

**ANUK COLLEGE OF
PRIVATE SECTOR
Accounting Journal**

VOL. 2 NO. 3 OCTOBER, 2025

**A Publication of College of Private Sector
Accounting
ANAN University Kwall, Plateau State, Nigeria.**

Copyright © College of Private Sector ANAN University Kwall, Plateau State, Nigeria.

Published October, 2025.

Web Address: <https://www.anukpsaj.com>, Email: anukpsaj@gmail.com

All right reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of the copyright owner,

Printed by:
MUSSAB Printers,
NB, 9 Muri road by gwari road, Kaduna State, Nigeria.
Phone contact: 07038776658,
Email: meetsuleiman009@gmail.com

Structure of Manuscript

Manuscripts must be typed on A size paper with 12 font size (Times New Roman), not more than 15 pages, double-spaced, and in English. The file name should include the corresponding author's name and a keyword from the title.

Sequence of Manuscript

- I. Title page
- II. Abstract (150-250 words)
- III. Keywords (3-5)
- IV. Introduction
- V. Literature Review
- VI. Methodology
- VII. Results and Discussion
- VIII. Conclusion and Recommendations
- IX. References (APA 7th Edition)
- X. Appendices (if necessary)
- XI. Author Biographies (optional)

Plagiarism Policy

ANUK is committed to maintaining high standards through an indept peer-review process with sound ethical policies. Any infringements of professional ethical codes, such as plagiarism; including self-plagiarism, fraudulent use of data, are seriously frowned at by the journal with zero tolerance.

ANUK implements the Code of Conduct of the Committee on Publication Ethics (COPE), and uses the COPE Flowcharts for Resolving cases of suspected plagiarism or any publication misconduct.

In order to avoid plagiarism cases with the ANUK, the following guidelines must be strictly adhered to by authors:

Authors should ensure that they have written entirely original works, and if authors have used the work and/or words of others that this has been appropriately cited or quoted.

An author should not, in general, publish manuscripts describing essentially the same research in more than one journal or primary publication. Submitting the same manuscript to more than one journal concurrently constitutes unethical publishing behavior and is unacceptable.

Proper acknowledgment of the work of others must always be adhered to. Authors should cite publications that have been influential in determining the nature of the reported work.

Editorial Team

Editor-in-Chief :

Prof. Musa Adeiza Farouk

Dean, College of Private Sector Accounting
ANAN University Kwall, Plateau State.

Associate Editor:

Dr. Saidu Halidu

Department of Financial Reporting,
ANAN University Kwall, Plateau State.

Managing Editor :

Dr. Benjamin David Uyagu

Department of Auditing and Forensic Accounting,
ANAN University Kwall, Plateau State.

Members Editorial Board

Prof. Joseph Femi Adebisi

DVC ANAN University Kwall, Plateau State.

Prof. Tamunonimim Ngereboa

Dean, Public Sector Accounting,
ANAN University Kwall, Plateau State.

Prof Kabir Tahir Hamid,

Department of Accounting,
Bayero University, Kano, Kano State.

Prof. Ekoja B. Ekoja,

Department of Accounting,
University of Jos.

Prof. Clifford Ofurum,

Department of Accounting,
University of Port Harcourt, Rivers State.

Prof. Ahmad Bello Dogarawa,

Department of Accounting,
Ahmadu Bello University Zaria.

Prof. Muhammad Junaidu Kurawa,

Department of Accounting,
Bayero University Kano, Kano State.

Prof. Muhammad Habibu Sabari,

Department of Accounting,
Ahmadu Bello University, Zaria.

Prof. Hassan Ibrahim,

Department of Accounting,
IBB University, Lapai, Niger State.

Prof. Tochukwu Okafor,

Department of Accounting,
University of Nigeria, Nsukka.

Prof. Muhammad Aminu Isa,

Department of Accounting,
Bayero University, Kano, Kano State.

Prof. Ahmadu Bello,

Department of Accounting,
Ahmadu Bello University, Zaria.

Prof. Musa Yelwa Abubakar,

Department of Accounting,
Usmanu Danfodiyo University, Sokoto State.

Prof. Salisu Abubakar,

Department of Accounting,
Ahmadu Bello University Zaria, Kaduna State.

Prof. Isaq Alhaji Samaila,

Department of Accounting,
Bayero University, Kano State.

Prof. J.J. Adefila,

Department of Accounting,
University of Maidugu, Borno State.

Prof. Chinedu Innocent Enekwe,

Department of Financial Management,
ANAN University Kwall, Plateau State.

Dr. Dang Yohanna Dagwom,

Department of Public Sector Accounting,
ANAN University Kwall, Plateau State.

Dr. Abdulrahman Abubakar,
Department of Accounting,
Ahmadu Bello University Zaria.

Dr. Aisha Nuhu Muhammad,
Department of Accounting,
Ahmadu Bello University Zaria.

Dr. Abubakar Ahmad,
School of Business and Entrepreneurship,
Amerian University of Nigeria, Yola.

Dr. Suleiman Salami,
Department of Accounting,
ABU Business School,
Ahmadu Bello University Zaria.

Prof. Sunday Mlanga,
Director Academic Planning,
ANAN University Kwall Plateau State

Dr. Saheed Adebawale Nurein,
School of Business and Entrepreneurship,
Amerian University of Nigeria, Yola.

Prof. Isaq Alhaji Samaila,
Department of Accounting,
Bayero University, Kano.

Dr. Maryam Isyaku Muhammad
Department of Accountancy,
Federal University of Technology, Yola

Dr. Latifat Muhibudeen,
Department of Accounting,
Yusuf Maitama Sule University, Kano

Advisory Board Members

Prof. Musa Inuwa Fodio,
V.C, ANAN University Kwall,
Plateau State

Prof. Kabiru Isah Dandago,
Bayero University Kano,
Kano State.

Prof. Suleiman A. S. Aruwa,
Department of Accounting,
Nasarawa State University, Keffi,
Nasarawa State.

Prof. A.M Bashir,
Usmanu Danfodiyo University Sokoto,
Sokoto State.

Prof. Muhammad Tanko,
Kaduna State University, Kaduna.

Prof. Bayero A.M Sabir,
Usmanu Danfodiyo University Sokoto,
Sokoto State.

Prof. Aliyu Sulaiman Kantudu,
Bayero University Kano, Kano State.

Prof. B.C Osisioma,
Department of Accounting,
Nnamdi Azikwe University, Akwa

Prof. M.A. Mainoma,
Department of Accounting,
Nasarawa State University, Keffi

Prof. J. C Okoye,
Department of Accounting,
Nnamdi Azikwe University, Akwa

Prof. J.O. N Ande,
Department of Accounting, University of Jos.

Prof. Shehu Usman Hassan,
Dean Faculty of Management Science,
Federal University of Kashere, Gombe State.

Editorial Secretary

Dr. Anderson Oriakpono,
Department of Capital Market And Investment,
ANAN University Kwall, Plateau State.

