

Effects Of Capital Structure on The Financial Performance of Listed Consumer Goods Companies in Nigeria

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Abstract- Nigerian consumer goods companies operate in a challenging macroeconomic environment characterized by inflationary pressures, exchange rate volatility, and rising operating costs, which often constrain access to affordable financing. As a result, many firms rely heavily on debt, particularly short-term borrowing, to sustain operations. While debt financing may provide tax advantages and support expansion, excessive leverage increases financial risk and may erode profitability. This study therefore examined the effect of capital structure on the financial performance of listed consumer goods companies in Nigeria over a ten-year period (2014–2023). Adopting a longitudinal panel research design, data were obtained from the audited annual reports of seven sampled firms out of twenty listed companies, generating seventy firm-year observations. Descriptive statistics, correlation analysis, and panel multiple regression using E-Views 9.0 were employed to analyze the relationship between capital structure indicators and Return on Assets (ROA). The findings revealed substantial variations in leverage practices, with firms relying more on short-term debt than long-term financing. Correlation results showed generally weak associations between ROA and leverage measures. However, the Random Effects regression results indicated that only the debt-to-equity ratio (TDTE) had a statistically significant and negative effect on ROA, while total debt to total assets (TDTA), short-term debt (STDTA), long-term debt (LTDTA), and firm size were statistically insignificant. The results suggest that excessive reliance on debt relative to equity undermines profitability in the sector. The study concludes that although capital structure components do not collectively exert strong explanatory power on performance, maintaining an optimal debt-equity balance is crucial for safeguarding profitability. Therefore, firm managers, investors, and policymakers should adopt prudent leverage strategies and pay attention to broader determinants of performance such as operational efficiency, innovation, and market competitiveness.

Index Terms- Capital Structure, Financial Performance, Listed Consumer Goods Companies, Nigeria.

I. INTRODUCTION

Globally, financial performance is a vital factor in determining corporate sustainability and competitiveness. It demonstrates a firm's capability to generate income, manage expenses, and provide value to its stakeholders (En, *et al.*, 2021). Thus, Zeitun and Tian (2022) stated that metrics such as Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS) are widely utilized to assess financial stability and effectiveness. Achieving optimal financial outcomes necessitates making strategic decisions, particularly regarding capital structure. Capital structure is the combination or mixture of the company's equity and debt, which ensures financial stability, profit generation, growth and expansion (Samour & Hassan, 2020). In an attempt to highlight the role of capital structure in shaping financial outcome, theoretical models like the Modigliani-Miller theorem (1958) and the trade-off theory emphasized that a firm's capital structure can impact its financial performance through identification of an optimal structure that balances debt and equity to minimize costs, maximize returns, and achieve financial goals. While leveraging debt may offer benefits such as tax savings and reduced capital costs, excessive borrowing increases the risks of financial instability and potential bankruptcy (Titman, 2022; Shittu & Adeusi, 2020). On the other hand, equity financing, though less risky, instruments can dilute ownership and reduce shareholder returns (Abolfazl, *et al.*, 2021). These complexities underline the importance of capital structure as a central topic for researchers and professionals globally. Moreover, in advanced economies, firms benefit from a variety of financing options, efficient capital markets, and favorable macroeconomic conditions that facilitate strategic decisions on capital structure. For example,

organizations in the U.S. and Europe exhibit different preferences for equity or debt financing, influenced by factors such as debt load (where organizations with low debt loads are more likely to secure debt financing), interest rates, economic conditions (such as recession or growth), regulatory environment (that comprises government policies and regulations), and collateral (that can be used by companies to secure debt financing) (Mramor & Crnigoj, 2019). In developing economies such as Nigeria, distinct structural challenges and emerging opportunities significantly shape the financial landscape within which firms operate. The consumer goods sector represents a major contributor to Nigeria's Gross Domestic Product (GDP) and remains particularly vulnerable to macroeconomic pressures such as high inflation, exchange rate volatility, and fluctuating interest rates. These conditions constrain firms' access to affordable financing and increase uncertainty in capital structure decisions. Moreover, the relatively underdeveloped financial markets and persistently high borrowing costs further complicate the debt-equity trade-off faced by firms (Olaleye et al., 2021). In addition, the structure of a company's capital significantly impacts its financial performance (Zeitun & Tian, 2022).

Financial performance includes metrics such as profitability, growth, efficiency, and stakeholder satisfaction, which are interconnected and provide a comprehensive view of a firm's fiscal health. Key indicators of financial performance include Return on Investment (ROI), Residual Income (RI), Earnings Per Share (EPS), Dividend Yield (DY), Return on Assets (ROA), Revenue Growth (RG), and Return on Equity (ROE) (Stanford, 2019). Moreover, capital structure is the mix of equity and debt used by a company to finance its operations, ensuring growth, stability, and profitability (Adetifa, 2021). It encompasses strategic financial arrangements involving debt, equity, and hybrid securities (Erhirhie, 2019). Hybrid instruments combine features of debt and equity, offering fixed or variable returns with an option for conversion into company shares. Furthermore, the configuration of a firm's capital structure, including short-term and long-term debt, directly affects its financial decisions and overall performance (Shetty et al., 2020). The balance between equity and debt influences not only

operational efficiency but also financing costs, investment returns, and risk management. From a financial perspective, capital structure is the strategic alignment of debt and equity to finance assets, sustain operations, and support growth (Nwaolisa & Chijindu, 2021). Tactically, it determines the firm's risk exposure, funding accessibility, financing costs, investor expectations, and resilience against economic downturns (Nassar, 2020). In addition, effective financing and investment strategies are fundamental to a firm's success. Financial managers aim to optimize funding sources, achieve an ideal capital mix, and enhance firm value through prudent investments (Karani, 2019). However, firms typically adopt one of three capital configurations: entirely equity-based (unlevered), entirely debt-based (highly leveraged, though impractical in reality), or a hybrid of debt and equity. The latter is most common, as it balances the advantages of both financing types for greater efficiency. Metrics like debt-to-assets and debt-to-equity ratios help analyze capital structure and its impact on performance. For instance, the debt-to-assets ratio measures leverage and its effect on operational effectiveness. Moreover, firms that achieve optimal leverage can minimize financing costs and maximize returns, particularly in the consumer goods sector (Zeitun & Tian, 2022). The consumer goods industry, encompassing producers of consumer essentials and luxury items, is heavily influenced by market demand and economic conditions. During economic growth, demand for premium products increases, while downturns shift consumer preferences to cost-effective alternatives. The companies in this sector are especially sensitive to market cycles and economic trends. Basic goods like food maintain steady demand regardless of economic conditions, whereas discretionary items like automobiles are more prone to fluctuations. Understanding these dynamics is essential for tailoring capital structures to align with the unique needs of firms within this industry. Despite the importance of capital structure in determining the financial performance of an organization, there is a scarcity of studies, particularly among listed consumer goods companies in Nigeria. Therefore, the current study attempts to fill this gap by examining the effect of total debt to total assets ratio, total debt to total equity ratio, short-term debt to total assets ratio, and long-term debt to total assets ratio (as

independent variables) on return on assets (as the dependent variable), while controlling for firm size as a control variable.

