Impact of Capital Structure on Financial Performance of Listed Consumer Goods Companies in Nigeria

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ABSTRACT

Corporate entities face the challenge of determining the optimal mix of equity and debt to maximize returns and firm value. This paper investigates the influence of capital structure on the financial performance of consumer goods companies in Nigeria. Utilizing secondary data from the annual financial reports of 21 sampled companies from 2013 to 2022, obtained from the Nigeria Stock Exchange website, the research employed a census sampling technique and an ex-post facto research design to explore the relationship between independent and dependent variables. Descriptive statistics, correlation, and multiple regression analysis were conducted to test hypotheses. The study reveals a significant association between a firm's capital structure and its financial performance. Specifically, it finds that the total debt to total equity ratio, short-term debt to total assets ratio, and long-term debt to total assets ratio do not significantly impact the financial performance of listed consumer goods firms in Nigeria. It suggests that companies should prudently manage their equity and debt usage, as these factors profoundly affect corporate performance. Regulatory authorities are encouraged to foster a conducive business environment, particularly for capital-constrained firms, by facilitating access to long-term debt financing. This strategic approach can enhance operational capabilities and short-term performance, rather than resorting to short-term debt as a stopgap measure for financing and profitability issues.
Keywords: Capital structure, financial performance, total debt, total equity, long-term debt and total assets ratio

INTRODUCTION

Financial decisions are among the most important issues for business owners as they directly affect the capital structure and success of a company [1]. Capital structure is a combination of borrowed money and shareholders' equity, which make up the total capital of a corporate organizations, the perfect blend of internal and external sources of capital to accommodate is a careful choice of corporate management. When it comes to factors that affect a firm's performance, decision-making is very critical, managers need to be extra careful and pay adequate attention when making capital structure decisions. As far as the company's financial position is concerned, capital structure reflects overall health in all types of assets and liabilities held [2]. A company's financial structure also usually comprise common stock, preferred stock, and long-term debt. Corporate financing has over the years attracted public interest because it is a tool for socioeconomic development and effective corporate management practice [3]. Corporate finance involves among other functions the crucial decision of selecting the optimal capital structure, which refers to how an organization finances its assets through a combination of debt and equity. Additionally, it refers to the manner in which an organization funds its activities by utilizing debts, equity, and hybrid securities [4]. Therefore, there is a need for optimal combination or mixture of debts and equity i.e capital structure. A well-optimized capital structure is critical for a company to meet its financial goals, manage risk, and provide attractive returns to investors [5]. The composition of a company's capital structure—its mix of long-term debt and equity—depends on several factors such as the industry, the cost of capital and the debt-equity balance. Companies aim to find the most suitable combination of debt and equity to support their business strategy, which in turn influences their financial performance. A company's capital structure directly impacts its risk profile, cost of capital and overall financial performance, as it defines how the company funds its operations and growth through

debt and shareholders' equity [5]. Financial performance is the measure of how effectively a company uses its resources to generate consistent revenue and profit over time [6]. It is evaluated using various financial metrics such as profitability, liquidity, leverage, efficiency, market-based indicators, and cash flow metrics. According to [5], these indicators offer insights into how well a business is utilizing its resources, maintaining profitability and ensuring financial stability. The relationship between capital structure and financial performance has been widely debated with extensive research focusing on the impact of capital mix decisions on corporate entities' operations [7]. Firms, particularly in competitive global markets, rely on a sound capital structure to support expansion and market capture, as the optimal balance of debt and equity is crucial for sustaining growth and financial performance [8]. Consequently, this study seeks to provide further empirical investigate of the impact of capital structure on financial performance of listed consumer goods companies in Nigeria.

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 [9]. 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 [10], [11], [12], [13], [9], and [14] have several deficiencies that require addressing. [15], conducted a study that examined how the capital structure of some publicly traded companies 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 [10] and [12] 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 [9] 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 [14], 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 companies in Nigeria.

Objectives of the Study

The primary aim of this research is to evaluate the influence of capital structure on the financial performance of consumer goods that are listed 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 companies in Nigeria.