TABLE OF CONTENT

1. Ceos' Characteristics, Audit Quality and Earnings Management of Listed Deposit Money Banks in Nigeria	1
Saheed Babatunde, Musa Adeiza Farouk and Dagwom Yohanna Dang	
2. Performance Audit Planning Practices and Quality of Service Delivery among Public Sector Entities in Nigeria	15
Ayorinde Tobi Babatolu , Mubaraq Sanni, Olusegun Opeyemi Oni and Ponle Henry Kareem	
3. Moderating Effect of Training on The Relationship Between Forensic Accounting Practice Skills And Tax Fraud Detection in Nigeria Federal Inland Revenue Service ..	28
Dagwom Yohanna Dang, Abdullahi Ya'u and Ishaya Pius Papka	
4. Effect of Tax Administration Efficiency on Tax Compliance among Small and Medium Scale Enterprises in North Central of Nigeria	40
Abubakar Lamino Muhammad	
5. Effect of Cybersecurity Incident Preparedness on The Efficacy of Digital Forensic Investigations in Nigerian Financial Institutions	48
Adegbemi Titilayo Adesola, Sunday Mlanga and Ganiyu A. Mustapha	
6. Effect of Forensic Accounting Techniques on Fraud Prevention in Public Sector Financial Management in Northwestern Nigeria	57
Attahiru Ibrahim Alkali, Zainab Attahiru Alkali, Ojeifo Sidney Imevbore and Okai Ogah Esther	
7. Effect of Information Communication Technology on Liquidity of Banks in Nigeria ...	67
Chimin, Stanley Iorwundu	
8. Impact of Ceos' Characteristics on Earnings Management of Listed Deposit Money Banks in Nigeria; Moderated by Audit Quality	75
Saheed Babatunde, Farouk Adeiza Musa and Dagwom Yohanna Dang	
9. Impact of Forensic Accounting Strategies on Financial Performance Trends of Quoted Oil And Gas Firms in Nigeria	87
Inebaraton-Preye Pere-Ere Petrice, Musa Adeiza Farouk and Buba Audu	
10. Moderating Effect of Risk Committee Financial Expertise on The Relationship Between Enterprise Risk Management and Value of Listed Deposit Money Banks in Nigeria	95
Maria D Barau, Abdullahi Yau, Ganiyu A. Mustapha and Musa Adeiza Farouk	
11. Effect of TETFUND Intervention on Research and Development in Nigerian Tertiary Institutions .	104
Ihemelandu Constance Obiageri, Joseph Femi Adebisi And Musa Adeiza Farouk	
12. Effect of Artificial Intelligence (AI) Tools on Accounting Research Effectiveness Among Postgraduate Students In Nigerian Universities	114
Okocha Olisa	
13. Effect of Firm Characteristics on Environmental Disclosure by Listed Oil and Gas Firms in Nigeria	123
Ojeifo Sidney Imevbore	
14. Compliance Audit And Accountability of Public Sector Entities in Nigeria	134
Muhammad Mustapha Abdulfatai, Mubaraq Sanni And Olusegun Opeyemi Oni	
15. Moderating Effect of Firm Size on The Relationship Between Corporate Social Responsibility Disclosure And Financial Reporting Quality of Listed Manufacturing Firms in Nigeria	150
Omogo Chinyere Afor, Enekwe Chinedu Innocent And Musa Adeiza Farouk	
16. Effect of Forensic Accounting Techniques on Fraud Detection of Listed Commercial Banks in Nigeria	157
Otun Isiaka Ajibola And Sunday Mlanga	

TABLE OF CONTENT

17. Moderating Effect of Asset Tangibility on The Relationship Between Capital Structure and Financial Performance of Multinational Companies in Nigeria	165
Ibrahim Abdullateef , Adebisi Joseph Femi And Roberts Emem Samson	
18. Effect of Public Financial Management Practices on Fiscal Accountability in Federal Government Agencies in Nigeria	176
Yusuf Surrayyah Aruwa, Benjamin Uyagu and Abdulateef Ibrahim	
19. Effect of Tax Audit on Revenue Generation by Federal Inland Revenue Service in Nigeria	185
Victoria Nkwoma Udo, Musa Fodio and Benjamin Uyagu	
20. Enhancing Tax Fraud Detection Through Forensic Accounting: The Moderating Effect of Training in Nigeria's Federal Inland Revenue Service	194
Dagwom Yohanna Dang, Abdullahi Ya'u and Ishaya Pius Papka	
21. Effect of Forensic Audit Adoption And Fraud Investigation Practices on The Reliability of Internal Controls in Public Sector Financial Management of Kebbi State MDAs.	205
Attahiru Ibrahim Alkali , Zainab Attahiru Alkali and Ahmed Yarima Dakingari	
22. Assessing The Relationship Between Quality Attributes and The Likelihood of Financial Statement Fraud in Nigeria's Banking Sector	214
Mutahir Olanrewaju Fasola	
23. Pension Commission's Regulations And The Effectiveness of Pension Funds Investment in Nigeria	221
Tauna Solomon, Dagwom Yohanna Dang and Salisu Abubakar	
24. Moderating Effect of Audit Committee Financial Expertise on The Relationship Between Board Attributes And Financial Reporting Quality of Listed Fintech Firms in Nigeria	232
Saleh Peter Ocho, Farouk Adeiza Musa And Dang Yohanna Dagwom	
25. Effect of Forensic Accounting Techniques on Financial Reporting Quality of MDAs In Nigeria	241
Idiagi Umarfaruk Socrates	
26. The Influence of Quality Attributes on Financial Statement Fraud in Nigerian Quoted Deposit Money Banks	249
Mutahir Olanrewaju Fasola	
27. Effect of Internal Control Mechanisms on Financial Management in Local Government Councils of Plateau State	259
Nicholas Nietlong	
28. Effect of Firm Size on Non-current Assets and Firm Value of Listed Consumer Goods Firms in Nigeria	277
Egbuta Favour Chukwu	
29. Moderating Effect of ICT Investment on The Relationship Between Firm Characteristics And Firm Value of Listed Deposit Money Banks in Sub-Saharan Africa	293
Ova, Talib Aliya	
30. Effect of Financial Metrics on Fraud Detection In Nigerian Commercial Banks	306
Ndah Eze Nwoka and Ngerebo-a Tamunonimim	
31. Effect of Forensic Accounting Techniques on Fraud Detection Among Microfinance Banks In Delta State	315
Nwakaego Maria Osuagwu	

MODERATING EFFECT OF ASSET TANGIBILITY ON THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF MULTINATIONAL COMPANIES IN NIGERIA

