

# Examining the Influence of Capital Structure on Firm Financial Performance: A Case Study of Financial Services Firms on the Lusaka Securities Exchange (LuSE)

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## Abstract:

This research investigated the impact of capital structure on the financial performance of selected financial services firms listed on the Lusaka Securities Exchange (LuSE) between 2019 and 2023. The analysis focused on five companies: Standard Chartered Bank Zambia Plc, Madison Financial Services Plc, Zambia National Commercial Bank (Zanaco), Zambia Reinsurance Plc, and Real Estate Investment Zambia Plc. The objective was to examine how debt to equity as a capital structure indicator influences Net Profit Margin within Zambia's financial sector. The study relied solely on quantitative data derived from audited financial statements and official LuSE disclosures. Capital structure metrics analyzed and identified as an independent variable was the Debt-to-Equity Ratio (D/E) while financial performance was measured by Net Profit Margin. Results revealed that the banking institutions; Standard Chartered and Zanaco maintained high average D/E ratios (1,336% and 1,203% respectively) yet continued to post strong profit margins, reflecting efficient use of financial leverage. By contrast, Madison Financial Services recorded negative equity and extreme D/E ratios exceeding -2,100%, signaling deep financial instability. Zambia Reinsurance adopted a conservative approach with a 29% D/E ratio, while Real Estate Investment Zambia Plc saw fluctuating leverage, peaking at 79% in 2021 before stabilizing at 39% by 2023. The analysis of Interest Cover and Debt-to-Assets Ratios further illustrated variations in risk exposure and financial health across the firms. The findings suggest that effective debt management supports sustained profitability in banking firms, while excessive leverage can endanger the financial viability of non-bank institutions. The research emphasizes the importance of maintaining optimal capital structures tailored to each firm's risk profile. Recommendations include adopting balanced financing strategies, reinforcing debt control mechanisms, and enhancing regulatory capital adequacy standards particularly for non-banking financial entities. These insights aim to inform managerial decisions and regulatory frameworks in Zambia's financial landscape.

**Keywords:** Capital Structure, Debt-to-Equity Ratio, Net Profit Margin, Financial Performance, Lusaka Securities Exchange (LuSE), Financial Services Sector, Banking Institutions, Non-Banking Financial Institutions

## 1. Introduction

### Financial Management and Corporate Governance

Capital structure refers to the combination of debt and equity that a firm utilizes to finance its operations and investments. As emphasized by Arhinful et al. (2024), the choice between debt and equity financing is a fundamental element of financial management, significantly shaping a firm's profitability, resilience, and market value. These decisions form the cornerstone of corporate finance theory, as they influence cost of capital, exposure to financial risk, and efforts to optimize shareholder wealth. In addition to financial considerations, Battisti et al. (2020) highlight that capital structure decisions also impact the long-term strategic direction and sustainability of a firm.

Organizations that adopt deliberate and balanced capital structure strategies are more likely to benefit from improved financial agility and operational effectiveness. In contrast, Yung et al. (2015) warns that firms with poorly structured capital mixes may encounter financial strain, elevated borrowing costs, and weakening investor confidence. Chinyonga (2024) contends that maintaining a well-optimized capital base enables businesses to leverage favorable market trends while minimizing risk exposure, ultimately enhancing overall performance.

The configuration of a firm's capital base is therefore critical to its financial stability and strategic planning. A sound balance between debt and equity can promote profitability, while excessive reliance on one over the other may result in volatility and weakened financial standing. Supporting this view, Pal and Damai (2020) found that Indian automobile firms with optimized capital structures experienced improved profitability. Similarly, Musah (2019) discovered that firms listed on the Ghana Stock Exchange faced profitability challenges when burdened by high levels of debt.

Strategic oversight of capital structure is thus indispensable for firms seeking to remain competitive, weather economic volatility, and achieve long-term goals. A well-considered capital mix not only ensures cost efficiency but also aligns financing decisions with the broader vision and sustainability targets of the organization.

### The Lusaka Securities Exchange (LuSE)

Established in 1993, the Lusaka Securities Exchange (LuSE) serves as Zambia's primary stock exchange, playing a critical role in facilitating the trade of financial securities and fostering capital market development (Chisanga et al., 2022). LuSE contributes significantly to the financial ecosystem by offering financial institutions access to long-term funding, promoting sound corporate governance practices, and enhancing transparency through mandatory disclosure of financial information. Firms listed on the exchange are required to comply with rigorous regulatory standards, ensuring that financial data is accurate, verifiable, and publicly accessible an essential foundation for conducting research on financial performance and capital structure.

