Nigeria. The researchers focused on firms listed in the Nairobi Securities Exchange and analyzed data from 2010 to 2019 using a census technique. The results obtained from the Gretl statistical software revealed a negative correlation between both the total loans to total assets ratio and the total debt to total equity ratio with financial performance.

In their study, Mwangi, Makau, and Kosimbei (2022) investigated the correlation between the capital structure and performance of 42 non-financial firms that are publicly traded on the Nairobi Securities Exchange in Kenya. The study utilized panel data obtained from the annual reports and financial statements of the selected publicly traded firms. It employed both the random effects model and the feasible generalized least squares (FGLS) method. The findings indicated a substantial negative correlation between the ratio of total debt to total assets and financial success.

In their study, Oke, Saheed, and Quadri (2019) analyzed the composition of capital structure in six conglomerate firms listed on the Nigerian Stock Exchange between 2008 and 2017. The results indicate that the ratio of short-term indebtedness to total assets (SDTA) had a substantial impact on the return on investment (ROA) of the enterprises included in the sample. Therefore, this analysis determined that utilizing short-term debt financing is the optimal method for conglomerate corporations to fund their assets.

Osuji and Odita (2022) conducted a study to examine how the capital structure of Nigerian enterprises affects their financial performance. They analyzed a sample of 30 non-financial firms that were listed on the Nigerian Stock Exchange from 2010 to 2019. The findings indicated that the ratio of total debt to total assets had a substantial adverse effect on the financial performance of the firms. Furthermore, the analysis suggests that

the debt equity ratio (DER) does not have a substantial impact on the return on assets (ROA) in comparison to the proportion of long-term debts to total assets (LDTA).

3.0   Methodology

The research design utilized for this study is an ex post facto research design. This research design is adopted because data on the variables of capital structure and financial performance were used to assess the relationship between the variables that already existed in the annual reports and accounts of listed consumer goods firms. No data were collected in the field using instruments like questionnaires or interviews or experiments were conducted. The data generated from the annual reports and accounts were analyzed using appropriate statistical techniques based on which conclusions were reached. Census sampling technique was adopted to study the population.

3.1   Population of the Study

The study population consisted of all listed consumer goods firms in the Nigerian Exchange Group (NGX). In particular, the population included the 21 listed consumer goods firms in the NGX as at 31st December 2023. Table1 presents the study population.

Table 1: Study Population

S/no.	Company	Acronym	Year of Incorporation
1.	Cadbury Nigeria Plc	CADBURY	1965
2.	Champion Breweries Plc	CHAMPION	1974
3.	Dangote Flour Mills Plc	DANGFLOUR	2006
4.	Dangote Sugar Refinery Plc	DANGSUGAR	2020
5.	DN Tyre and Rubber Plc	DUNLOP	1961
6.	Flour Mills Of Nigeria Plc	FLOURMILL	1960
7.	Golden Guinea Breweries Plc	GOLDBREW	1962
8.	Guinness Nigeria Plc	GUINNESS	1950
9.	Honeywell Flour Mill Plc	HONYFLOUR	1985
10.	International Breweries Plc	INTBREW	1971
11.	McNichols Plc	MCNICHOLS	2004
12.	Multi-Trex Integrated Foods Plc	MULTITREX	1999
13.	Nascon Allied Industries Plc	NASCON	1973
14.	Nestle Nigeria Plc	NESTLE	1969
15.	Nigerian Breweries Plc	NB	1946
16.	Nigerian Enamelware Plc	ENAMELWA	1960
17.	Northern Nigeria Flour Mills Plc	NNFM	1971
18.	PZ Cussons Nigeria Plc	PZ	1948
19.	Unilever Nigeria Plc	UNILEVER	1923
20.	Union Dicon Salt Plc	UNIONDICON	1991
21.	Vitafoam Nigeria Plc	VITAFOAM	1962

Source: Nigerian Exchange Group (2023)

3.2 Model Specification

The study adopted descriptive statistics and correlation statistics. The following subsections provide a detail of what each of these statistical techniques were used to achieve in the study.

The model used in testing the hypotheses of the study is presented below:

$R0A_{it} = \beta_0 + \beta_1 TDTE_{it} + \beta_2 STTA_{it} + \beta_3 LTTA_{it} + \varepsilon_{it}$

Where:

ROA = Return on Asset

$\beta_0, \beta_1, \beta_2$ & β_3 = parameters to be estimated

TDTE = Total-Debt to Total Equity

STTA = Short-Debt to Total Assets

LTTA = Long-Debt to Total Assets

ε = error term indicating other variables not captured in the study

it = Firm i at time t

4.0   RESULTS AND DISCUSSION

4.1   Descriptive Statistics

Table 2 displays the descriptive statistics of 210 continuous variables in this study, including the mean, minimum, maximum, and standard deviation. Thus, the collected data were analysed using STATA version 14.