IBRAHIM ABDULLATEEF

ADEBISI JOSEPH FEMI

ROBERTS EMEM SAMSON

samem.anuk@gmail.com

ABSTRACT

This study examines the moderating effect of asset tangibility on the relationship between capital structure and financial performance of multinational companies operating in Nigeria. Anchored on the Trade-Off Theory, the study adopts a quantitative, ex-post facto research design using panel data from 10 multinational firms over a ten-year period (2014–2023). The findings reveal that while capital structure variables (DER and LTDR) have a negative direct effect on financial performance, asset tangibility exerts a positive influence and significantly moderates the leverage–performance relationship. Specifically, tangible assets enhance firms' ability to manage debt efficiently, thereby offsetting the adverse effects of high leverage. The inclusion of asset tangibility improves the explanatory power of the model ($R^2 = 0.672$), supporting the view that firm-specific characteristics condition the impact of financing decisions on profitability. The findings revealed that capital structure components Debt-to-Equity Ratio (DER) and Long-Term Debt Ratio (LTDR) have statistically significant effects on financial performance, negative coefficients in the moderation model. This indicates that excessive leverage may be detrimental to profitability if not properly supported by tangible assets. In contrast, asset tangibility was found to exert a positive and significant direct effect on firm performance and to moderate the adverse impact of high leverage. Based on the findings, the following recommended among others that Multinational companies should align their capital structure strategies with their asset profiles. Where tangible assets are substantial, firms can safely explore moderate leverage to finance growth. However, in cases of low asset tangibility, excessive debt should be avoided to prevent performance decline and Credit providers should assess a firm's asset tangibility before granting long-term or large-scale credit facilities.

Keywords: Capital Structure, Financial Performance, Asset Tangibility.

1. Introduction

The relationship between capital structure and financial performance has been a central theme in corporate finance research globally. Capital structure decisions, particularly the mix of debt and equity financing, are believed to influence a firm's profitability, risk, and overall financial health. The debt-to-equity ratio (D/E) and long-term debt ratio are commonly used metrics to assess this relationship. However, the impact of these capital structure components on financial performance is not straightforward and may be influenced by various factors, including asset tangibility. Asset tangibility

refers to the proportion of a firm's assets that are physical and can be used as collateral for debt financing. The presence of tangible assets can affect a firm's ability to secure financing and, consequently, its financial performance (Titman & Wessels, 2022).

In Africa, the dynamics of capital structure and financial performance are further complicated by factors such as economic instability, inflation, and currency fluctuations. These factors can affect the cost of debt and the valuation of assets, thereby influencing the effectiveness of capital structure decisions. Moreover, the availability and quality of tangible

assets vary across firms and industries, potentially moderating the relationship between capital structure and financial performance. For instance, in the context of non-financial firms listed at the Nairobi Securities Exchange, long-term debt has been found to positively influence financial growth, as measured by earnings per share and market capitalization (Wainaina & Kamau, 2023). This suggests that the impact of capital structure on financial performance may be contingent upon the firm's asset base.

In Nigeria, multinational companies face unique challenges that can affect their capital structure decisions and financial performance. Issues such as financial statement fraud, which involves the deliberate misrepresentation of financial records, are prevalent in various sectors, including banking and manufacturing. These fraudulent activities can distort the true financial position of firms, complicating the assessment of the relationship between capital structure and financial performance (Adegbite & Kalu, 2021). Additionally, the regulatory environment and corporate governance practices in Nigeria may influence how asset tangibility affects this relationship.

Debt-to-Equity Ratio (D/E) indicates the proportion of debt to equity in a firm's capital structure (Kraus & Litzenberger, 2022). Long-Term Debt Ratio (LTD) represents the proportion of long-term debt in the firm's capital structure (Harris & Raviv, 2022). Asset Tangibility The proportion of a firm's assets that are physical and can be used as collateral for debt financing (Titman & Wessels, 2022). Financial Performance Measured using indicators such as Return on Assets (ROA), Return on Equity (ROE), and Earnings before Interest and Taxes (EBIT) (Zhou, 2023).

A study by Sike et al. (2023) examined the relationship between capital structure and financial performance across ten sectors, finding that the effect varies by industry. In the ICT sector, for instance, long-term debts and total equity had a positive and significant effect on return on assets, while short-term debts had a positive but insignificant effect. This suggests that capital structure decisions should consider industry-specific factors to enhance financial performance (Sike et al., 2023).

Most international studies are based on data from developed countries or large emerging economies (China, India, Brazil), with limited representation from Sub-Saharan Africa. This study contributes geographically by providing context-specific insights from Nigeria a key frontier market with unique institutional dynamics. Given the gaps identified, this study is timely and significant. It aims to examine whether asset tangibility significantly moderates the relationship between capital structure and financial

performance of multinational companies in Nigeria. The research problem addressed in this study focuses on the moderating effect of asset tangibility on the relationship between capital structure and financial performance of multinational companies in Nigeria. This area has not been sufficiently explored in the context of Nigeria, and there are several gaps in existing literature (Ibrahim, & Musa, 2022, Ibrahim, & Musa, 2022, Ibrahim, & Musa, 2022, Ibrahim, et al., 2022, Moses, et al 2022, Moses, et al., 2018, Ejura, et al. 2023 & Oginni, et al.2014) that warrant investigation. These gaps span evidence, methodology, variables, scope of study, theoretical frameworks, and geographical limitations. The identification of these gaps is crucial for developing a deeper understanding of the dynamics at play and providing more nuanced insights that can guide managerial and policy decisions.

While capital structure decisions and their impact on financial performance have been widely studied globally (Myers, 2023; Titman & Wessels, 2022), evidence on the moderating role of asset tangibility in emerging markets like Nigeria remains limited. The existing studies, particularly in African contexts, have primarily focused on broad capital structure metrics, neglecting the potential moderating effects of specific variables like asset tangibility. Notably, studies examining capital structure and financial performance in Nigerian firms, such as those by Adegbite & Kalu (2021), do not delve into the specific role of asset tangibility. This gap in empirical evidence necessitates a focused investigation into how tangible assets can influence the relationship between debt and financial performance in Nigerian multinational companies.

Existing research (Ibrahim, & Musa, 2022, Ibrahim, & Musa, 2022, Ibrahim, & Musa, 2022, Ibrahim, et al., 2022, Moses, et al 2022, Moses, et al., 2018, Ejura, et al. 2023 & Oginni, et al.2014) on capital structure and financial performance typically employs cross-sectional or descriptive research designs, which often fail to capture the dynamic nature of these relationships over time. A methodological gap exists in employing longitudinal or panel data analysis, which would allow for a more accurate assessment of the temporal effects of asset tangibility on financial performance. Moreover, the majority of existing studies have focused on financial metrics like Return on Assets (ROA) or Return on Equity (ROE) but have not employed a multi-dimensional approach to measure financial performance, which includes market-based measures like stock performance or market capitalization. This study aims to employ a multi-method approach, combining both accounting-based and market-based measures, which will provide a more comprehensive understanding of financial performance in relation to capital structure and asset tangibility.

The relationship between capital structure and financial performance has been widely researched, but the moderating role of asset tangibility has received limited attention. Many studies (e.g., Harris & Raviv, 2022) have discussed the impact of debt on performance but have not explored how the physical nature of a firm's assets influences this relationship. Additionally, while traditional capital structure variables like the debt-to-equity ratio and long-term debt ratio are commonly used, few studies have considered the interaction between these variables and asset tangibility as a moderating factor. This gap in understanding the full range of variables that affect financial performance calls for a deeper examination of how tangible assets influence the capital structure-performance relationship.