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This study deliberately focused on financial services firms listed on LuSE rather than unlisted entities. Listed companies provide standardized, audited financial statements that are readily available in the public domain, allowing for consistent and reliable secondary data collection over a specified period. In addition, listed financial institutions tend to be larger, more diversified, and are subjected to closer scrutiny by investors, regulators, and the general public. These characteristics make them well-suited for analyzing how capital structure choices influence firm performance under conditions of greater transparency and compliance.

### 1.2 Problem Statement

This study explored the relationship between capital structure and firm financial performance within the context of companies listed on the Lusaka Securities Exchange (LuSE). While this topic has been extensively examined in other markets, limited empirical research has been conducted within Zambia's listed financial sector. As the Zambian economy continues to expand, the financial performance of LuSE-listed firms becomes increasingly relevant to national economic development. However, a gap persisted regarding how varying capital structures influence the profitability and financial resilience of these firms.

This lack of localized empirical evidence has hindered stakeholders such as corporate executives, investors, and policymakers from making fully informed decisions about optimal financing strategies to drive firm performance. Addressing this research shortfall was therefore vital in generating insights that can inform strategic financial planning, improve operational outcomes, and contribute to Zambia's broader economic progress. Musah and Kong (2019) emphasized the importance of financing decisions, noting their direct impact on a firm's ability to grow, withstand financial shocks, and maintain profitability.

In the Zambian context, many firms face notable constraints in structuring their capital effectively, such as high interest rates, limited equity market development, and regulatory barriers (Lumbala, 2019). This dissertation specifically focused on assessing how capital structure choices affect the financial performance of financial service providers listed on LuSE, aiming to provide evidence-based recommendations that support sustainable financial strategies.

### 1.3 Research Purpose

The primary objective of this study was to investigate the impact of capital structure on the financial performance of publicly listed firms within the financial services sector on the Lusaka Securities Exchange (LuSE). The research focused on assessing how differing levels of debt and equity financing influence profitability among these companies. By analyzing capital structure configurations, the study aimed to determine whether firms with higher leverage outperform or underperform those with a greater reliance on equity financing.

Through the use of quantitative financial data, the study sought to provide concrete, context-specific evidence that clarifies the relationship between capital structure and firm performance.

The findings were intended to contribute meaningful insights to corporate executives, regulators, investors, and policy developers by offering practical, data-driven guidance on achieving optimal capital structure. Ultimately, the study aspires to support better financial planning, enhance operational efficiency, and promote long-term financial sustainability within Zambia's financial services industry.

#### 1.4 Rationale of the Study

The rationale for this study stemmed from the pivotal influence capital structure holds over a firm's financial performance and long-term sustainability. Although considerable research has explored this relationship in various international and regional markets, there remained a notable gap in contextualized knowledge specific to firms listed on the Lusaka Securities Exchange (LuSE). As Zambia's economy continues to develop and capital markets play an increasingly vital role in corporate funding, it became imperative to examine how capital structure decisions affect firm performance in this unique setting.

This investigation focused exclusively on publicly listed companies within LuSE's Financial Services Sector specifically, Standard Chartered Bank Zambia Plc, Madison Financial Services Plc, Zambia National Commercial Bank, Zambia Reinsurance Plc, and Real Estate Investment Zambia Plc. The sector was particularly appropriate due to the statutory requirement for detailed financial disclosures, providing accessible, audited data suitable for analysis. Furthermore, these firms presented a wide range of capital structures, offering valuable insights into how different financing configurations influence performance outcomes. The sector's regulatory environment also yielded additional dimensions of compliance, risk oversight, and financial governance to examine.

Practically, this research was expected to offer substantive contributions to the field of financial management by identifying how firms in Zambia's financial services industry can structure their capital to achieve better financial outcomes. It also aimed to inform policymakers and regulators by presenting evidence that may support the development of more effective financing policies. For investors, the findings could enhance their ability to evaluate firm stability and competitiveness based on financing decisions. Ultimately, the study aspired to strengthen corporate financial strategy and support sustainable economic growth within the Zambian market.