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

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

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 companies in Nigeria.

Scope of the Study

The purpose of this study is to analyze the impact of capital structure on financial performance of consumer products companies that are listed in Nigeria. The study encompasses a decade-long

timeframe, specifically from 2013 to 2022. The selection of consumer goods businesses for this study was based on their representation as the largest industry in Nigeria. The study examines the impact of capital structure on financial performance. The independent variables include total debt to total equity, short-term debt to total assets, and long-term debt to total assets. The dependent variable is measured by return on assets (ROA). The selected period for this study, namely 10 years, is deemed suitable as it aligns with the era during which significant political and economic transformations occurred, thereby influencing the consumer products business in Nigeria. This is a correlational research design as it investigates the relationship between two variables without manipulation utilizing statistical analyses method and secondary data source.

Conceptual Review
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. 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 [1]. 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. According to [9], a firm's capital structure is the amalgamation of its equities and financial liabilities. Therefore, a corporation funds its assets by utilizing a combination of stock and debt. [5], stated that capital structure refers to the combination of various instruments (such as long-term debt and common stock) that a company issues in order to fund its assets. As stated by [15], capital structure refers to the allocation of money in a corporation, specifically in terms of equity capital and loan capital, each of which has its own benefits and drawbacks. Capital structure refers to the financial structure of a company, which includes its retained earnings, debt financing, and equity financing. These components are all used to support the company in financing its activities. The capital structure of a corporation is crucial in establishing how it obtains funds from different sources to finance its operations and expansion. In essence, capital structure plays a crucial role in both market economies and the establishment of effective governance in democratic societies. [16]. [17] noted that capital structure falls under the ambit of corporate financial policy of a firm and is affected by a plethora of factors as identified in prior studies. Trade-off Theory (ToT) posits that an optimal capital structure is only attainable from a trade-off of interest tax shields and costs of bankruptcy [18]. ToT suggests that a firm chooses which percentage of debt and equity to finance its capital structure by considering the costs and benefits of both options. ToT is hinged on the assumption that a firm would choose how to allocate its resources after a trade-off analysis of the 'tax benefits of debt' and 'the bankruptcy costs', which concomitantly leads to an optimal capital structure [18].

Elements of Capital Structure
Total Debt to Total Assets

The total debts to total assets ratio quantifies the extent of funds provided by creditors in proportion to a firm's total assets. Typically, creditors prefer a lower ratio for debts as it offers a greater safety cushion against potential losses during liquidation. This ratio serves as a measure of the total debt in relation to a firm's assets, allowing for comparisons across companies. A higher ratio indicates a higher level of debt and consequently greater financial risk. It encompasses all types of debts, the assets of a corporation, including both long-term and short-term assets, as well as tangible and intangible assets [18]. Conversely, the debt ratio, a solvency ratio, measures the proportion of a company's total liabilities to its total assets. It signifies the company's ability to settle its obligations using its assets and shows the number of assets that may need to be liquidated to meet all liabilities. Companies with high debt ratios are perceived as more heavily indebted and risky for lenders, providing insights into the firm's debt burden and repayment capability during periods of economic uncertainty, the debt ratio is determined by dividing the entire liabilities by the total assets. Lower ratios typically suggest a more stable business with the possibility for long-term success [19].

Total Debt to Total Equity

The debt-to-equity ratio indicates the proportion of creditors' funds in comparison to shareholders' funds. Creditors prefer a lower ratio as it signifies a higher level of financing from shareholders, thereby increasing the safety net in case of declining asset values or losses [9]. This ratio reflects the commitment of suppliers, lenders, and creditors compared to shareholders and measures the company's debt to equity capital. Higher debt-to-equity ratio suggests more reliance on creditor

financing than investor financing, indicating greater risk for creditors and investors. This ratio is vital in evaluating a company's financial structure in terms of funding sources, with different industries having varying benchmarks for debt and equity ratios [20]. The debt-to-equity ratio is often presented as a percentage and indicates the proportion of borrowed funds from creditors and investors. A higher percentage suggests a greater proportion of funding from creditors compared to investments from shareholders. A higher debt-to-equity ratio indicates a greater reliance on creditor financing, such as bank loans, compared to investor funding from shareholders. The components of the debt-to-equity ratio are typically found in a firm's financial statements, namely in the statement of financial position. The debt-to-equity ratio is included in statement of financial position since all of its components are revealed in the statement [21].