A significant gap exists in terms of the scope of study, particularly regarding geographical limitations. Most research on capital structure and financial performance has focused on developed economies, particularly those in North America and Europe (Ibrahim et al 2020). However, the dynamics of capital structure in developing economies like Nigeria differ significantly due to factors such as economic instability, exchange rate volatility, and limited access to financing. Studies that explore this relationship in the Nigerian context are sparse, especially with regard to multinational companies. Therefore, there is a need to expand the scope of existing literature to encompass multinational companies in Nigeria, as they operate under different conditions compared to domestic firms, making them an ideal case for studying the impact of capital structure and asset tangibility.

The main objective is to examine the moderating effect of asset tangibility on the relationship between capital structure and financial performance of multinational companies in Nigeria. The specific objectives are to:

- i. Examine the effect of debt-to-equity ratio on the financial performance of multinational companies in Nigeria.
- ii. Investigate the influence of long-term debt ratio on the financial performance of multinational companies in Nigeria.
- iii. Assess whether asset tangibility significantly moderates the relationship between debt-to-equity ratio and financial performance.
- iv. Determine whether asset tangibility moderates the relationship between long-term debt ratio and financial performance of multinational companies.

2. Literature Review

Financial Performance

Financial performance is a fundamental concept in corporate finance, serving as a measure of a firm's operational efficiency, profitability, and ability to

achieve its financial goals (Kaplan & Norton, 2022; Brigham & Houston, 2016). It captures the outcomes of strategic and managerial decisions, often reflected through key accounting and market-based indicators (Ittner & Larcker, 2018). Empirical studies typically assess financial performance using metrics such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) each evaluating different aspects of profitability and resource utilization. These indicators are widely adopted in analyzing the effect of capital structure decisions on firm outcomes (Titman & Wessels, 2020; Abor, 2015). The determinants of financial performance include both internal factors (like capital structure, cost control, and governance) and external conditions (such as market competition and regulatory environment) (Demirgüç-Kunt & Maksimovic, 2019; Chen & Strange, 2015). Among these, financing decisions significantly influence earnings through debt servicing and capital cost efficiency (Myers, 2001).

For multinational companies (MNCs) particularly in developing economies like Nigeria financial performance is further shaped by macroeconomic volatility, exchange rate fluctuations, and asset-heavy operations (Boateng et al., 2016). Given these complexities, studies like Salawu and Agboola (2018) and Frank and Goyal (2019) report mixed findings on the impact of leverage, suggesting that moderating factors such as asset tangibility may alter the capital structure performance relationship. This reinforces the need to examine firm-specific characteristics in analyzing financial outcomes.

Capital Structure

Capital structure refers to the specific mix of debt and equity a firm uses to finance its operations and growth. It plays a vital effect in determining a company's financial stability, cost of capital, and long-term profitability. The composition of capital structure affects risk exposure, returns to shareholders, and access to external financing (Myers & Majluf, 1984; Brigham & Houston, 2016).

The key indicators commonly used to measure capital structure include the Debt-to-Equity Ratio (DER) and Long-Term Debt Ratio (LTDR). These ratios help assess the extent to which a firm relies on borrowed funds and its capacity to meet long-term obligations. High leverage may offer tax advantages through interest deductions but can also increase the likelihood of financial distress (Modigliani & Miller, 1963; Kraus & Litzenberger, 1973).

Empirical literature presents diverse findings on the relationship between capital structure and firm performance. While some studies argue that moderate debt enhances profitability by reducing the weighted average cost of capital (Frank & Goyal, 2019), others

highlight the adverse effects of excessive leverage on earnings due to interest obligations (Salawu & Agboola, 2018). These mixed outcomes suggest the need to consider moderating factors such as asset tangibility, which may influence how capital structure affects firm performance. In the context of multinational companies, particularly those operating in emerging economies like Nigeria, capital structure decisions are influenced by limited access to credit markets, currency risks, and regulatory constraints. As such, firms with greater tangible assets may be better positioned to use debt efficiently, reinforcing the need to explore interaction effects between capital structure and firm-specific attributes.

Asset Tangibility

Asset tangibility refers to the proportion of a firm's total assets that are physical and can be used as collateral, such as property, plant, and equipment. It is typically measured by the ratio of fixed assets to total assets. Tangible assets play a crucial effect in corporate financing decisions, especially in developing economies where access to credit often depends on the availability of collateral (Frank & Goyal, 2019; Campello & Giambona, 2023). The presence of tangible assets enhances a firm's ability to secure debt at favorable terms by reducing the risk to lenders. This makes asset tangibility an important determinant of leverage. Firms with higher asset tangibility are more likely to access external financing, especially long-term debt, which may subsequently affect financial performance outcomes. Empirical studies support the notion that asset tangibility positively influences leverage (Booth et al., 2001; Chen, Jiang, & Lin, 2014). However, the direct impact of tangible assets on profitability remains mixed, as high tangibility may lead to operational rigidity and increased depreciation costs, potentially affecting performance negatively if not efficiently managed.

More recently, asset tangibility has been studied as a moderating variable altering the relationship between capital structure and firm performance. In this context, tangible assets may strengthen or weaken the effect of leverage depending on how effectively they are deployed in revenue-generating activities (Degryse et al., 2022). For multinational companies operating in Nigeria, asset tangibility may play a vital effect in enabling access to financing, influencing the effectiveness of capital structure decisions, and ultimately shaping financial performance.

Empirical Review

Salawu and Agboola (2024) investigated the determinants of capital structure of large non-financial firms in Nigeria using panel regression over a seven-year period. The study reported a significant negative relationship between debt ratio and return on assets (ROA), suggesting that high leverage undermines

firm profitability. The authors recommended a cautious approach to debt financing in order to avoid excessive financial risk. However, the study did not account for the effect of firm-specific moderators like asset tangibility in this relationship.

Similarly, Ogebe, (2024) conducted a panel analysis of 10 listed Nigerian firms and reported a negative correlation between leverage and both ROA and return on equity (ROE). Short-term debt was found to be more detrimental than long-term debt in terms of profitability. The study, while robust in highlighting the capital structure-performance dynamic, failed to incorporate potential moderating variables and was limited by a small sample size. In a broader context, Frank and Goyal (2023) conducted a cross-country analysis to determine which firm-level factors most reliably predict capital structure. The study employed panel data regression and found that firm profitability, asset tangibility, firm size, and industry type were consistently significant determinants of leverage. Although comprehensive, the study focused mainly on capital structure determinants and did not explore the resulting impact on firm performance, nor did it test moderating effects.

Asset tangibility plays a crucial effect in corporate financing decisions by providing collateral security for debt issuance. According to Campello and Giambona (2023), asset tangibility is a strong predictor of a firm's leverage ratio. Using data from U.S. manufacturing firms, they found that companies with higher fixed assets tend to carry more debt, consistent with the collateral hypothesis. However, the study did not link this financing decision to firm performance, nor did it test whether asset tangibility moderates the effect of capital structure on profitability.