#### 1.5 Objectives of the Study

To examine the relationship between Debt-to-Equity ratio and net profit Margin among Firms in the Financial Services Sector listed on LuSE over a five-year period.

#### 1.6 Research Hypothesis

The study hoped to address the following research hypothesis:

### **Null Hypothesis (Ho)**

There is no significant relationship between the debt-to-equity ratio and net profit margin among Firms in the Financial Services Sector listed on LuSE.

### **Alternative Hypothesis (Ha)**

There is significant relationship between the debt-to-equity ratio and net profit among Firms in the Financial Services Sector listed on LuSE

#### **1.7 Significance of the Study**

This research holds significance in advancing the field of corporate finance, with particular emphasis on Zambia's evolving capital markets. Gaining a clear understanding of how capital structure influences firm financial performance is vital for a wide range of stakeholders, including corporate executives, investors, financial analysts, and regulatory bodies.

For corporate decision-makers, the study offers valuable insights into financing approaches that can enhance profitability, strengthen financial stability, and maximize shareholder wealth. It also enables investors to assess how firms structure their finances and the implications of those choices for long-term performance and risk management.

By shedding light on these dynamics within the Zambian context, the research contributes to more informed decision-making and supports efforts to foster robust financial practices across the industry.

#### **1.8 Scope of the Study**

This study investigated the impact of capital structure on the financial performance of firms within Zambia's Financial Services Sector listed on the Lusaka Securities Exchange (LuSE). It focused on analyzing the relationship between financing strategies specifically the use of debt versus equity and key performance indicators such as net profit margin. The research was geographically confined to publicly traded financial institutions on LuSE and covered a five-year period from 2019 to 2023, allowing for an assessment of recent and sustained trends in capital structure practices.

The theoretical foundation of this research was grounded in the Trade-Off Theory, which posits that firms seek to balance the benefits of debt, such as tax advantages, with the potential costs of financial distress. This framework provided a lens through which to understand how firms strategically approach their financing decisions in pursuit of optimal capital efficiency.

A descriptive and exploratory research design was adopted, utilizing secondary data from audited financial statements and industry reports. Quantitative analysis was employed to statistically assess the relationship between capital structure and firm performance, without incorporating qualitative interviews. This methodological approach enabled a detailed examination of how variations in debt and equity influence financial outcomes within Zambia's financial services landscape.

## 2. Literature Review

### 2.1 Literature review underpinning Study

This section discusses various specific literatures done previously to form basis for this study.

#### **Capital Structure and Its Impact on Firm financial Performance**

Capital structure involves the specific mix of debt and equity a company uses to finance its operations and pursue strategic growth, as outlined by Kumar et al. (2017). Globally, scholars such as Sokołowska and Zargartalebi (2024) emphasize that decisions regarding capital composition significantly influence a firm's exposure to financial risk, its resilience under economic pressure, and overall profitability. In mature economies, developed capital markets often facilitate more balanced and flexible financing options. However, while debt can offer tax advantages, an overreliance on it may heighten financial risk, whereas equity although more stable can dilute ownership control (Farhangdoust et al., 2020).

In the African setting, firms frequently operate within environments marked by economic volatility, limited access to long-term capital, and high borrowing costs. These factors make excessive debt utilization more challenging. As noted by Abor (2007), while moderate use of debt can enhance firm performance, excessive leverage may lead to financial distress. Moreover, capital structure decisions are also influenced by sector-specific characteristics, particularly in industries with high capital demands (Ndung'u et al., 2021).

Organizations listed on the Lusaka Securities Exchange (LuSE), such as Zambeef Plc and Shoprite Holdings Plc, encounter various structural and financial barriers. These include underdeveloped capital markets, inflationary trends, and stringent regulatory requirements. Kayombo et al. (2024) observe that these conditions necessitate a cautious and well-informed approach to balancing debt and equity, helping firms maintain financial stability and adaptability amid Zambia's dynamic economic landscape.

#### **Capital Structure Composition (Debt-to-Equity Ratio)**

The debt-to-equity ratio is widely recognized as a vital measure of a firm's capital structure, indicating the relationship between borrowed capital and shareholders' equity (Öztekin, 2015). Blessing and Sakouvogui (2023) emphasize its importance in evaluating a company's financial risk and long-term viability. In highly developed financial systems, firms often favor equity financing, supported by stable economic environments, strong investor trust, and regulatory safeguards. This approach tends to improve financial agility and limits the risks associated with high debt levels.