Table 2: *Descriptive Statistics for Full Sample (N = 210)*

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	210	6.967	10.676	-44.16	42.85
LTTA	210	.154	.14	-.24	.83
STTA	210	.495	.289	.1	2.57
TDTE	210	64.759	31.11	4.28	305.8

Note: ROA – return on asset; TDTE – total debt to total equity; STTA – Short-term debt to total asset; and LTTA – Long-term debt to total asset

Table 2 provides a summary of the descriptive statistics for the variable that are the independent and dependent examined. The financial performance values exhibit a range of values spanning from -44.16 (minimum) to 42.85 (maximum), with a standard deviation of 10.676 and an average value of 6.967. The standard deviation is a measure that indicates the extent of variation in capital structure, ranging from the lowest to the highest values. A higher standard deviation suggests that there is a greater difference from the average.

When examining the independent variables, the results in table 2 show that the long-term debt to total asset (LTDA) has an average value of 0.154, a minimum value of -0.24, and a maximum value of 0.83. The standard deviation for this variable is 0.14. The LTDA, or Long-Term Debt to Assets ratio, is a significant determinant of capital structure and has an impact on performance.

For short-term debt to total asset (STDA), the result from Table 4.1 shows that its mean value is 0.495, a minimum of 0.10, and a maximum of 2.57, while the standard deviation is 0.289. STDA, which is measured as short-term debts to total assets, is considered to have an impact on a company's financial performance.

Based on the result obtained from total debt to total equity (TDEQ), the average value of 64.759 means that some of the listed consumer goods firms in Nigeria have 64% as debt in their capital structure. Meanwhile, the sampled consumer goods industry ranges from a minimum of 4.28 to a maximum of 305.8. The standard deviation is 31.11, indicating that the rates differ from the mean by 31.11% in both directions. This indicates that there is an important deviation of data from the average due to the high standard deviation.

4.2   Correlation Test

Correlation analysis is a statistical method that is employed to elucidate the magnitude and direction of a linear association between two variables (Pallant, 2011). Pearson correlation was employed to assess the interrelationship between study variables. The table 3 shows the interrelations among Financial performance, LTDA, STDA, and TDEQ. Pallant (2011) asserted that a correlation of 0 indicated no relationship at all, a correlation of 1.0 is an indication of a positive correlation, and a value of -1 is a pointer of a perfect negative correlation. Cohen (1988) suggested the following guidelines: $r = 0.10$ to 0.29 small; $r = 0.30$ to 0.49 medium; and $r = 0.5$ to 1.0 large, as indicated in Table 3.

Table 3 *Results of Pearson Correlation Analysis of the Study Variables (N = 210)*

Variables	ROA	LTDA	STDA	TDEQ
ROA	1.000			
LTDA	-0.053	1.000		
STDA	-0.584*	-0.076	1.000	
TDEQ	-0.566*	0.363*	0.899*	1.000

*** p<0.01, ** p<0.05, * p<0.1*
Note: ROA – return on asset; TDTE – total debt to total equity; STTA – Short-term debt to total asset; and LTTA – Long-term debt to total asset

Based on the information presented in Table 3, there is a direct link between the financial performance of the listed Consumer goods firms in Nigeria and their LTDA, STDA, and TDEQ. The result showed that there is a perfect negative correlation between LTDA, STDA, and TDEQ with financial performance (ROA), though this connection is not considered significant. Thus, the results imply that there is a negative association

between financial performance and LTDA, STDA, and TDTE. A negative relationship is noted between the dependent variable and LTDA, STDA, and TDTE of the Consumer goods industry under study. It means that any changes in return on assets will cause a decrease in LTDA, STDA, and TDTE.

The study discovered significant autocorrelation among some of the variables, but this alone is not enough to conclude that there is multicollinearity between the explanatory variables unless the tolerance values and variance inflation factor exceed the standard thresholds of one and ten respectively. Therefore, the variance inflation factor (VIF) and the tolerance serve as advanced measures to detect harmful multicollinearity between the explanatory variables. Using STATA, the researchers determined that the VIF and tolerance values were both less than ten and one respectively, indicating that there was no harmful multicollinearity. As a result, the model with three independent variables was deemed suitable for the study. In conclusion, the table above signifies that the variables are significantly correlated to the fact that there is no variable with a value of 0.9 which indicated that there is no problem of multicollinearity (Hair et al., 2010).