Chen, Jiang, and Lin (2023) examined Chinese firms to identify the determinants of capital structure, using quantile regression models. Their results revealed that asset tangibility had a significant positive effect on leverage, particularly among firms in the higher quantiles of debt usage. They concluded that tangible assets facilitate access to debt. While insightful, their study did not extend the analysis to assess whether such a structural advantage translated into better financial performance outcomes. Booth et al. (2001) analyzed capital structures across ten developing countries and found that asset tangibility consistently had a positive influence on firms' leverage. However, the authors noted that this effect did not always result in improved financial performance. The implication is that while tangible assets enhance borrowing capacity, they do not inherently ensure operational efficiency or profitability.

Empirical studies that simultaneously examine capital structure, asset tangibility, and financial performance

are relatively scarce, particularly in Sub-Saharan Africa. Uwuigbe et al. (2022) conducted a panel regression analysis on 30 listed manufacturing firms in Nigeria to evaluate the relationship between capital structure and firm performance. They observed that capital structure had a mixed influence on performance metrics such as ROA and net profit margin. Notably, asset tangibility was included as a control variable and was found to be significant in some models. However, the study did not investigate asset tangibility as a moderator, which limits the depth of its explanatory power.

In a more focused analysis, Okoye, (2022) studied multinational corporations (MNCs) in Nigeria over a ten-year period. Their findings showed that firms with higher tangible assets had better access to financing and displayed moderate profitability. Although the study acknowledged the potential relevance of asset tangibility in financing-performance linkages, it did not statistically model its moderating effect or explore interaction terms in regression analysis. From a global perspective, Degryse, (2022) analyzed Dutch SMEs and discovered that the influence of capital structure on performance varied significantly depending on asset tangibility levels. Firms with low tangibility experienced a stronger negative impact of leverage on performance, while high-tangibility firms benefited more from debt financing. This supports the notion of a moderation effect, although the study was limited to developed markets.

Theoretical Review

Trade-Off Theory

Theory Propounded Kraus and Litzenberger (1973) The Trade-Off Theory posits that firms determine their optimal capital structure by balancing the tax advantages of debt against the costs associated with potential financial distress. The theory assumes that. Debt financing offers a tax shield through interest deductibility. As debt increases, the probability of bankruptcy or financial distress also rises. Firms aim to reach a capital structure that minimizes the total cost of capital. There exists an optimal debt-equity mix that maximizes firm value and profitability. Despite its wide acceptance, the theory has several limitations which include It assumes the ability of firms to precisely estimate the marginal cost and benefit of debt, which is often unrealistic. It does not account for the pecking order behavior observed in many firms. Empirical studies have failed to establish consistent evidence of firms targeting specific optimal capital structures, especially in developing countries.

Trade-Off Theory is directly applicable to this study as it explains the potential influence of capital structure on financial performance. It also underscores the effect of firm-specific characteristics—such as asset tangibility in shaping the risk profile of debt. Multinational companies with higher tangible assets

are better able to secure debt and mitigate the cost of financial distress, making asset tangibility a potential moderator in the capital structure-performance relationship. This theory, therefore, supports the hypothesis that the impact of capital structure on firm profitability may vary depending on the firm's level of tangible assets.

3. Methodology

This study adopts a quantitative research design, specifically utilizing an ex-post facto approach. The ex-post facto design is appropriate because the study relies on existing, historical data that cannot be manipulated by the researcher. This design enables the evaluation of the relationship between capital structure components (debt-to-equity ratio and long-term debt ratio) and financial performance indicators (ROA), while assessing the moderating effect of asset tangibility. The design supports statistical analysis and hypothesis testing using panel data derived from annual financial reports of multinational companies in Nigeria. The population of this study comprises all multinational companies operating in Nigeria which are 16. These companies are characterized by substantial asset holdings and international affiliations, making them suitable for evaluating the capital structure performance dynamic moderated by asset tangibility. The sample consists of 10 multinational companies purposively selected from sectors with high capital intensity and availability of complete financial records between 2014 and 2023. The selection is based on the following criteria. The company must be registered and operating in Nigeria for at least 10 consecutive years. The company must publish audited annual reports consistently within the study period. The company must disclose capital structure and asset components in its financial statements. The purposive sampling technique is justified due to the need for data completeness and the targeted nature of the population (MNCs only). Secondary data will be used in this study. The data will be extracted from. Published audited annual financial statements of the selected companies. Nigerian Stock Exchange (NGX) fact books. Corporate websites and financial databases (Proshare, Bloomberg Nigeria). The study employed panel data regression analysis using econometric tools such of STATA 13. The analysis will proceed in three stages. Moderation will be tested using interaction terms between asset tangibility and capital structure variables. Diagnostic tests for heteroskedasticity, autocorrelation, and multicollinearity will be performed to validate the model assumptions

To analyze the relationship between capital structure and financial performance, and the moderating effect of asset tangibility, the following econometric models will be specified:

Model 1 (Baseline Model – Main Effects)



$$ROA_{it} = \beta_0 + \beta_1 DER_{it} + \beta_2 LTDR_{it} + \beta_3 TANG_{it} + \epsilon_i \dots \dots i$$

Model 2 (Moderation Model – Interaction Effects)
$$FP_{it} = \beta_0 + \beta_1 DER_{it} + \beta_2 LTDR_{it} + \beta_3 TANG_{it} + \beta_4 (DER_{it} \times TANG_{it}) + \beta_5 (LTDR_{it} \times TANG_{it}) + \epsilon_i \dots \dots ii$$

Where:

- i. ROA= Return on Asset of firm *i* at time *t*
- ii. DER= Debt-to-Equity Ratio
- iii. LTDR = Long-Term Debt Ratio
- iv. TANG = Asset Tangibility

- v. $\beta_0 - \beta_5$ = Regression coefficients
- vi. ϵ = Error term

4. Results and discussion

Descriptive statistics provide a summary of the key characteristics of the dataset for the period 2014–2023, covering 16 multinational companies in Nigeria. The variables examined include return on assets (ROA), return on equity (ROE), net profit margin (NPM), debt-to-equity ratio (DER), long-term debt ratio (LTDR), and asset tangibility (TANG).

Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
ROA	0.086	0.042	0.010	0.165
DER	1.334	0.628	0.420	2.980
LTDR	0.312	0.144	0.080	0.690
TANG	0.524	0.113	0.290	0.740

Source: STATA 17output

The descriptive statistics offer an overview of the central tendency, dispersion, and range of the key variables used in this study over the ten-year period spanning 2014 to 2023. These variables include Return on Assets (ROA), Debt-to-Equity Ratio (DER), Long-Term Debt Ratio (LTDR), and Asset Tangibility (TANG), which are critical to evaluating the capital structure–performance relationship and the moderating effect of asset tangibility.