Statement of the Problem

The Nigerian businesses, particularly listed consumer goods firms, face significant challenges in accessing suitable equity or debt financing. Financial resources are the cornerstone of business operations, determining the ability of companies to initiate or sustain growth (Lawan & Ibrahim, 2020; Aladi & Tersoo, 2023). Capital structure, a fundamental aspect of corporate finance, involves the strategic use of long-term and short-term debt, common and preferred equity, and retained earnings to support a company's operations and expansion (Amos & Francis, 2021). The optimal capital structure of firms, particularly the balance between debt and equity, remains a fundamental concern in corporate finance. In Nigeria's volatile economic environment, consumer goods companies have increasingly turned to debt financing especially short-term borrowing to navigate inflation, exchange rate depreciation, and rising operating costs. While debt can offer tax advantages and facilitate expansion, excessive or poorly structured leverage may deteriorate firm performance, particularly return on assets (ROA) a key measure of operational efficiency (Onaolapo & Kajola, 2020).

Moreover, a firm's chosen capital structure not only influences its profitability but also its ability to compete effectively. The debt-equity ratio, a critical financial decision, directly affects metrics such as shareholder returns, capital costs, and overall market value, all of which are influenced by associated risks (Chandrasekharan, 2022). For companies like Nestlé Nigeria Plc, Nigerian Breweries Plc, Dangote Sugar Refinery Plc, and Flour Mills of Nigeria Plc, determining an effective capital structure is essential for maintaining profitability and navigating a challenging economic landscape. However, financing decisions are complicated by the need to balance stakeholder returns with risk management. Firms avoiding debt miss the benefits of low-cost financing but incur higher equity costs, while those overly reliant on debt face risks such as financial distress and reduced operational flexibility. Striking an optimal balance between debt and equity is thus

critical for enhancing profitability while managing financial risk (Dada & Ghazali, 2021).

On the other hand, profitability is a key measure of financial performance and the dependent variable in this research, is central to assessing managerial effectiveness. Owolabi and Obida (2022) describe profitability as a firm's ability to generate returns exceeding its financing costs, ensuring long-term viability and wealth creation for shareholders. However, many Nigerian consumer goods companies struggle with profitability due to insufficient funding or high capital costs (Akintoye, 2019; Salawu, 2019). Roanne (2023) stated that high short-term debt obligations can negatively impact financial performance of listed consumer goods industries in Dutch. Gholamreza *et al.* (2022) opined that high debt levels can negatively impact financial performance where relying heavily on share capital may not be beneficial for consumer goods companies in Nigeria. In addition, many listed consumer goods companies in Nigeria have limited access to debt financing, which can limit their ability to invest in growth opportunities and optimize their capital structure (Abor, 2019).

Recent industry data shows that NGX-listed consumer goods manufacturers borrowed ₦1.834 trillion in H1 2023, a 24.5% increase from ₦1.473 trillion in H1 2022. Their finance cost surged 411% to ₦331 billion (from ₦64.7 billion) (Vanguard, 2023). In the first nine months of 2024, Fast Moving Consumer Goods (FMCG) firms' interest expenses jumped to 435% Year-over-Year (YoY) to ₦280.5 billion (from ₦52.4 billion) (Business Day, 2024). The total interest and Forex finance cost for major FMCGs (Nestlé, Dangote Sugar, Nigerian Breweries, BUA, etc.) reached a staggering ₦1.074 trillion by Q3 2024, up 133.3% YoY (₦460 billion in 2023) (Maikaji, 2024). For Short-Term and Long-Term Debt, Business Day (2023) captured that borrowings by major consumer goods firms (Dangote Sugar, Nestlé, Nigerian Breweries, Cadbury, NASCON) rose 38.6% in 2022, driven mainly by short-term borrowing to cover working-capital needs while long-term debt stagnated or fell. However, Nigerian Breweries short-term borrowing rose 402%, while long-term fell to 41% in 2022 (BusinessDay, 2023).

However, despite this debt upsurge, the effect of different debt structures; total debt to total assets (TD/TA), total debt to equity (TD/EQ), short-term debt to total assets (STD/TA), and long-term debt to total assets (LTD/TA) on firm performance remains empirically inconclusive, largely due to differences in methodologies, contexts, and performance metrics used. Some studies report negative impacts such as study of En and Malek (2021) who found that short-term debt to total assets (STD/TA) has a negative significant on return on assets (ROA) of listed software companies of Bursa Malaysia. Ajibola *et al.* (2022) discovered a negative insignificant relationship between all the proxies of capital structure (LTD, STD and TD) and ROA of listed manufacturing firms in Nigeria. Also, study of Olaoye *et al.* (2021) indicated that long-term debt and firms size exerted insignificant negative impact on return on equity of pharmaceutical companies in Nigeria. Adesina and Akinlo (2023) found that short-term debt has a significant negative effect on ROA, while Ukaegbu (2022) suggested long-term debt may either improve or have no significant effect on ROA, all in Nigerian consumer goods companies.

Other studies highlight positive outcomes such as study of Ismail (2021) discovered capital structure components studied (equity capital and long-term debt) had a positive substantial impact on selected Nigerian enterprises' financial performance. Study by Eyong *et al.* (2021) indicated that Capital Structure (DER), Liquidity (CR), and Asset Turnover (TATO) have significant effect on financial performance (return on assets) of consumer goods companies in Nigeria. These conflicting conclusions call for a closer examination of this relationship, particularly within Nigeria's consumer goods sector. This industry is critical to the nation's economic growth, continues to grapple with challenges in utilizing capital structure to drive profitability and market success.

This study aimed to examine the effects of capital structure on the financial performance of listed consumer goods companies in Nigeria. Therefore, the study used total debt to total assets ratio, total debt to total equity ratio, short-term debt to total assets ratio, long-term debt to total assets ratio as independent variables and return on asset as dependent variable,

and firm size as a control variable. It covered a period of ten (10) years from 2014 – 2023. By examining these variables, companies can understand how to optimize their financial mix to address profitability challenges. This research seeks to contribute to both scholarly understanding and practical strategies for effective financial management.

Research Questions

The following research questions were formulated to guide the study:

How does total debt to total assets ratio affect the financial performance of listed consumer goods companies in Nigeria?

What effect does the total debt to total equity ratio have on the financial performance of listed consumer goods companies in Nigeria?

To what extent does short-term debt to total assets ratio affect the financial performance of listed consumer goods companies in Nigeria?

What is the effect of long-term debt to total assets ratio on the financial performance of listed consumer goods companies in Nigeria?