The second method of checking the multicollinearity is by variance inflation factor (VIF). According to the general guideline established by Hair et al. (2014), there is an existence of multicollinearity if the VIF value is greater than threshold of 5 and tolerance of less than 0.2. The result of this study shown in Table 4 indicates that the VIF value and Tolerance value are all within the less than threshold of 5 and higher than 0.2 respectively (Hair et al., 2014). Therefore, the outcome of the Multicollinearity tests (VIF and Tolerance) displayed in Table 4 below:

Table 4: *Multicollinearity Test (Variance Inflated Factor and Tolerance)*

	VIF	1/VIF
Financial performance	1.043	.959
Short Terms Debt to Asset	1.032	.969
Long Terms Debt to Asset	1.013	.987
Total Debt to Equity	1.029	.289

Note: VIF – variance inflated factor

Table 5: *Result of Regression Analysis (Direct Relationship Regression Results)*

ROA	Coef.	Std.Err.	t	P>t	5%Conf.	Interval]
LTTA	-19.945	11.990	-1.660	0.131	-47.069	7.178
STTA	-34.896	13.577	-2.570	0.030	-65.610	-4.182
TDTE	0.130	0.132	1.980	0.015	0.170	0.429
_cons	18.920	0.885	21.370	0.000	16.918	20.923

Regression with Driscoll-Kraay standard errors	Number of obs	=	210
Method: Pooled OLS	Number of groups	=	21
Group variable (i): id	F(3, 9)	=	112.30
maximum lag: 2	Prob> F	=	0.0000
R-squared = 0.3513	Root MSE	=	8.6613

*** $p<.01$, ** $p<.05$, * $p<.1$

The result from Table 5 shows that the LTTA (Long-Term Total Assets) showed a coefficient (-19.945), t-stat (-1.66), p-value (0.131) and not statistically significant at 5% level. The confidence interval (-47.069, 7.178). The coefficient is negative, suggesting that an increase in long-term assets is associated with a decrease in ROA, but the result is not statistically significant. The study cannot confidently conclude a relationship between LTTA and ROA.

STTA (Short-Term Total Assets) revealed a coefficient (-34.896), t-stat (-2.57), p-value (0.030) at a significant level at 5%. While the confidence interval (-65.610, -4.182). this shows a statistically significant negative relationship between short-term assets and ROA. It implies that a 1 unit increase in STTA is associated with a 34.90 unit decrease in ROA. This could indicate inefficient use of short-term assets or overinvestment in non-profitable current assets.

TDTE (Total Debt to Equity Ratio) showed a coefficient (0.130), t-stat (1.98), p-value (0.015) at a level of Significant at 5%. Confidence interval (0.170, 0.429). A positive and significant effect of leverage on profitability, this implies that 1 unit increase in TDTE leads to a 0.13 increase in ROA. This could imply that leveraged firms are utilizing debt efficiently to generate returns.

4.3 Test of Hypotheses

The generated hypotheses were evaluated using p-value statistics. A significance value lower than α=0.05 signifies sufficient statistical evidence to reject the null hypothesis and embrace the alternative hypothesis. If the P-value is greater than 0.05, then we lack sufficient statistical evidence to reject the null hypothesis or accept the alternative hypothesis.

4.3.1 Hypothesis One

H_{01}Long-term debt to total assets ratio has no significant impact on the financial performance of listed consumer goods firms in Nigeria.

Decision Rule: To test this hypothesis, Table 5 was used. The strength of the negative relationship between long-term debt to total asset and return on assets (ROA) is measured by the calculated p-value = 0.131 and a significance level (α) of 0.05. Since the computed p-value is greater than the significance level (α) of 0.05

(0.131>p-value>0.05) (i.e., t= -1.66; p= .131), therefore, the result supported the null hypothesis that long-term debt to total asset has no significant impact on the performance of listed Consumer goods industry in Nigeria.

4.3.2 Hypothesis Two

H$_{02}$ Short-term debt to total assets ratio has no significant impact on financial performance of listed consumer goods firms in Nigeria.

Decision Rule: To test this hypothesis, Table 5 was used. The negative relationship between STDA and return on assets (ROA) is measured by the calculated p-value = 0.03 and a significance level (α) of 0.05 (i.e., t= -2.57; p= .030). Since the computed p-value is less than the significance level (α) of 0.05 (0.030>p-value>0.05), therefore the result also supported the alternate hypothesis that short-term debt to total asset has a significant impact on the performance of the listed Consumer goods industry in Nigeria

4.3.3 Hypothesis Three

H$_{03}$ Total debt to total equity ratio has no significant impact on the financial performance of listed consumer goods firms in Nigeria.