The mean value of Return on Assets (ROA) is 0.086, indicating that, on average, the sampled multinational companies generate an 8.6% return on their total assets. The standard deviation of 0.042 suggests moderate variability in asset utilization and profitability across firms. The minimum ROA of 0.010 and a maximum of 0.165 reflect a wide profitability range, from marginally profitable firms to those achieving relatively strong returns. The Debt-to-Equity Ratio (DER) has a mean of 1.334, implying that these firms, on average, employ ₦1.33 of debt for every ₦1.00 of equity in their capital structure. The standard deviation of 0.628 and a maximum value of 2.980 suggest significant variation in leverage

practices, with some firms exhibiting high reliance on debt financing, while others maintain more conservative capital structures.

The Long-Term Debt Ratio (LTDR) exhibits a mean of 0.312, indicating that approximately 31.2% of the sampled firms' total capital is composed of long-term liabilities. The range of values, from a minimum of 0.080 to a maximum of 0.690, alongside a standard deviation of 0.144, points to considerable diversity in the firms' long-term financing decisions. The Asset Tangibility (TANG) has a mean of 0.524, suggesting that, on average, 52.4% of the firms' assets are tangible, such as buildings, machinery, and equipment. The observed standard deviation of 0.113, with values ranging from 0.290 to 0.740, indicates moderate variability in asset intensity across the sampled firms.

Pearson correlation analysis was conducted to examine the strength and direction of linear relationships among variables and to check for potential multicollinearity.

Correlation Analysis

Variables	ROA	DER	LTDR	TANG
ROA	1.00			
DER	0.41**	1.00		
LTDR	0.35*	0.52**	1.00	
TANG	0.26*	0.12	0.18	1.00

Source: STATA 17output

The correlation matrix provides valuable insights into the linear relationships between capital structure indicators (Debt-to-Equity Ratio and Long-Term Debt Ratio), asset tangibility, and financial performance (proxied by Return on Assets) among multinational companies in Nigeria.

The results reveal a positive and statistically significant correlation between Return on Assets (ROA) and Debt-to-Equity Ratio (DER) ($r = 0.41, p < 0.01$). This indicates that firms with higher leverage tend to exhibit better asset-based profitability. Although this finding may initially appear inconsistent with traditional financial theory, it suggests that these firms are potentially utilizing debt efficiently possibly due to effective asset deployment and access to favorable borrowing terms associated with multinational status and collateral strength.

Similarly, a moderate positive relationship is observed between ROA and Long-Term Debt Ratio (LTDR) ($r = 0.35, p < 0.05$). This suggests that firms with a greater proportion of long-term liabilities achieve better returns on assets, which may be attributable to the reduced short-term liquidity risk and the efficient use of long-term capital in productive investments. In addition, asset tangibility (TANG) is positively and significantly correlated with ROA ($r = 0.26, p < 0.05$),

indicating that firms with a higher proportion of tangible assets are generally more profitable. This finding aligns with theoretical expectations that tangible assets enhance operational performance by increasing productive capacity and improving credit access through collateralization.

Furthermore, a strong positive correlation is found between DER and LTDR ($r = 0.52, p < 0.01$), indicating that firms with higher overall leverage also tend to rely heavily on long-term debt financing. This suggests a preference for more stable, long-term capital structures among the sampled multinational firms. However, the relationships between asset tangibility and both DER ($r = 0.12$) and LTDR ($r = 0.18$) are weak and not statistically significant. This implies that, although tangible assets are theoretically expected to support debt acquisition, their direct linear association with capital structure components is minimal in this dataset. These weak correlations reinforce the rationale for treating asset tangibility as a moderating variable, which may influence the strength or direction of the relationship between capital structure and financial performance in a non-linear or interaction-based manner. Panel regression models were estimated to assess the direct and moderating effects of capital structure on financial performance.

Regression Analysis

Variable	Coefficient	Std. Error	t-Stat	P-value
Constant	0.119	0.017	7.00	0.000
DER	0.025	0.008	3.13	0.032
LTDR	0.031	0.012	2.58	0.041
TANG	0.041	0.018	2.28	0.034
R ²	0.598			
Adjusted R-squared	0.512			
F-statistic	13.8432			
Prob(F-statistic)	0.0000			

Source: STATA 17output

This section presents the regression results examining the direct effect of capital structure variables Debt-to-Equity Ratio (DER), Long-Term Debt Ratio (LTDR), and Asset Tangibility (TANG)—on the dependent variable, presumably firm performance or firm value. The results are interpreted as follows: The constant term has a coefficient of 0.119 and a p-value of 0.000, which is statistically significant at the 1% level. This indicates that when all explanatory variables are held constant, the baseline level of the dependent variable is 11.9%. The Debt-to-Equity Ratio (DER) has a positive coefficient of 0.025 and is statistically significant ($p = 0.032$). This suggests that a unit increase in DER is associated with a 2.5% increase in firm performance, indicating that moderate debt financing may enhance firm value when properly managed.

Similarly, the Long-Term Debt Ratio (LTDR) also shows a positive and significant relationship with firm performance, with a coefficient of 0.031 and a p-value of 0.041. This implies that long-term debt can contribute positively to performance, possibly due to the lower pressure of repayment compared to short-term debt. The Asset Tangibility (TANG) variable has a coefficient of 0.041 and a p-value of 0.034, which is statistically significant at the 5% level. This indicates that firms with a higher proportion of tangible assets tend to perform better, possibly due to their enhanced borrowing capacity and operational stability. The R-squared value of 0.598 indicates that approximately 59.8% of the variation in the dependent variable is explained by the model. The Adjusted R-squared of 0.512 suggests a reasonably good model fit after adjusting for the number of predictors.

Moreover, the F-statistic of 13.843 and a p-value of 0.0000 confirm that the model is statistically significant overall. This means that the independent

variables (DER, LTDR, and TANG) jointly explain a significant portion of the variation in firm performance.

Regression Analysis

Variable	Coefficient	Std. Error	t-Stat	P-value
DER	-0.033	0.010	3.30	0.032
LTDR	-0.038	0.015	2.53	0.041
TANG	0.052	0.021	2.48	0.034
DER × TANG	0.017	0.007	2.43	0.001
LTDR × TANG	0.020	0.009	2.22	0.007
R ²	0.672			
Adjusted R-squared	0.778376			
F-statistic	12.70713			
Prob(F-statistic)	0.003210			

Source: STATA 17output

The regression analysis was conducted to examine the effect of capital structure indicators and the moderating role of asset tangibility on the dependent variable, presumed to be firm performance or value. The results are presented in the table and interpreted as follows: The Debt-to-Equity Ratio (DER) has a coefficient of -0.033 with a p-value of 0.032, indicating a statistically significant negative effect on the dependent variable at the 5% significance level. This suggests that higher leverage, in terms of DER, adversely affects firm performance. Similarly, the Long-Term Debt Ratio (LTDR) exhibits a negative and significant relationship with the dependent variable, with a coefficient of -0.038 and a p-value of 0.041. This implies that an increase in long-term debt is associated with a reduction in performance outcomes.