Objectives of the Study

The main objective of this study is to examine the effects of capital structure on the financial performance of consumer goods companies listed on the Nigerian Exchange Group (NGX). Specifically, the study seeks to:

Assess the effect of total debt to total assets ratio on the financial performance of listed consumer goods companies in Nigeria

Determine the effect of total debt to total equity ratio have on the financial performance of listed consumer goods companies in Nigeria

Investigate the effect of short-term debt to total assets ratio on the financial performance of listed consumer goods companies in Nigeria

Examine the effect of long-term debt to total assets ratio on the financial performance of listed consumer goods companies in Nigeria

II. LITERATURE REVIEW

Concept of Financial Performance

Financial performance remains a central concern to investors, managers, regulators, and the broader economy because it reflects a firm's capacity to create value and sustain operations over time. For investors, financial performance determines the profitability and risk profile of their investments, while for other stakeholders, it signals the firm's ability to enhance employee welfare, deliver quality products, meet obligations, and contribute to socio-economic development through employment generation and wealth creation. However, beyond these functional roles, financial performance also represents a strategic indicator of how effectively a firm deploys its resources to achieve its corporate objectives. Scholars conceptualize financial performance from slightly different but complementary perspectives. Rahul (2020) views it as a firm's ability to achieve predetermined goals through efficient resource utilization, emphasizing operational effectiveness. Similarly, Sulaiman and Shittu (2020), and Suleiman (2021) defines financial performance as the measurable outcomes of strategic decisions and managerial actions. While these definitions highlight goal attainment, they tend to treat performance as an outcome rather than a dynamic process shaped by financing, investment, and operational decisions. This suggests that financial performance should not merely be viewed as a result but as a reflection of underlying structural and strategic choices particularly capital structure decisions, which are central to this study. The efficiency with which a firm utilizes its assets to generate revenue constitutes a critical dimension of financial performance. Van Horn (2020) describes financial performance as a subjective assessment of a firm's ability to employ its core assets profitably, while Pandey (2019) characterizes it as a comprehensive indicator of financial health and operational viability. Although these perspectives emphasize asset utilization, they differ in scope: Van Horn focuses primarily on operational productivity, whereas Pandey adopts a broader financial health approach. This divergence underscores the multidimensional nature of financial performance and the need for appropriate measurement proxies depending on research objectives. From a theoretical

standpoint, financial performance is rooted in organizational and strategic management theories, which posit that firms align resources and strategies to maximize value. El-Maude et al. (2021) argue that performance management ensures strategic alignment between operational activities and corporate objectives. In a similar vein, Rouf (2021) links shareholder returns to firm value, asserting that stock ownership outcomes reflect overall corporate performance. Hasan et al. (2022) further contend that high-performing firms are more inclined toward transparency and comprehensive financial disclosure, suggesting a governance-performance nexus. Collectively, these arguments reinforce the idea that financial performance is both an outcome of managerial efficiency and a signal to capital markets. Despite advancements in sophisticated valuation techniques such as Internal Rate of Return (IRR), Cash Flow Return on Investment (CFROI), and discounted cash flow models, empirical literature shows that analysts often rely on traditional accounting ratios. Hossain et al. (2019) argue that Return on Assets (ROA) provides a more comprehensive indicator of managerial efficiency than profit margins derived solely from income statements, such as Return on Sales (ROS). Nasiru et al. (2025) viewed that ROA provides confidence to shareholders to be interested in businesses that are performing better by observing at operating indicators and the return on each asset individually. Conversely, proponents of market-based measures argue that accounting metrics may suffer from historical cost bias and managerial manipulation. Ayuba et al. (2019) therefore categorize performance measures into two broad classes: accounting-based (e.g., ROA, ROE, ROI) and market-based (e.g., Tobin's Q), each with inherent strengths and limitations. Accounting-based measures capture internal efficiency and are grounded in audited financial data, while market-based measures reflect investor expectations and external valuation. However, no single metric is universally superior. The appropriateness of a performance measure depends largely on the study context, industry characteristics, and data availability. In emerging markets such as Nigeria, market-based indicators may be influenced by market inefficiencies, thin trading volumes, and speculative distortions. Consequently, many empirical studies including

Abbasali et al. (2019), Khalaf (2019), Babalola (2019), Muhammad et al. (2020), Osuji and Odita (2021), and Raheel et al. (2021) have predominantly adopted ROA as a reliable proxy for financial performance due to its ability to measure how effectively firms utilize total assets to generate earnings. Given the objective of this study which examines the effect of capital structure on the financial performance of consumer goods companies listed on the Nigerian Exchange Group (NGX); Return on Assets (ROA) is considered the most appropriate proxy. This is because ROA directly links profitability to total asset utilization, thereby capturing the efficiency implications of debt financing decisions on overall firm performance. Since capital structure influences both asset base and financing costs, ROA provides a comprehensive measure that reflects the combined impact of financing and operational decisions. In sum, financial performance is a multidimensional construct encompassing profitability, efficiency, value creation, and strategic effectiveness. Its complexity necessitates careful selection of measurement indicators. Based on theoretical justification, empirical precedent, and contextual relevance to Nigerian listed consumer goods firms, this study adopts ROA as the proxy for financial performance.

Concept of Capital Structure

The concept of capital structure has been widely discussed in financial literature, yet no single definition has achieved universal acceptance. Broadly, capital structure refers to the proportionate mix of debt and equity a firm employs to finance its assets and operations. Aliu (2020) conceptualizes capital structure as the combination of financial liabilities and owners' equity used to fund corporate activities. Similarly, Abdul (2020), Saad (2020), Shehu (2021), and Ishaya and Abduljaleel (2014) describe it as the composition of long-term debt, short-term liabilities, and equity instruments utilized by firms for operational and expansionary purposes. While these definitions emphasize financing sources, they largely present capital structure as a static composition rather than a dynamic strategic decision. A more analytical perspective views capital structure as a strategic financial policy choice that influences firm value, risk exposure, and performance outcomes. Semiu and Collins (2021) highlight that capital

structure reflects the ratio of debt to equity employed by a firm, noting that each component carries distinct costs and benefits. Debt financing offers tax advantages through interest deductibility and can enhance returns via financial leverage, but it simultaneously increases bankruptcy risk and financial distress costs. Equity financing, on the other hand, reduces financial risk but may dilute ownership and potentially increase agency costs. Thus, capital structure decisions involve a deliberate trade-off between risk and return, rather than merely selecting funding sources. The theoretical underpinnings of capital structure further deepen this understanding. The Trade-Off Theory posits that firms seek an optimal leverage level by balancing the tax shield benefits of debt against the potential costs of financial distress. Under this framework, moderate levels of debt can enhance firm value and financial performance, but excessive leverage may erode profitability due to increased risk premiums and default probability. Conversely, the Pecking Order Theory suggests that firms prioritize internal financing (retained earnings) over external financing, and prefer debt to equity when external funds are required, due to information asymmetry and issuance costs. This implies that capital structure may reflect financing hierarchy preferences rather than an explicitly targeted optimal ratio. Additionally, Agency Theory argues that debt can serve as a monitoring mechanism that disciplines managerial behavior by reducing free cash flow, yet it may also create conflicts between shareholders and creditors. These competing theoretical perspectives suggest that the impact of capital structure on performance is context-dependent and potentially non-linear.