Decision Rule: To test this hypothesis, table 5 was used. The positive relationship between total debt to total equity ratio and return on assets (ROA) is measured by the calculated p-value = 0.015 and a significance level (α) of 0.05. Since the computed p-value is lesser than the significance level (α) of 0.05 (0.015>p-value>0.05) (i.e., t= 1.98; p= .015)., therefore, the result also supported the null hypothesis that total debt to total equity ratio has no significant impact on the performance of listed Consumer goods industry in Nigeria.

5.0 Discussion of Findings

The first specific objective of this study was to evaluate the impact of long-term debt to total assets on the financial performance of listed consumer goods firms in Nigeria. According to the regression result, long-term debt to total assets oflisted consumer goods firms in Nigeria had a positive relationship with ROA but the relationship is not significant at 5% level. Therefore, the result supported the null hypothesis that LTTA has no significant impact on the performance of listed consumer goods firms in Nigeria.

The implication of this is that the consumer goods firms had maintained an increase in the LTDA ratio, which indeed led to a decrease in their return on assets. In the words of Yinusa and Babalola (2022),too much LTDA may become less effective and less productive to enhance financial performance.The findings concur with the study conducted by Rafiu, Taiwo, and Dauda (2022) and Innocent, Ikechukwu, and Nnagbogu (2021)

The second specific objective of this study was to evaluate the impact of short-term debt on the total asset performance of listed consumer goods firms in Nigeria. The regression results revealed that STTA has a

negative relationship and is statistically insignificant on the dependent variable at 5% confidence level. Therefore, the result supported the alternate hypothesis STTA has a significant impact on the financial performance of the listed Consumer goods industry in Nigeria for the period under review. This finding is in line with the study of Idode, Adeleke, Ogunlowore, and Ashogbon (2021) and Oke, Saheed, and Quadri (2019).

The third objective of this study was to assess the impact of total debt on the total equity performance of listed consumer goods firms in Nigeria. The regression results revealed that TDTE has a positive relationship and is statistically insignificant on the dependent variable at 5% confidence level. Therefore, the result supported the null hypothesis that TDTE has no significant impact on the financial performance of listed Consumer goods industry in Nigeria which supported the study of Akinyomi (2019) and Amara and Bilal (2021).

5.1 Conclusion

Based on the previous chapter's discussion and analysis, the study reaches the following conclusion: The study found a statistically significant negative link between the ratio of total debt to total assets and financial success. Therefore, it can be deduced that the ratio of total debt to total assets is one of the factors in the capital structure that influences the financial performance of consumer goods firms listed in Nigeria. Furthermore, the study discovered a negligible negative correlation between the ratio of total debt to total equity and the financial performance of consumer products firms listed in Nigeria. Therefore, the study determined that the ratio of total debt to total equity does not have a significant impact on the financial performance of consumer products firms listed in Nigeria. Moreover, it was discovered that the ratio of long-term debt to total assets had a considerable negative effect on the financial performance of consumer products firms listed in Nigeria.

Consequently, the study determined that the ratio of long-term debt to total assets is a significant factor in influencing the financial performance of consumer products firms listed in Nigeria. Furthermore, the study discovered a strong and meaningful correlation between the proportion of short-term debt to total assets and the financial performance of consumer products firms listed in Nigeria. Therefore, the study determined that the ratio of short-term debt to total assets is one of the factors that influences the financial performance of consumer products firms listed in Nigeria.

5.2 Recommendations

Based on the study's findings, the following recommendations are proposed:

(i)   Nigerian consumer goods firms listed on the stock exchange should prioritise efforts to optimise the capital structure of their manufacturing firms in order to improve financial performance. This can be accomplished by ensuring that their capital structure is optimised.

(ii)   Nigerian consumer goods firms that are listed on the stock exchange could consider increasing their proportion of short-term debt in relation to their total assets in order to improve their financial performance in their commercial operations. The advice is in accordance with the study's findings, which suggest that short-term debt has a favourable impact on the financial performance of industrial firms listed in Nigeria.

(iii)   Nigerian consumer goods firms listed on the stock exchange should prioritise monitoring their total debt-to-total equity ratio in order to enhance their financial performance. The study's findings support the conclusion that there is a weak and statistically negligible correlation between these characteristics and financial performance.

(iv)   Stakeholders of consumer goods businesses listed in Nigeria should prioritise reducing both the total debt-to-total assets ratio and long-term debt levels in order to improve financial performance. The study's findings reveal that both total debt and long-term debt have a considerable negative influence on the financial performance of listed manufacturing enterprises in Nigeria. Therefore, this recommendation is well-supported.

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