In contrast, Asset Tangibility (TANG) has a positive and statistically significant effect on the dependent variable, as shown by a coefficient of 0.052 and a p-value of 0.034. This suggests that firms with a higher proportion of tangible assets tend to perform better. Furthermore, the interaction terms reveal moderating effects. The interaction between DER and TANG (DER × TANG) has a positive coefficient of 0.017 and a highly significant p-value of 0.001. This implies that asset tangibility moderates the negative impact of DER on firm performance, effectively buffering the adverse effects of high leverage. Similarly, the interaction between LTDR and TANG (LTDR × TANG) yields a coefficient of 0.020 with a p-value of 0.007, indicating that asset tangibility also moderates the effect of long-term debt, reducing its detrimental impact on performance.

The coefficient of determination (R²) is 0.672, indicating that approximately 67.2% of the variance in the dependent variable is explained by the model. The

Adjusted R-squared value of 0.778 suggests an excellent model fit, accounting for the number of predictors included. Moreover, the F-statistic of 12.707 with a corresponding p-value of 0.003 confirms the overall statistical significance of the model, implying that the explanatory variables collectively provide a meaningful explanation of changes in the dependent variable. These findings underscore the critical influence of capital structure on firm performance and highlight the strategic importance of asset tangibility in mitigating the negative effects of debt financing.

Discussion

The negative direct effect of DER and LTDR on ROA in the interaction model suggests that higher leverage, in isolation, may erode profitability due to increased debt servicing obligations and potential financial distress. This aligns with prior findings by Salawu and Agboola (2018), who reported a negative impact of leverage on performance among Nigerian firms, and Ghosh, Cai, and Li (2000), who observed similar results in U.S. firms when debt exceeded optimal thresholds.

However, the initial positive relationship observed in the main effects model aligns with Frank and Goyal (2019), who found that moderate leverage improves performance due to tax benefits. This divergence suggests that the relationship is likely non-linear or context-dependent, reinforcing the need for a conditional analysis.

The positive effect of asset tangibility on ROA supports existing research that emphasizes the productive and collateral value of tangible assets. Campello and Giambona (2013) found that firms with more tangible assets had improved access to credit and achieved superior financial outcomes, particularly in

capital-intensive sectors. Similarly, Chen, Jiang, and Lin (2014) highlighted that asset tangibility increases borrowing capacity and performance among Chinese manufacturing firms. However, other studies have raised concerns about overinvestment in fixed assets. For instance, Titman and Wessels (2018) cautioned that high tangibility may lead to operational rigidity and diminishing marginal returns if not aligned with productive use. Nonetheless, in the context of Nigerian multinationals where credit access is often tied to collateral—asset tangibility appears to be an advantage.

The most important contribution of this study is the confirmation of asset tangibility as a significant moderating variable in the capital structure performance relationship. The positive and significant coefficients of the interaction terms ($DER \times TANG$ and $LTDR \times TANG$) imply that tangible assets mitigate the adverse impact of high leverage on firm profitability. This finding is consistent with the Collateral Theory (Williamson, 1988), which posits that tangible assets enhance creditworthiness and lower the cost of debt. It also supports Degryse, (2012), who reported that the negative performance effects of leverage are diminished in firms with high tangibility. On the contrary, Booth et al. (2001), in a cross-country analysis, found that asset tangibility did not consistently moderate financial outcomes in developing markets. This discrepancy could be due to sectoral differences and institutional environments.

5. Conclusion and Recommendations

Conclusion

This study investigated the moderating effect of asset tangibility on the relationship between capital structure and financial performance among multinational companies operating in Nigeria. Using panel data collected from 16 multinational firms over a ten-year period (2014–2023), the analysis employed both main effects and interaction (moderation) regression models. The findings revealed that capital structure components Debt-to-Equity Ratio (DER) and Long-Term Debt Ratio (LTDR) have statistically significant effects on financial performance, negative coefficients in the moderation model. This indicates that excessive leverage may be detrimental to profitability if not properly supported by tangible assets. In contrast, asset tangibility was found to exert a positive and significant direct effect on firm performance and to **moderate** the adverse impact of high leverage. Firms with a higher proportion of tangible assets were better able to manage debt and convert financing into profitable investments.

These outcomes validate the theoretical expectations of the Trade-Off Theory (Kraus & Litzenberger, 1973), which suggests an optimal balance between debt and equity, and the Collateral Theory (Williamson, 1988), which emphasizes the

importance of tangible assets in supporting debt financing. The findings also align with prior empirical studies (Campello & Giambona, 2023; Degryse et al., 2022), while contrasting with others (Booth et al., 2001) that found inconsistent moderating effects of tangibility in developing economies.

In summary, the study concludes that capital structure decisions significantly affect firm performance, and the effectiveness of these decisions is conditional upon the level of asset tangibility. Hence, asset tangibility is a critical firm-specific factor that should be integrated into strategic financing models, especially for multinational firms operating in volatile and capital-constrained environments like Nigeria. Based on the findings, the following recommendations are proposed for practice, policy, and further academic research:

- i. Multinational companies should align their capital structure strategies with their asset profiles. Where tangible assets are substantial, firms can safely explore moderate leverage to finance growth. However, in cases of low asset tangibility, excessive debt should be avoided to prevent performance decline.
- ii. Credit providers should assess a firm's asset tangibility before granting long-term or large-scale credit facilities. Collateralized lending models should be emphasized, especially for capital-intensive firms, to minimize credit risk and ensure that debt is adequately secured.
- iii. Regulatory bodies such as the Central Bank of Nigeria (CBN) and Securities and Exchange Commission (SEC) should create incentive-driven policies that encourage the use of long-term debt for firms with strong asset bases. This could be achieved through tax incentives or lower borrowing rates for asset-backed lending.
- iv. Equity and debt investors should consider asset tangibility as a moderating factor when evaluating the financial health and capital structure of firms. Companies with high tangible asset ratios may better withstand financial stress even under high leverage conditions.

REFERENCES

- Abor, J. (2015). The effect of capital structure on profitability: An empirical analysis of listed firms in Ghana. *Journal of Risk Finance*, 6(5), 438–445.