Simon and Afolabi (2021) underscore the broader economic significance of capital structure, asserting that financing decisions influence not only firm-level profitability but also overall financial market stability. Chandrasekharan (2022) further argues that an optimal capital structure enhances investment efficiency, supports dividend policy decisions, and improves long-term shareholder value. However, the assumption of an "optimal" capital structure remains debated. Empirical evidence across different sectors and economies reveals mixed findings, indicating that what constitutes optimal leverage may vary according to industry characteristics, firm size, asset

tangibility, macroeconomic conditions, and regulatory environment. Karani (2019) therefore emphasizes that balancing risk and return is not a one-size-fits-all exercise but requires contextual financial strategy. Practically, capital structure is commonly measured using leverage ratios such as total debt-to-total assets, total debt-to-equity, short-term debt-to-total assets, and long-term debt-to-total assets. These indicators provide insight into the firm's reliance on borrowed funds relative to its asset base or shareholders' equity. While such ratios offer quantifiable measures of financing strategy, critics argue that they may not fully capture qualitative factors such as managerial risk appetite, market timing considerations, or macroeconomic volatility.

Nevertheless, these metrics remain widely used in empirical research because they allow for objective comparison across firms and time periods. In essence, capital structure represents more than a financial composition; it embodies a strategic decision framework that influences firm risk, cost of capital, and ultimately financial performance. The interaction between debt and equity financing, guided by Trade-Off, Pecking Order, and Agency theories provides the conceptual basis for examining how leverage ratios affect the financial performance of listed consumer goods companies. Therefore, understanding capital structure in both theoretical and empirical dimensions is essential for evaluating its implications on firm performance within the Nigerian corporate environment.

Total Debt to Total Assets

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Total Debt to Total Equity

The total debt-to-total equity ratio (D/E) measures the proportion of creditors’ funds relative to shareholders’ funds in a firm’s capital structure. Unlike the debt-to-assets ratio, which focuses on overall leverage relative to assets, the D/E ratio directly captures the balance of ownership versus external financing and thus reflects the firm’s financial risk exposure from the shareholders’ perspective. Kurfi (2019) notes that creditors generally prefer lower D/E ratios because higher equity contributions provide a cushion against losses

during periods of financial distress. Similarly, Magpayo (2021) emphasizes that elevated D/E ratios increase fixed financial obligations in the form of interest and principal repayments, potentially straining cash flows and increasing default risk.

While these perspectives highlight the risk dimension of leverage, they tend to assume that higher debt levels are inherently unfavorable. However, from a theoretical standpoint, this assumption is not always valid. Under the Trade-Off Theory, a moderate D/E ratio may enhance firm value by optimizing the tax benefits of debt relative to the costs of financial distress. In this context, leverage becomes a value-enhancing instrument rather than merely a risk indicator. Conversely, excessively high D/E ratios may signal over-leverage, increase bankruptcy risk and reducing profitability. The Agency Theory further suggests that debt can discipline managers by reducing free cash flow and limiting opportunistic behavior. However, excessive debt may create agency conflicts between shareholders and creditors, leading to restrictive covenants and underinvestment problems. Erasmus (2018) suggests that a D/E ratio of 0.5 reflects a relatively balanced financing structure, but such benchmarks must be interpreted within industry context. Capital-intensive sectors may sustain higher ratios due to stable asset bases and predictable cash flows, whereas volatile industries may require more conservative structures. Stanford (2019) argues that lower D/E ratios indicate stronger equity support and financial resilience, yet excessively low leverage may also imply underutilization of tax shields and missed growth opportunities. Empirical evidence regarding D/E and financial performance remains mixed. Some studies report a positive relationship, indicating that leverage amplifies returns to equity holders through financial gearing. Others document a negative association, particularly where debt servicing costs outweigh operational gains. These inconsistencies suggest that the relationship may be non-linear, supporting the argument that both under-leverage and over-leverage can impair performance. In this study, the D/E ratio is particularly relevant because it directly measures how debt financing interacts with shareholders’ funds to influence profitability. Since Return on Assets (ROA) captures earnings relative to total assets, variations in

D/E may indirectly affect asset productivity through changes in financial risk and cost structure.

Short-Term Debt to Total Assets

The short-term debt-to-total assets ratio (STDTA) measures the proportion of a firm's assets financed through current liabilities. This ratio provides insight into the firm's short-term financing strategy and liquidity risk exposure. Akinyomi (2021) suggests that lower STDTA ratios are generally preferred, as they indicate limited dependence on short-term borrowing and reduced refinancing risk. However, interpreting short-term debt purely as a risk indicator may oversimplify its strategic function. Short-term financing is often cheaper and more flexible than long-term debt, allowing firms to adjust quickly to working capital needs. Under the Pecking Order Theory, firms may prefer short-term debt over long-term debt due to lower issuance costs and fewer information asymmetry concerns. Thus, moderate reliance on short-term debt may enhance operational efficiency, especially in industries with high inventory turnover such as consumer goods. Shehu (2021) highlights that high levels of short-term debt can strain liquidity and increase rollover risk, particularly during economic downturns when credit markets tighten. From a risk management perspective, excessive short-term leverage may reduce financial flexibility and negatively impact profitability if firms divert earnings toward immediate debt servicing instead of productive investment. Empirical findings on STDTA are inconclusive. Some studies suggest that short-term debt positively influences performance due to lower interest rates and tighter managerial discipline. Others report a negative impact, especially in volatile environments where short-term refinancing becomes costly. These divergent findings indicate that the performance effect of short-term debt depends on liquidity management efficiency and macroeconomic stability. In the context of consumer goods firms, where working capital management is critical, the STDTA ratio provides a meaningful indicator of how short-term financing strategies influence asset utilization and overall profitability.

Long-Term Debt to Total Assets

The long-term debt-to-total assets ratio (LTDTA) measures the extent to which a firm's assets are

financed by long-term liabilities. Unlike short-term debt, long-term financing supports capital investments and expansion projects, making it more closely aligned with strategic growth objectives. Kurfi (2019) argues that declining LTDTA ratios signal improved financial stability, as firms rely less on long-term obligations. Similarly, Akinsulire (2019) notes that higher long-term leverage increases fixed financial commitments and long-term solvency risk. However, this perspective may understate the strategic advantages of long-term financing. Under the Trade-Off Theory, long-term debt may enhance firm value when used to finance productive investments that generate returns exceeding borrowing costs. Compared to short-term debt, long-term financing reduces rollover risk and provides stability for long-term planning. However, excessive long-term leverage may reduce financial flexibility and expose firms to interest rate risk and covenant restrictions. Industry characteristics significantly influence acceptable LTDTA levels. Khalaf (2019) observes that industries with stable cash flows such as utilities can sustain higher long-term leverage.