Short Term Debt to Total Assets

The short-term debt to total assets ratio assesses the proportion of A firm's short-term obligations that must be settled within a specific accounting period. Experts contend that a debt in short duration signifies improved performance of the firm [20]. This ratio provides insight into the company's financial leverage by indicating the proportion of assets that are financed by short-term indebtedness. Short-term debt specifically refer to obligations due for repayment within 12 months or less, excluding long-term liabilities on the balance sheet. It encompasses creditors and accruals [21]. The short-term debt to total assets ratio is calculated by dividing current obligations (loans / overdraft and other credit obligations with a duration of less than one year) by the total assets, which include both tangible and intangible assets [19]. These numbers are included in a company's financial statement. A lower debt ratio signifies the long-term viability of a corporation.

Long-Term Debt to Total Assets

The long-term debt to total assets ratio is a measure that evaluates the percentage of long-term debt in a company's overall capital structure by comparing it to the total assets of the company. This ratio represents a company's capacity to meet its financial obligations and is calculated on an annual basis. A decrease in the annual ratio indicates that the company relies less on funds from creditors. The calculation is performed on an annual basis, and any decrease signifies a reduced reliance of the company on funds from creditors. [20]. Effective management of a greater amount of long-term debt necessitates a consistent and positive stream of revenue and cash flow. In order to sustain a significant amount of long-term debt, it is imperative for management to ensure positive revenue and a consistent cash flow. Therefore, it is crucial for a company to regularly assess its debt structure and determine its debt capacity. Management should regularly assess its debt structure and ascertain its debt capacity [21].

The long-term debt to total assets ratio quantifies a company's financial leverage by comparing its long-term debt (excluding current liabilities) such as mortgages, debentures and long-term leases, which are due for repayment over a year, to its total assets, which include both tangible and intangible assets. Long-term debt refers to a type of debt that is scheduled to be repaid in a period longer than one year. It is not recorded as non-current liabilities in the statement of financial position. The scope of this encompasses mortgages, debentures, bonds, bank acceptances with long tenor and long-term leases, while excluding general trading liabilities [22]; [23].

Equity

Shareholders'; funds can be defined as the net value of a company's assets (both tangible and intangible) after subtracting its total obligations (including both short-term and long-term debts). Equity, often known as preferred stock, represent the ownership of individual shareholders in the corporation [20]. Common stockholders offer the most cost-effective source of funding for a company, hence reducing financial risk. Owners' equity can be expressed through several means, such as financial accounting. The net assets determine it, which is the disparity between the total assets and total liabilities. Equity is recognized in a firm's financial accounts, specifically in the statement of financial position [21]. A company's total assets comprise both tangible and intangible assets. Tangible assets refer to physical assets such as land, equipment, and cash. On the other hand, intangible assets include non-physical assets like goodwill, licenses, brand names, copyrights, and patents [21]. Equity, as defined by the International Accounting Standards Board's framework, refers to the remaining interest in the entity's assets once all liabilities have been subtracted (IASB, 2022). Equity is the financial contribution of the owners towards the management of the company. It denotes the amount of debt that the business is obligated to repay to its owners. In case of liquidation, creditors and other lenders are paid off first and the balance upon settlement of all liabilities becomes the owner's capital [24]. The choice of debt and equity is fueled by their cost, which are closely connected to corporate performance [25].