In contrast, firms operating in emerging markets face distinct structural constraints, including limited access to capital, high interest rates, and macroeconomic volatility. As a result, their capital structure strategies diverge significantly from those in more developed economies. Kumar et al. (2017), in their examination of service sector firms in France, found no substantial link between

debt levels and profitability, suggesting that optimal capital structure is context-dependent, varying across sectors and national financial environments.

Furthermore, in many developing countries, firms often rely more heavily on debt financing to fund growth, particularly when equity options are scarce or cost-prohibitive. This underscores the necessity for firms to craft capital structure strategies that align with both their operational needs and prevailing economic conditions. Tailoring financing decisions to suit specific market realities is therefore essential for sustaining firm performance and financial health.

### **Impact of Debt and Equity Financing on Financial Performance**

The relationship between debt and equity financing and a firm's financial outcomes continues to be a central theme in corporate finance research. Habib (2016), in his analysis of the Pakistani market, found that both short-term and long-term debt negatively influenced profitability. His findings suggest that heavy dependence on debt may result in increased financial burdens due to interest obligations, restrictive loan covenants, and heightened default risks, ultimately limiting a firm's financial agility and performance.

In contrast, a study by Pal and Damai (2020) on the Indian automobile sector highlighted the nuanced nature of capital structure's impact on profitability. Their results demonstrated that the effect of leverage varies depending on the financial metrics applied; for example, while return on equity (ROE) was positively correlated with debt financing, net profit margins exhibited a negative association. This variation points to the complexity of capital structure decisions, where optimal financing strategies must be aligned with firm-specific characteristics, sectoral contexts, and broader market conditions.

Collectively, these studies reinforce the importance of a strategic and balanced approach to capital structure. Firms must carefully assess their financing choices to ensure long-term financial health while minimizing exposure to operational and market-related risks.

### **Influence of Capital Structure on Profitability and Shareholder Value**

The structure of a firm's capital, its mix of equity and debt, has significant implications for both profitability and the creation of shareholder value. Rahmatillah and Prasetyo (2016), in their study of Indonesia's telecommunications industry, emphasized that a balanced approach to financing enhances financial outcomes. Their findings indicate that the combined use of debt and equity, when strategically managed, allows firms to benefit from leverage while maintaining financial stability. This reinforces the importance of carefully aligning capital structure with the goal of maximizing profitability while mitigating financial risks.

However, an overdependence on debt can adversely affect shareholder wealth. Park (2023) highlights that aggressive use of debt, particularly through practices such as dividend

recapitalizations in private equity, can heighten bankruptcy risk and compromise long-term value. High leverage increases a firm's exposure to financial strain, especially during periods of economic instability, as fixed interest obligations become more burdensome.

Therefore, it is essential that firms adopt a capital structure that supports both short-term financial performance and long-term strategic objectives. A well-considered financing mix not only protects the firm's operational flexibility but also promotes sustainable value creation for shareholders over time. This balance is crucial in ensuring that firms remain resilient and competitive in changing economic environments.

## 2.2 Empirical Findings on Capital Structure

### Empirical Evidence on Capital Structure

Scholarly investigations reveal that the connection between capital structure and financial outcomes varies significantly across global regions. In advanced economies like those in Europe, companies tend to prioritize equity financing, benefiting from robust capital markets and investor trust, which minimizes reliance on debt (Raposo & Lehmann, 2019). Conversely, African financial systems often display distinct characteristics. Research from West African countries suggests that moderate borrowing can provide tax-related performance advantages, whereas high debt exposure frequently results in financial strain and lower profitability (Kofi, 2021). These disparities underline the relevance of local context when evaluating financing decisions.

In Zambia's developing market, firms listed on the Lusaka Securities Exchange (LuSE) navigate a shifting financial environment where access to long-term finance, economic regulation, and macroeconomic stability shape debt-equity preferences. Understanding these local conditions is crucial for analyzing how capital structure influences firm performance in this setting.