Conversely, sectors experiencing revenue volatility may avoid heavy long-term commitments to maintain flexibility. This suggests that optimal long-term leverage is context-dependent. Empirical evidence again reveals mixed outcomes. Some studies find positive relationships between long-term debt and performance when debt finances productive assets. Others find negative effects due to increased interest burdens. These inconsistencies reinforce the importance of sector-specific investigation. For listed consumer goods firms, long-term debt may support expansion, modernization, and capacity enhancement. However, if improperly managed, it may constrain profitability. Therefore, examining LTDTA helps determine whether long-term financing contributes positively to ROA in the Nigerian context.

Firm Size

Firm size represents the scale of a company's operations, asset base, and market influence. In empirical research, it is commonly measured as the natural logarithm of total assets to normalize distribution and reduce heteroskedasticity (Kraja & Bushi, 2014; Hashim & Amira, 2018). Beyond being

a descriptive attribute, firm size plays a strategic role in shaping financial structure and performance outcomes. Larger firms typically benefit from economies of scale, diversified revenue streams, stronger bargaining power, and improved access to capital markets (Al-Tamimi & Obeidat, 2013; San & Heng, 2011). These advantages may translate into higher profitability and greater resilience to economic shocks. Gul et al. (2016) find that larger firms often achieve superior asset utilization efficiency in emerging markets. However, firm size may also introduce bureaucratic inefficiencies and coordination challenges, leading to diseconomies of scale (Ekundayo & Olamide, 2015). Therefore, size does not automatically guarantee improved performance; its effect may be contingent on managerial efficiency and organizational structure. In capital structure research, firm size is a critical control variable because larger firms generally enjoy better credit ratings, lower borrowing costs, and greater leverage capacity (Booth et al., 2001; Chen, 2004). Ahmed and Javid (2009) argue that failing to control for size may bias leverage-performance relationships. Furthermore, Nguena and Abanda (2014) suggest that firm size moderates the impact of debt on profitability, particularly in capital-intensive industries. Within the Nigerian consumer goods sector, firm size influences brand strength, distribution networks, production capacity, and financing access; all of which affect profitability and risk-bearing capacity. By incorporating firm size as a control variable, this study isolates the pure effect of capital structure components on financial performance, thereby enhancing the robustness of the empirical analysis.

Theoretical Framework

The study of capital structure and its effect on financial performance has been informed by a variety of theoretical perspectives. Notable theories include the Modigliani and Miller (MM) Theory, Pecking Order Theory, Efficiency-Risk Hypothesis, Franchise Value Hypothesis, Agency Theory, and the Static Trade-Off Theory. For the purpose of this study, three theories; Modigliani and Miller Theory, Pecking Order Theory, and Trade-Off Theory were considered for their applicability to publicly listed consumer goods companies in Nigeria. Among these, the Trade-Off Theory is adopted as the primary

theoretical framework, given its ability to explain the balance firms must maintain between debt benefits and financial distress costs in imperfect markets.

Modigliani and Miller (M.M.) Theory

The Modigliani and Miller (M.M.) Theory revolutionized the field of corporate finance when it was first introduced by Franco Modigliani and Merton Miller in 1958. The theory posits that in an idealized market where there are no imperfections, a firm's capital structure does not influence its overall value. Whether a firm is financed by debt, equity, or a mixture of both, the total market value remains unaffected. According to MM's Proposition I, under perfect market conditions, the capital structure does not alter the firm's value because investors can replicate the effects of leverage within their own portfolios (Modigliani & Miller, 1958).

Pecking Order Theory

The Pecking Order Theory, developed by Myers and Majluf (1984), argues that firms have a preference for financing their activities with internal funds (retained earnings) first, followed by debt, and resort to issuing equity only when no other options are available. This theory challenges the Trade-Off Theory by asserting that firms do not aim for a specific capital structure. Instead, they follow a hierarchy of financing choices, driven by the relative costs of these options and the information asymmetry between the company's managers and external investors.

Trade-Off Theory

The Trade-Off Theory of capital structure proposes that firms weigh the benefits and drawbacks of using debt and equity when making financing decisions. Introduced by Kraus and Litzenberger (1973), the theory argues that firms strive to identify an optimal capital structure that maximizes their value. It highlights that while debt financing offers advantages, such as tax benefits through interest deductions, it also carries the risk of financial distress, which can diminish the firm's value. Consequently, a firm must carefully evaluate the trade-off between the tax advantages of debt and the potential costs associated with bankruptcy.

Conceptual Model

This study's conceptual framework illustrates the relationship between capital structure (the independent variable) and financial performance (the dependent variable) of consumer goods companies listed on the Nigerian Exchange Group (NGX). It also incorporates firm size as a control variable to account for the effect of company scale on financial outcomes. The framework identifies the various proxies used to evaluate capital structure and the specific metrics employed to assess financial performance.



Figure 2.1 Original Model by Ogenche *et al.* (2020)

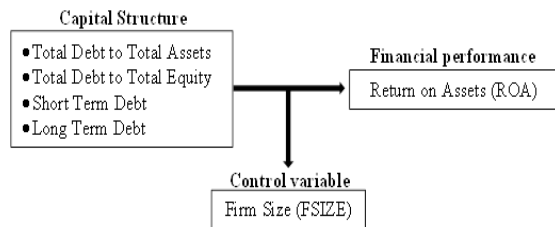


Figure 2.2 Conceptual Model

Adapted from: Ogenche *et al.* (2020)

Figure 2.2 illustrates the conceptual framework of this study, showing the relationships between capital structure, firm size, and financial performance of consumer goods companies listed on the Nigerian Exchange Group (NGX). The independent variables include four primary debt ratios: total debt to total assets (TD/TA), total debt to total equity (TD/TE), short-term debt to total assets (STD/TA), and long-term debt to total assets (LT/TA). Financial performance, measured using return on assets (ROA), serves as the dependent variable. Firm size (FSIZE) is included as a control variable to account for the influence of company scale on financial outcomes, recognizing that larger firms may have greater operational capacity, access to resources, and market power, which can affect profitability. The framework assumes that variations in capital structure ratios and firm size collectively influence the financial performance of listed consumer goods firms, highlighting both the direct effects of debt

management and the moderating role of firm-specific characteristics on performance.

III. METHODOLOGY

Research Design

This study adopted longitudinal panel research design grounded in the positivist paradigm. This approach is a type of quantitative research method that involves collecting data from the same subjects (or units, such as firms or individuals) repeatedly over a period of time. The design is appropriate for the present study as panel data allows the researcher to track changes and trends within the same firms over time, offering a more comprehensive understanding of cause-and-effect relationships. Specifically, independent variables such as the total debt-to-total assets ratio, total debt-to-total equity ratio, short-term debt-to-total assets ratio, and long-term debt-to-total assets ratio were compared with the financial performance measured by return on assets, while firm size was included as a control variable to account for the influence of company scale on performance.