Concept of Financial Performance

Concept of Firm Performance The word performance is a concept of two levels, such as efficiency and effectiveness. While efficiency is the proportion between input and output, effectiveness is the extent to which goals are achieved. According to motivation theory in management science, performance is interpreted as an extent of work completed by an employee [26]. [27], aver that performance is the strategic outcome a company uses in achieving its objectives. Efficiency is the major concern of any corporate management or entrepreneur. A company's performance is the extent to which a firm is able to achieve its strategic objectives, as well as an indicator for the assessment of overall competeness. When properly evaluated, a company's performance give corporate management an idea of current financial and non-financial conditions [26]. [1], defines financial performance as firms' ability to maximize earnings from available assets and resources. The term can also be used to mean the general measurement of an organization's overall financial strength over a given period of time. Financial performance examines how effective and efficient an organization can meet its profit maximization objective and manage its assets, liabilities and financial interests of shareholders. Accordingly, profitability-based accounting indicators such as

return on assets (ROA) and return on equity (ROE) have been used by several scholars measures of financial performance [1]. A firm's financial performance refers to the capacity of an organization to produce long-term profits [28]. It functions as an essential gauge, offering perceptions of the company's capacity to make money, add value for stakeholders, and negotiate the difficult terrain of financial operations [29]. These characterizations highlight the role a firm's performance plays in its sustainability including the need for the unswerving focus on the interactions between socioeconomic variables and firm performance. Financial performance is a metric that gauges a company's ability to generate revenue, profit, profitability, and create wealth for its shareholders. Financial performance is a measure of an organization's financial condition or financial outcomes resulting from management decisions conducted by organization members [30]. This is achieved by effective management of both current and non-current assets, as well as revenues and expenses. Effective and efficient management of a company's resources is indicated by high financial performance [20]. Financial performance is a measure of how well a company's management policies and operational practices have resulted in monetary outcomes.
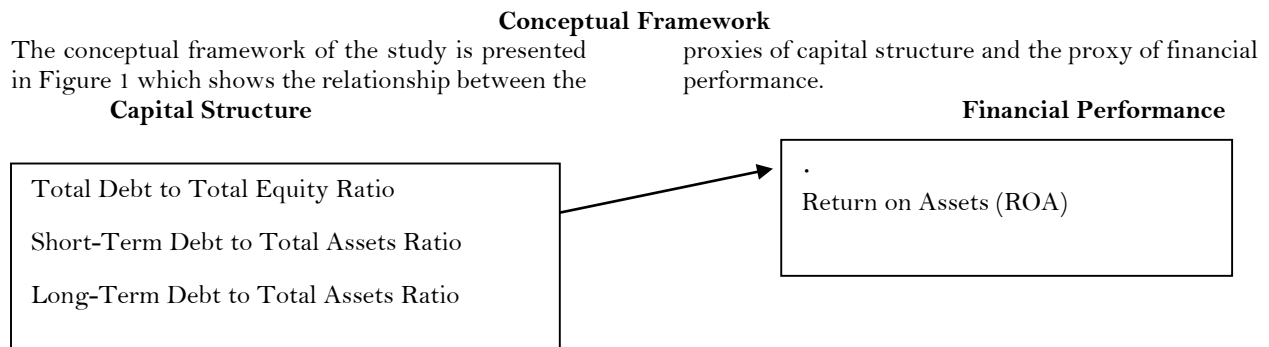
Financial Performance Measures

[31] 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. [32], sub-divides such financial indices into accounting [33] 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.

Accounting Based Approach

[32], suggest that the accounting-based approach to evaluating financial performance comprises two main components: profitability/accounting ratios and investment/market ratios. [34], states that this approach primarily relies on the utilization of accounting data. Profitability metrics are commonly utilized in financial statement analysis. Assessing a firm's historical profitability aids financial analysts in forecasting its future profitability and expected returns on investing in the company's equity (securities). [31], argue that analyzing the statement of financial position of a company is facilitated through the use of financial indexes and indicators, examining financial statements as primary sources of data and information, with a focus on previous performance reports to forecast the future. Financial analysis is important in the determination of

company's worth financial performance and status based on financial data and reports, as highlighted by [34]. These analyses are categorized into efficiency, liquidity, and profitability, as outlined by [2]. [31], 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 [31]. 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.

Conceptual Framework

The conceptual framework of the study is presented in Figure 1 which shows the relationship between the proxies of capital structure and the proxy of financial performance.