Additional studies affirm that capital structure decisions are linked to financial performance across different national environments. For example, research on non-financial companies listed on the Nairobi Securities Exchange revealed that long-term borrowing supports financial growth, as reflected in improvements in earnings per share and overall market value (Shikumo et al., 2020). Similarly, findings from Ghana suggest that moderate use of debt can promote performance, but excessive reliance on leverage harms profitability, pointing to the necessity of a more balanced financial approach (Essel, 2024). These insights imply that capital structure's effectiveness depends heavily on firm-specific financial contexts and prevailing market dynamics. Industry-specific evaluations further support the idea that the impact of financing choices is shaped by sectoral and economic environments. A study examining firms in Ghana and Nigeria highlighted that industry characteristics significantly influence how debt maturity affects the capital structure-performance nexus (Opoku-Asante et al., 2022). This implies that firms must consider both their operational and industry-specific factors when making financing decisions. Understanding the interplay between

capital structure and firm financial performance necessitates a comprehensive examination of local financial markets, regulatory frameworks, and economic conditions. As the LuSE continues to develop, firms must navigate challenges related to access to capital, investor confidence, and macroeconomic stability. Empirical investigations into these areas will provide valuable insights into optimizing capital structures to enhance firm performance within Zambia's unique economic landscape.

### **Theoretical Framework**

This study was anchored in a key theoretical framework that elucidates the relationship between capital structure and firm financial performance: the Trade-Off Theory. This framework offers valuable insights into how firms navigate financing decisions amid fluctuating economic conditions.

#### ***Trade-Off Theory***

The Trade-Off Theory suggests that firms seek to establish an ideal capital structure by balancing the benefits of debt, such as tax deductibility of interest, against the risks associated with financial distress and potential insolvency (Khoa & Thai, 2021). The theory asserts that although debt financing can improve firm value by lowering the overall cost of capital, excessive reliance on debt may increase the likelihood of financial instability. Consequently, firms endeavor to determine an optimal leverage point that enhances firm value while mitigating the risks tied to overleveraging.

### **2.3 Research Variables**

#### **Debt-to-Equity Ratio (D/E)**

The debt-to-equity (D/E) ratio is a fundamental indicator used to assess a firm's capital structure, measuring the extent to which a company finances its operations through debt in relation to shareholder equity. This metric serves as a key reference point in evaluating a firm's financial leverage and risk exposure. According to Dada and Ghazali (2016), companies that maintain a well-balanced D/E ratio are better positioned to take advantage of interest tax shields, which can contribute positively to profitability. However, they also caution that an overdependence on debt may elevate financial risk and adversely affect net income. Firms that strike an optimal balance in their D/E ratio often demonstrate improved operational performance and enjoy enhanced market valuations. In this study, the D/E ratio will be used as one of the independent variables to explore its influence on firm financial performance.

#### **Net Profit Margin**

In this study, net profit margin is adopted as the dependent variable to assess financial performance. This metric reflects a firm's ability to translate its revenue into net income after accounting for all expenses. As noted by Shaikh et al. (2017), companies that maintain efficient capital structures

often benefit from lower financing costs and enhanced operational performance, which in turn contribute to healthier net profit margins. Additionally, firms with lower leverage tend to incur fewer interest obligations, supporting higher profitability levels and improved financial outcomes.

## 2.4 Conceptual Framework

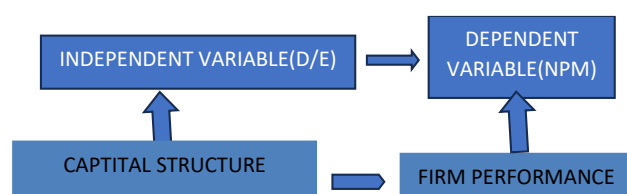


Figure 1: Source field survey 2025, Conceptual framework

## 2.5 Research Gaps

Table 1: source field survey 2025, research gap

Type of Gap	Description of Gap	How the Current Study Addresses It
Contextual Gap	Most existing studies on capital structure focus on developed economies, with limited attention to Zambia's unique economic and regulatory environment.	The study focuses on firms listed on the Lusaka Securities Exchange (LuSE), providing context-specific insights relevant to Zambia's financial and regulatory framework.
Empirical Gap	Prior African studies often generalize across broad industries, lacking firm-level or sector-specific analysis, especially in the financial services sector.	This study examines selected financial services firms in Zambia, offering detailed insights into sector-specific capital structure decisions.
Methodological Gap	Many Zambian studies have used cross-sectional data, failing to track the long-term effects of capital structure decisions on firm performance.	The study adopts a longitudinal research design covering 2019–2023 to assess how capital structure decisions evolve and influence financial performance over time.