Population of the Study

The population for this research consists of 20 consumer goods companies that are listed on the Nigerian Exchange Group (NGX) as of January 2024.

Sample Size

For this study, the seven (7) consumer goods firms were purposively selected from the population. These companies are selected due to the availability of their financial reports on the Nigerian Exchange Group (NGX). The selection is made through checking the listed and delisted consumer goods companies on the NGX. Also, financial reports of each company were reviewed and observed that there are some companies that do not have comprehensive scope period (2014 – 2023). The companies included in the sample are as follows:

Sampling Technique

For this study, a multi-stage procedure and purposive sampling method were employed. In the first stage, all consumer goods companies listed on the Nigerian Exchange Group (NGX) were selected. In the second stage, firms with comprehensive annual financial

reports were purposively selected for the study. This technique is chosen due to its appropriateness, as it enables the researcher to deliberately select companies that meet specific criteria relevant to the research objectives. In this case, the focus is on firms listed on the NGX that provide complete and detailed annual financial reports, and have not been delisted or skipped reporting during the specified period. By using this method, the study ensures that the sample consists of companies with the requisite data for evaluating both financial performance and capital structure.

Method of Data Collection

This study utilized secondary data sources for its analysis. Data were collected from the annual financial reports of the chosen consumer goods companies and the Nigerian Exchange Group (NGX) Fact Book. Secondary data is deemed suitable for this research due to the nature of the variables under investigation. Both cross-sectional and time-series data were extracted from the annual reports to examine the effects of the variables in the study. The research also employed panel data analysis and accounted for effects that not be evident when using only cross-sectional or time-series data alone.

Method of Data Analysis

The data were analyzed using panel multiple regression analysis through Eview software and evaluated how capital structure influences the market performance of publicly listed consumer goods companies. This method is appropriate as it enables the identification of relationships between variables and the determination of cause-and-effect dynamics. For assurance of the reliability and strength of the findings, necessary robustness tests were performed.

Model Specification

The model used to test the hypotheses in this study is as follows and the model is adapted from Ogenche *et al.* (2020):

$$ROA_{it} = \beta_0 + \beta_1 TDTA_{it} + \beta_2 TDTE_{it} + \beta_3 STDTA_{it} + \beta_4 LTDTA_{it} + \beta_5 FSIZE_{it} + \epsilon_{it}$$

Where:

ROA = Return on asset

$\beta_0, \beta_1 - \beta_4$ = parameters to be estimated

TDTA = Total-debt to total assets

TDTE = Total-debt to total equity

STDTA = Short-debt to total assets

LTDTA = Long-debt to total assets

FSIZE = Firm Size

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

it = Firm i at time t

IV. DISCUSSION AND FINDINGS

Descriptive Analysis

Descriptive measures of variables used in this study were presented on Table 4.2 below.

Table 4.1 Descriptive Statistics

Variables	ROA	TDTA	TDT E	STDT A	LTDT A	FSIZE
Mean	7.10	64.11	2.47	51.47	12.67	17.96
Median	4.72	63.82	1.70	53.27	10.14	18.09
Maximum	30.85	113.41	13.51	87.60	63.46	20.50
Minimum	-13.66	23.37	0.53	12.00	0.05	15.28
Std. Dev.	9.19	17.43	2.59	14.91	10.63	1.52
Skewness	0.36	0.32	2.86	-0.13	2.47	-0.16
Kurtosis	3.44	3.24	11.06	3.20	11.07	1.79
Jarque-Bera	2.05	1.40	284.90	3.32	261.43	4.53
Probabilit y	0.36	0.50	0.0000	0.85	0.000	0.10
Sum	496.9	4487.6	172.53	3602.9	886.79	1257.
	1	5	6	7		23
Sum Sq.	5827.	20954.	464.5	15349.	7793.1	1160.0
Dev.	39	14	4	53	0	8
Observatio ns	70	70	70	70	70	

Source: Author's computation using Eviews version 9.0

Keys: ROA=Return on Assets, TDTA=Total Debt-to-Total Assets, TDTE=Total Debt-to-Total Equity, STDTA= Short-Term Debt to Total Assets, LTDTA=Long-Term Debt to Total Asset and FSIZE = Firm Size

The descriptive statistics of the variables are shown in Table 4.1 above. The statistics include mean, standard deviation, maximum, minimum, skewness, and kurtosis, as well as the Jarque-Bera statistics. The descriptive statistics covered the 10-year time series and 7 cross-sections, making up 70 observations for data analysis. The return on assets (ROA) which is a

dependent variable, recorded an approximate mean, median, and standard deviation of 7.10, 4.72, and 9.19, respectively. This indicates moderate profitability across the sampled firms, though the relatively high standard deviation suggests considerable variation in performance among the companies. For the independent variables: Total debt to total assets ratio (TDTA) recorded a mean of 64.11, a median of 63.82, and a standard deviation of 17.43, indicating moderate leverage with some variability among firms. Total debt to total equity ratio (TDTE) had a mean of 2.47, a median of 1.70, and a standard deviation of 2.59, suggesting that most firms maintain low to moderate reliance on equity versus debt financing, though some outliers exist. Short-term debt to total assets ratio (STDTA) recorded a mean of 51.47, a median of 53.27, and a standard deviation of 14.91, showing that short-term debt constitutes a substantial portion of the asset base for many firms. Long-term debt to total assets ratio (LTDTA) had a mean of 12.67, a median of 10.14, and a standard deviation of 10.63, indicating relatively lower reliance on long-term debt compared to short-term debt, but with notable variation among firms. Firm size (FSIZE) was included as a control variable, recorded a mean of 17.96, a median of 18.09, a maximum of 20.50, a minimum of 15.28, and a standard deviation of 1.52. These values suggest that the sampled firms are generally large, with total assets distributed fairly consistently across the dataset. The skewness of -0.16 and kurtosis of 1.79 indicate a near-symmetric distribution with a relatively flat peak compared to a normal distribution, suggesting moderate variation but no extreme outliers in firm size. The Jarque-Bera statistic of 4.53 with a probability of 0.10 implies that the distribution of firm size is not significantly different from normal at the 5% significance level. The results show that the standard deviation of ROA is relatively larger than its mean, indicating wide variation and instability in profitability. The approximated minimum and maximum observations in the dataset were -13.66 and 30.85 for ROA, respectively, while for firm size, they were 15.28 and 20.50. The Jarque-Bera statistics were used to examine the normality of the distributions. Only STDTA, with a skewness of -0.13, recorded a near-normal skewness, while other variables, such as ROA (0.36), TDTA (0.32), TDTE (2.86), LTDTA (2.47),

and FSIZE (-0.16), exhibited varying degrees of skewness. TDTA and LTDTA showed leptokurtic distributions (kurtosis > 3), indicating long-right tails. Probability values suggest that the null hypothesis of normality can be rejected for TDTE (0.000) and LTDTA (0.000), while ROA (0.36), TDTA (0.50), STDTA (0.85), and FSIZE (0.10) can be considered normally distributed at the 5% significance level.