Capital Structure

> Total Debt to Total Equity Ratio
>
> Short-Term Debt to Total Assets Ratio
>
> Long-Term Debt to Total Assets Ratio

Financial Performance

> .
> Return on Assets (ROA)

Figure 1: Conceptual Framework of the Study
Source: Adopted with modifications from [19].

Figure 2.1 illustrates that the capital structure was represented by three proxies: The Total debt to Total equity ratio, the Short-term debt to Total assets ratio, and the Long-term debt to Total assets ratio. Three models were utilized to estimate the effect of capital structure on financial performance represented by return on asset. As shown in the figure 2.1, the relationship between the variables is a one-way direction, capital structure may derive financial performance.

Theoretical Framework

After the ground-breaking effort of [36] on capital structure, several theories of capital structure have been developed. These include Modigliani and Miller theory, pecking order theory, efficiency-risk hypothesis, franchise value hypothesis, agency theory and static trade off theory. This study carefully selects the efficiency-risk hypothesis, franchise value hypothesis and agency cost theories to explain the relationship between the studied variables. [37], states that capital structure influences financial performance. Capital structure refers to how firm investment is financed using either equity or debt or proportionate mix of both [38]; [39]; [40]; [41].

Efficiency-Risk Hypothesis

Efficiency- risk hypothesis is a spin- off the trade-off theory of capital structure whereby differences in efficiency, other things constant, enable firms to fine tune their optimal capital structure. Under the efficiency-risk hypothesis, firms that are more efficient choose lower equity ratios than other firms, else equal, because higher efficiency reduces the expected costs of bankruptcy and financial distress. Under this hypothesis, higher profit efficiency generates a higher expected return for a given capital structure, and the higher efficiency substitutes for equity capital to some degree in protecting the firm against future crises. This is a joint hypothesis, that firstly efficiency is strongly positively associated with expected returns (H1), and secondly the higher expected returns from high efficiency are substituted for equity capital to manage risks (H2). Regarding the first part of the hypothesis, i.e., that efficiency is strongly positively associated with expected returns in firms, efficiency has been found to be significantly positively correlated with returns on equity and returns on assets see for example, [42]. Other evidence suggests that efficiency is relatively stable over time see for example [4], therefore, a finding of high efficiency tends to yield high future expected returns. Regarding the second part of the hypothesis – that higher expected returns for more efficient firms are substituted for equity capital – follows from a standard Altman z-score analysis of firm insolvency [14]. High expected returns and high equity capital ratio can each serve as a buffer against portfolio risks to reduce the probabilities of incurring the costs of financial distress/bankruptcy, therefore, firms with high expected returns due to high efficiency can hold lower equity ratios. According to the above analysis, firms with higher efficiency will have higher expected returns, and a higher expected return allows the firm to have a lower equity ratio for a given z-score, so that more efficient firms may choose lower equity capital ratios.

Franchise-Value Hypothesis

The franchise-value hypothesis focuses on the income effect of the economic rents generated by efficiency on the choice of capital structure. Under this hypothesis, more efficient firms choose higher equity capital ratios, other things constant, to protect the rents or franchise value associated with high efficiency from the possibility of liquidation. Higher efficiency may create economic rents if the efficiency is expected to continue in the future, and shareholders may choose to hold extra equity capital to protect these rents, which would be lost in the event of liquidation, even if the liquidation involves no overt bankruptcy or distress costs. The franchise-value hypothesis is also a joint hypothesis that efficiency is a source of rents,

and that firms hold additional equity capital to prevent the loss of these rents in the event of liquidation. Related literature to this field, [5], [21],

[16], [43] supports the notion that firms hold additional equity capital to protect franchise value.

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. [43] 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 [20]. Management frequently holds superior knowledge compared to shareholders regarding the internal operations and financial well-being of the company [44]. 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. [43] 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 [45]. 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 [16]. 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.