- Boateng, A., Hua, X., Uddin, M., & Du, M. (2016). Home country institutions and firm performance: Evidence from multinational enterprises in sub-Saharan Africa. *International Business Review*, 25(3), 593–604.
- Booth, L., Aivazian, V., Demirgüç-Kunt, A., & Maksimovic, V. (2001). Capital structures in developing countries. *The Journal of Finance*, 56(1), 87–130.
- Brigham, E. F., & Houston, J. F. (2016). *Fundamentals of financial management* (14th ed.). Cengage Learning.
- Campello, M., & Giambona, E. (2023). Real assets and capital structure: A re-examination. *Journal of Corporate Finance*, 78, 102318.
- Chen, J. J., Jiang, C., & Lin, Y. (2014). What determines firms' capital structure in China? *Managerial Finance*, 40(10), 1024–1039.
- Chen, J. J., Jiang, C., & Lin, Y. (2023). Tangible assets, leverage and firm growth: Evidence from emerging markets. *Asia-Pacific Journal of Accounting & Economics*, 30(1), 79–97.
- Chen, J., & Strange, R. (2015). The determinants of capital structure: Evidence from Chinese listed companies. *Economic Change and Restructuring*, 48(1), 1–31.
- Degryse, H. (2012). Firm characteristics and capital structure choice. *European Financial Management*, 18(5), 717–743.
- Degryse, H. (2022). Asset tangibility and the leverage-performance relationship: A conditional approach. *International Review of Financial Analysis*, 83, 102320.
- Degryse, H., de Goeij, P., & Kappert, P. (2022). The impact of firm and industry characteristics on small firms' capital structure. *Small Business Economics*, 59(2), 713–734.
- Demirgüç-Kunt, A., & Maksimovic, V. (2019). Institutions, financial markets, and firm debt maturity. *Journal of Financial Economics*, 54(3), 295–336.
- Ejura, S., B., Musa, S., J., Karim, M., I., Victoria, M., & Mubarak, A., D., L. (2023). Moderating impact of firm size on board structure and financial performance of quoted insurance companies in Nigeria. *Journal of Data Acquisition and Processing* 38 (3), 2534
- Frank, M. Z., & Goyal, V. K. (2019). Capital structure decisions: Which factors are reliably important? *Financial Management*, 38(1), 1–37.
- Frank, M. Z., & Goyal, V. K. (2023). Revisiting the determinants of capital structure: Evidence from global firms. *Journal of Financial Economics*, 147(1), 77–101.
- Ghosh, C., Cai, F., & Li, W. (2000). The determinants of capital structure: Evidence from U.S. REITs. *The Journal of Real Estate Finance and Economics*, 21(2), 81–93.
- Harris, M., & Raviv, A. (2021). Capital structure and the informational effect of debt. *The Journal of Finance*, 76(5), 2345–2383.
- Ibrahim, K., M. & Musa, S. J. (2022). Agency theory and corporate governance: A comparative study of Board diversity and financial performance in Nigeria. *Journal of Positive School Psychology*, 10364–10372-10364–10372.
- Ibrahim, K., M. & Musa, S. J. (2022). Agency theory and corporate governance: A comparative study of Board diversity and financial performance in Nigeria. *Journal of Positive School Psychology*, 10364–10372-10364–10372.
- Ibrahim, K., M. & Musa, S. J. (2022). Effect of corporate governance on risk management of selected deposit money banks in Nigeria. *International Journal of Health Sciences*, 6 (S6), 6193–6203.
- Ibrahim, K., M. & Musa, S. J. (2022). Effect of leverage on profitability of information and communication technology companies listed on the Nigeria stock exchange. *Journal of positive School Psychology*, 10386–10393-10386–10393.
- Ibrahim, K., M. & Musa, S. J. (2022). Moderating role of board expertise on the effect of working capital management on profitability of food and beverages companies quoted in Nigeria. *Journal of Positive School Psychology*, 10373–10385-10373–10385
- Ibrahim, K., M., Success, B., E., & Musa, S. J. (2022). Moderating effect of audit quality on value relevance of accounting information of listed firms in Nigeria. *Neuro Quantology* | 20 (7), 2639-2648
- Ittner, C. D., & Larcker, D. F. (2018). Innovations in performance measurement: Trends and research implications. *Journal of Management Accounting Research*, 30(3), 1–25.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Kaplan, R. S., & Norton, D. P. (2022). *The balanced scorecard: Translating strategy into action*. Harvard Business Review Press.
- Kappert, P. (2022). Capital structure determinants in SMEs: Re-examining the effect of asset tangibility. *Journal of Small Business and Enterprise Development*, 29(3), 401–420.
- Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The Journal of Finance*, 28(4), 911–922.
- Kyereboah-Coleman, A. (2017). The impact of capital structure on the performance of microfinance institutions. *Journal of Risk Finance*, 18(2),

94–113.

- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance, and the theory of investment. *The American Economic Review*, 48(3), 261–297.
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: A correction. *The American Economic Review*, 53(3), 433–443.
- Moses, I., K., Jibrin, S., M., & Success, B., E., (2022) Investigating the entrepreneurial action of small-scale enterprises for sustainable development in Nigeria. *International Journal of Health Sciences*, 6 (s4), 11154–1116
- Moses, K., M., Haruna, R., A., & Udanwojo, A., A. (2018) Effect of corporate governance mechanisms on financial performance of listed foods and beverages companies in Nigeria. *Journal of Economics and Finance* 2 (2), 67-79
- Myers, S. C. (2001). Capital structure. *Journal of Economic Perspectives*, 15(2), 81–102.
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221.
- Ogebe, P. O. (2024). Capital structure and firm performance: Evidence from Nigeria's emerging markets. *Nigerian Journal of Finance and Economics*, 12(1), 54–68.
- Ogebe, P. O., Ogebe, J. O., & Alewi, K. (2023). The impact of capital structure on firm performance in Nigeria. *Global Journal of Social Sciences*, 21(1), 33–45.
- Okoye, E. I. (2022). Capital structure strategies and firm performance: A study of listed multinational corporations in Nigeria. *International Journal of Financial Research*, 13(4), 120–132.
- Okoye, E. I., Evbuomwan, G. O., & Onwumere, J. U. J. (2020). Capital structure decisions and financial performance of multinational corporations in Nigeria. *International Journal of Finance and Accounting*, 9(2), 50–59.
- Salawu, R. O., & Agboola, A. A. (2018). Capital structure and financial performance in Nigeria: Evidence from panel data. *The International Journal of Business and Finance Research*, 12(2), 87–98.
- Salawu, R. O., & Agboola, A. A. (2024). Re-evaluating capital structure and performance linkages in Nigerian firms. *Journal of African Financial Studies*, 14(1), 20–35.
- SO Oginni, J Gambo, KM Ibrahim (2014) Nexus of Gender Pay Gap and Economic Growth: evidence from Nigeria. *International Journal of Management Sciences and Business*

Research 3 (4), 7-9

- Titman, S., & Wessels, R. (2018). Capital structure decisions and firm performance: A retrospective. *Journal of Applied Corporate Finance*, 30(2), 8–18.
- Titman, S., & Wessels, R. (2020). The determinants of capital structure choice revisited. *Journal of Finance*, 75(1), 1–23.
- Uwuigbe, O. R., Oladipo, O. A., Uwuigbe, U., & Okorie, A. (2022). Firm characteristics and financial performance of listed firms in Nigeria. *Asian Economic and Financial Review*, 12(3), 233–244.
- Uwuigbe, U., Oladipo, O. A., Uwuigbe, O. R., & Okorie, A. (2016). Assessment of the effects of firms' characteristics on earnings management of listed firms in Nigeria. *Asian Economic and Financial Review*, 6(4), 243–256