Correlation Analysis

The correlation analysis was conducted to examine the strength and direction of the linear relationships between variables. The results were presented in Table 4.2:

Table 4.2 Correlation Matrix

Variables	ROA	TDTA	TDTE	STDTA	LTDTA	FSIZE
ROA	1.00	-0.03	0.22	0.07	-0.14	-0.03
TDTA	-0.03	1.00	0.64	0.77	0.54	0.05
TDTE	0.22	0.64	1.00	0.34	0.56	0.29
STDTA	0.07	0.77	0.34	1.00	-0.09	-0.01
LTDTA	-0.14	0.54	0.56	-0.09	1.00	0.09
FSIZE	-0.03	0.05	0.29	-0.01	0.09	1.00

Source: Author's computation using Eviews version 9.0

Keys: ROA=Return on Assets, TDTA=Total Debt-to-Total Assets, TDTE=Total Debt-to-Total Equity, STDTA = Short-Term Debt to Total Assets, LTDTA=Long-Term Debt to Total Assets and FSIZE = Firm Size

The results in table 4.2 above indicate that ROA has a very weak negative relationship with TDTA ($r = -0.03$), suggesting that an increase in total debt relative to assets has a minimal effect on profitability in the sampled consumer goods firms. This finding is consistent with prior research, which indicates that

higher leverage can increase financial risk and reduce operational efficiency (Raza et al., 2023; Gul et al., 2022). Similarly, ROA shows a weak negative correlation with TDTE ($r = -0.22$), implying that the debt-to-equity ratio has only a slight inverse relationship with profitability. This observation aligns with studies by Nirajini and Priya (2020) and Mwangi et al. (2021), who found that equity financing may mitigate the impact of debt on firm performance. The correlation between ROA and STDTA is very weakly positive ($r = 0.07$), suggesting that short-term debt may marginally enhance financial performance. This could be due to the lower cost and greater flexibility of short-term financing, which allows firms to meet working capital needs efficiently (Ali et al., 2023; Pandey, 2022). Conversely, ROA and LTDTA exhibit a weak negative correlation ($r = -0.14$), indicating that reliance on long-term debt is slightly associated with lower profitability, potentially due to the long-term interest burden and repayment obligations (Ahmed & Wanjiru, 2023; Wambua et al., 2022). Firm size (FSIZE), included as a control variable, shows a very weak negative correlation with ROA ($r = -0.03$), indicating that the scale of the firm exerts minimal direct influence on financial performance in this dataset. While larger firms often benefit from economies of scale, greater access to resources, and stronger market presence, these advantages do not appear to significantly translate into higher ROA for the sampled consumer goods companies. Nonetheless, including FSIZE in the analysis is important, as it accounts for potential scale-related effects that could interact with capital structure in influencing profitability. The interrelationships among leverage variables also reveal noteworthy patterns. TDTA and TDTE are strongly positively correlated ($r = 0.64$), reflecting the consistency of these measures in capturing overall indebtedness. Similarly, TDTE and STDTA show a very strong positive correlation ($r = 0.77$), suggesting that firms with higher debt-to-equity ratios also rely considerably on short-term debt. TDTA and LTDTA are moderately positively correlated ($r = 0.54$), indicating that total debt growth is often accompanied by increased long-term debt. These findings demonstrate internal consistency among the leverage metrics and are supported by theoretical frameworks such as Modigliani and Miller (1958), which

highlight the interrelated nature of capital structure components, and Jensen and Meckling (1976), which emphasize the agency costs of debt in shaping firm strategy and financial outcomes.

Inferential Analysis

This section presents the results of inferential statistics that is in the form of Hausman test and panels multiple regression analysis of Least Square technique which was employed in estimating the influence of regressors on return on assets. The results were presented in Tables 4.3 and 4.4, respectively.

Table 4.3 Hausman Test Results

Test Type	Chi-Sq. Statistic	d.f	Prob.
Cross-section random	1.127675	5	0.9516
Period random	3.478967	5	0.6266
Cross-section & period random	5.779460	5	0.3283

As shown in Table 4.3, the p-values for all test types are substantially greater than the 0.05 significance level. This indicates that the null hypothesis, which states that the Random Effects Model is appropriate, cannot be rejected. Therefore, the REM is considered the most suitable model for estimating the relationships between capital structure variables, firm size, and financial performance in this study, and is used for further analysis and interpretation.

Table 4.4 Random Effects Regression Results

Dependent Variable	ROA (Return on Assets)			
Method	Panel EGLS (Cross-section random effects)			
Date	02/19/26 Time: 17:17			
Sample	2014-2023			
Periods included	10			
Cross-sections included	7			
Total panel (balanced) observations	70			
Variable	Coefficient	Std. Error	t-Statistic	Probability
Constant	11.95964	33.272	0.3594	0.7204

		40	46	
TDTA	0.052492	0.2973	0.1765	0.8604
		62	25	
TDTE	-	0.5773	-	0.0107
	1.517348	05	2.6283	
			30	
STDTA	0.073647	0.2904	0.2535	0.8007
		98	19	
LTDTA	-	0.3138	-	0.9164
	0.033076	02	0.1054	
			05	
FSIZE	-	1.8991	-	0.8186
	0.437472	88	0.2303	
			47	
Statistic				Value
R-squared				0.15731
				9
Adjusted R-squared				0.09148
				5
Prob(F-statistic)				0.04745
				4
Durbin-Watson stat				1.03313
				0

Source: Author's computation using E-views version 9.0

The random effects regression results, estimated using the Swamy and Arora component variance estimator, are presented in Table 4.4. The findings indicate that among the selected capital structure variables, total debt to equity (TDTE) has a significant negative effect on financial performance (ROA) at the 5% level ($\beta = -1.5173$, $p = 0.0107$). This suggests that firms with higher debt relative to equity experience lower profitability, likely due to increased financial obligations and interest costs, which supports prior studies highlighting the adverse impact of excessive leverage on firm performance (Onaolapo & Kajola, 2010; Saeedi & Mahmoodi, 2011). In contrast, total debt to total assets (TDTA) shows a positive but statistically insignificant effect on ROA ($\beta = 0.0525$, $p = 0.8604$), indicating that the overall proportion of assets financed by debt does not meaningfully influence profitability in this sample. Similarly, short-term debt to total assets (STDTA) and long-term debt to total assets (LTDTA) show very weak and insignificant relationships with ROA (STDTA: $\beta = 0.0736$, $p = 0.8007$; LTDTA: $\beta = -$

0.0331 , $p = 0.9164$), suggesting that the maturity structure of debt does not significantly explain variations in financial performance among the sampled consumer goods companies. Firm size (FSIZE) which is used as a control variable, has a negative but statistically insignificant effect on ROA ($\beta = -0.4375$, $p = 0.8186$). This implies that, within this sample, larger firms do not necessarily achieve higher profitability. While larger firms may benefit from economies of scale and greater access to resources, these advantages do not appear to translate into higher returns on assets for the listed consumer goods companies. Nevertheless, controlling for firm size remains important as it accounts for potential scale-related effects that may interact with debt structure. Regarding model fit, the R-squared value of 0.1573 indicates that approximately 16% of the variation in ROA is explained by the combined influence of the independent variables and firm size. The F-statistic p-value (0.0475) suggests that the model is statistically significant at the 5% level overall. However, the Durbin-Watson statistic of 1.0331, which is below the ideal value of 2, indicates potential positive autocorrelation in the residuals, suggesting that the model may be slightly misspecified or that relevant lagged variables may be omitted.