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. [46], investigated the influence of capital structure on the financial performance of 74 companies 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. [7], 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 companies. 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. [47], 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, [10], investigated how the capital structure of 32 publicly traded companies 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. [48], investigated the impact of financial policy on the operational effectiveness of companies 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 [49], 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. [50], researched the effect of capital structure on performance of consumer goods companies 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. [51], conducted a study to investigate the impact of capital structure on financial performance in Nigeria. The researchers focused on companies 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, [52] investigated the correlation between the capital structure and performance of 42 non-financial companies 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 companies. 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, [53], analyzed the composition of capital structure in six conglomerate companies 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. [54], 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 companies. 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).

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 companies. 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.

Population of the Study

The study population consisted of all listed consumer goods companies in the Nigerian Exchange Group (NGX). In particular, the population included the 21 listed consumer goods companies in the NGX as at 31st December 2022. 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)

Sample Size and Sampling Techniques

All the 21 listed consumer goods companies in the Nigerian Exchange Group (NGX) were studied. The utilization of the census sample approach was employed for the aim of this investigation. Census sampling is a technique in which every unit or every element that makes up the population is studied.

Method of Data Collection

The data for the study were collected from secondary sources. The secondary source of data involved obtaining data from annual reports and accounts, and the NGX fact book. Cross-sectional data were extracted from the annual reports and accounts of the companies. The extracted data pertained to various financial ratios, including total debt to total assets, total debt to total equity, short-term debt to total assets, long-term debt to total assets, and return on assets. These ratios were obtained from annual reports and accounts. The data was extracted from 2013 to 2022.

Technique of Data Analysis and Model Specification

Panel multiple regression was employed in this study. Multiple regressions was considered appropriate for two cogent reasons; first, it helps in establishing a relationship between variables, and it demonstrates the cause-and-effect relationship between the variables. In order to ensure the accuracy and dependability of the outcome, several rigorous tests were performed, such as tests for multicollinearity and the Hausman specification test. 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:

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

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

DATA PRESENTATION AND ANALYSIS
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 companies 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.

Correlation Test

Correlation analysis is a statistical method that is employed to elucidate the magnitude and direction of a linear association between two variables. Pearson correlation was employed to assess the interrelationship between study variables. The table below 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 companies 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 [8].

The second method of checking the multicollinearity is by variance inflation factor (VIF). According to the general guideline established by [8], 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 [8]. 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 result of individual variables and their contributions to the model which indicated that LTTA (t-value-1.660; p-value>0.1); STTA (t-value -2.570; p-value<0.05) and TDTE (t-value 1.980; p-value<0.1) are significantly and negatively related to the abnormal cash flow from operations. The result shows that these two constructs (LTTA & STTA) contribute significantly in reducing the manipulation of abnormal cash flow

of listed consumer goods companies in the Nigerian exchange group while the result of TDTE shows a positive relationship that contribute significantly to the cash flow of listed consumer goods companies in the Nigerian exchange group. The Regression result above presents a positive relationship between return on assets and TDTE. Consequently, any alteration in the rate of increase of the TDTE will result in a corresponding increase in the dependent variable.

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.

Hypothesis One

H₀₁ Long-term debt to total assets ratio has no significant impact on the financial performance of listed consumer goods companies 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.

Hypothesis Two

H₀₂ 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

Hypothesis Three

H₀₃ 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.

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 companies in Nigeria. According to the regression result, long-term debt to total assets of listed consumer goods companies 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 companies in Nigeria. The implication of this is that the consumer goods companies had maintained an increase in the LTDA ratio, which indeed led to a decrease in their return on assets. In the words of [9], too much LTDA may become less effective and less productive to enhance financial performance. The findings concur with the study conducted by [48] and [49]. 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 companies 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 [54] and [53]. The third objective of this study was to assess the impact of total debt on the total equity performance of listed consumer goods companies 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 [22] and [47].

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 companies 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 companies 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 companies 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 companies 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 companies 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 companies 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 companies listed in Nigeria.

Recommendations

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

(i) Nigerian consumer goods companies 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 companies 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 companies listed in Nigeria.

(iii) Nigerian consumer goods companies 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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