Summary of the Findings

In summary, the analysis indicates that among the selected capital structure variables, TDTE has the most pronounced negative effect on ROA, while TDTA, STDTA, LTDTA, and FSIZE do not significantly influence financial performance. These findings highlight the critical role of managing debt relative to equity to protect profitability. The model explains approximately 16% of the variation in ROA, as indicated by the R-squared value (0.1573), while the Durbin-Watson statistic (1.0331) suggests potential positive autocorrelation, warranting caution in interpreting results. Overall, the study confirms that careful management of capital structure, particularly debt-to-equity ratios, is essential for maintaining firm profitability in the Nigerian consumer goods sector.

V. CONCLUSION AND RECOMMENDATIONS

Conclusion

This study examined the effect of capital structure on the financial performance of listed consumer goods companies in Nigeria over the period 2014–2023, with firm size included as a control variable. The findings provide important insights into how leverage decisions influence profitability within the Nigerian consumer goods sector. The empirical results reveal that the debt-to-equity ratio (TDTE) exerts a statistically significant and negative effect on Return on Assets (ROA), indicating that excessive reliance on debt relative to equity diminishes firm profitability. This suggests that high financial leverage increases financial risk, interest burden, and potential distress costs, thereby eroding returns generated from assets. In contrast, total debt to total assets (TDTA), short-term debt to total assets (STDTA), long-term debt to total assets (LTDTA), and firm size (FSIZE) were found to be statistically insignificant in explaining variations in profitability during the study period. These findings imply that it is not merely the volume or composition of debt that determines performance, but rather the proportion of debt relative to equity financing. The negative and significant effect of TDTE aligns with the predictions of the Trade-Off Theory, which posits that although debt provides tax advantages, excessive leverage leads to increased bankruptcy risk and agency costs that ultimately reduce firm value. The results therefore suggest that many firms within the Nigerian consumer goods sector may be operating beyond their optimal capital structure threshold. Furthermore, the weak explanatory power of the model indicates that financial performance is influenced by additional factors beyond capital structure, such as macroeconomic conditions, operational efficiency, market competition, and corporate governance practices. The presence of possible autocorrelation also suggests that dynamic or lagged effects may exist in the capital structure performance relationship. In conclusion, the study establishes that debt management, particularly the balance between debt and equity financing, is a critical determinant of profitability in Nigerian consumer goods firms. Firms that maintain excessive debt relative to equity are likely to experience reduced performance. Therefore, achieving and maintaining an optimal capital

structure remains essential for sustaining profitability and enhancing shareholder value in the sector.

Recommendations

On the bases of the general findings of this study, it therefore recommends the following:

- i. Since the debt-to-equity ratio (TDTE) was found to have a significant negative effect on profitability, consumer goods firms should avoid excessive reliance on debt financing relative to equity. Management should strive to maintain an optimal capital structure that minimizes financial distress costs while maximizing returns. Excessive leverage increases interest burden and financial risk, which ultimately reduces return on assets.
- ii. Although short-term debt showed a positive but insignificant effect, its high average level indicates heavy dependence on short-term financing. Firms should gradually rebalance their financing structure by reducing excessive short-term obligations that may expose them to refinancing risk and liquidity pressures, especially during macroeconomic instability.
- iii. Firms should prioritize retained earnings and efficient cost management as alternative financing sources. Internal financing reduces exposure to external debt risk and helps maintain financial stability. Strengthening operational efficiency will also improve profitability beyond capital structure adjustments.
- iv. Given the negative effect of high debt-to-equity ratios, firms should adopt stronger financial risk management frameworks. Scenario analysis, sensitivity testing, and careful evaluation of borrowing costs should guide financing decisions to prevent over-leverage.
- v. Regulatory authorities such as the Nigerian Exchange Group should enhance monitoring mechanisms to ensure transparent disclosure of leverage levels and financial risk exposure. Improved corporate governance and disclosure standards will help investors assess firms' capital structure decisions more effectively.
- vi. Given the extended study period (2014–2023), which includes economic volatility and post-pandemic recovery, firms should align financing decisions with prevailing macroeconomic conditions. Borrowing decisions should account

for interest rate fluctuations, inflation, and exchange rate instability to avoid profitability erosion.

- vii. Since the model explains only 16% of variations in profitability, future studies should incorporate additional variables such as liquidity, corporate governance, asset turnover, inflation rate, and GDP growth to provide a more comprehensive understanding of determinants of financial performance in the Nigerian consumer goods sector.

These recommendations emphasize prudent debt management, balanced financing decisions, and strengthened risk control mechanisms as essential strategies for improving financial performance and ensuring long-term sustainability in the Nigerian consumer goods industry.

Contribution to Knowledge

This study contributes to knowledge by extending the analysis of capital structure and financial performance of listed consumer goods companies in Nigeria over a ten-year period (2014–2023), thereby capturing macroeconomic fluctuations and post-pandemic effects that earlier short-term studies overlooked. By focusing specifically on the consumer goods sector, the study improves sectoral relevance and external validity within the Nigerian context. It incorporates firm size as a control variable and applies panel regression techniques to control for unobserved heterogeneity, enhancing methodological rigor and reliability of findings. The study also provides empirical support for the Trade-Off Theory by demonstrating that excessive debt relative to equity significantly reduces profitability, suggesting that firms may exceed their optimal capital structure threshold. Overall, the research offers updated, context-specific, and methodologically robust evidence that deepens understanding of capital structure dynamics in emerging economies.

Limitations of the Study

- i. The study focused on a moderate sample size (70 observations), which limits generalizability.
- ii. The analysis was restricted to accounting-based financial performance (ROA); market-based measures like stock return were not included.

- iii. The study did not account for sectoral differences or macroeconomic shocks that may affect capital structure-performance dynamics.

Suggestions for Further Research

- i. Investigate the sector-specific impact of capital structure on financial performance across manufacturing, banking, and services.
- ii. Explore the role of corporate governance, ownership structure, and firm age as moderating variables.

Author's statements - Disclosures

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Data Availability- This study used secondary data, which was extracted from the audited annual reports and financial statements of selected listed consumer goods firms in Nigeria.

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