## 3. Methodology and Design

### 3.1 Research Approach and Design

This study adopted a deductive research approach, grounded in the Positivist philosophical perspective, and employed a longitudinal research design. The investigation aimed to test the hypotheses by quantitatively assessing the impact of capital structure on the financial performance of selected firms within Zambia's financial services sector listed on the Lusaka Securities Exchange (LuSE).

To achieve this, the research analyzed one key capital structure indicator: the Debt-to-Equity (D/E)

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ratio. The variable was measured against the Net Profit Margin, used as the dependent variable representing firm financial performance. The study covered a five-year period from 2019 to 2023, allowing for the identification of trends and patterns over time.

Microsoft Excel was utilized to process and analyze financial data obtained from audited annual financial statements and official LuSE filings. This approach ensured consistency and reliability in evaluating the statistical relationship between capital structure components and financial performance across the selected firms: Standard Chartered Bank Zambia Plc, Madison Financial Services Plc, Zambia National Commercial Bank, Zambia Reinsurance Plc, and Real Estate Investments Zambia Plc.

### 3.2 Research Strategy

This study, integrated both longitudinal and case study approaches, to assess the impact of capital structure on financial performance among firms in Zambia's financial services sector listed on the Lusaka Securities Exchange (LuSE). As supported by Islam and Aldaihani (2022), this dual strategy allows for a robust, multidimensional examination of financial patterns over time, while also enabling an in-depth analysis within real-world business contexts, thereby enhancing the validity and reliability of the research.

The analysis focused on five LuSE-listed firms, Standard Chartered Bank Zambia Plc, Madison Financial Services Plc, Zambia National Commercial Bank Plc, Zambia Reinsurance Plc, and Real Estate Investments Zambia Plc. By concentrating on these companies over a five-year period (2019–2023), the study captured meaningful insights into evolving trends in capital structure and their implications for firm-level financial outcomes.

The research was based entirely on secondary data obtained from publicly accessible sources, including audited financial statements, annual reports, and LuSE filings. The analysis centred on the key capital structure indicator: Debt-to-Equity Ratio (D/E) as identified in prior studies by Dada and Ghazali (2016) and MHESI (2023). The indicator was measured and analyzed annually to determine its influence on net profit margin, which served as the dependent variable.

By integrating longitudinal data analysis with detailed firm-level case studies, the study ensured a comprehensive and evidence-based exploration of capital structure dynamics. All research procedures adhered to ethical standards to ensure accuracy, transparency, and academic integrity throughout the investigation.

### 3.3 Sampling Frame

The sampling frame for this study consisted of companies listed on the Lusaka Securities Exchange (LuSE) operating within the Financial Services Sector, with at least five consecutive years of publicly available financial statements spanning from 2019 to 2023. The firms selected

included both banking and non-banking financial institutions. The banking institutions comprised Zambia National Commercial Bank Plc and Standard Chartered Bank Zambia Plc, while the non-banking entities included Madison Financial Services Plc, Zambia Reinsurance Plc, and Real Estate Investments Zambia Plc.

These companies were chosen based on their consistent financial disclosures, active market presence, and ongoing listing status on LuSE, ensuring their relevance to the research objectives. This well-defined sampling frame supported the collection of reliable secondary data, thereby contributing to the robustness and credibility of the quantitative analysis examining the effect of capital structure on firm financial performance.

### **Study Population**

The population for this study included all firms within the Financial Services Sector that maintained active listings on the Lusaka Securities Exchange (LuSE) and had published audited financial statements consistently over a five-year period from 2019 to 2023. These firms were selected based on the availability of reliable quantitative data necessary to conduct a comprehensive analysis of capital structure and financial performance trends within Zambia's formal financial sector. This defined population ensured that the study was grounded in robust and accessible data, facilitating meaningful statistical examination.

### **Sample Size and Sampling Techniques**

The sample size for this study consisted of all companies within the Financial Services Sector that were actively listed on the Lusaka Securities Exchange (LuSE) and maintained consistent publication of audited financial statements over the five-year period from 2019 to 2023. This census-based sampling ensured that the data collected was both comprehensive and representative of the target population, aligning closely with the study's objectives. In the period 2019 to 2023, LuSE's financial Services sector had seven (7) companies namely; the banking institutions comprised Zambia National Commercial Bank Plc, Standard Chartered Bank Zambia Plc, Invest trust and Cavmont Plc while the non-banking entities included Madison Financial Services Plc, Zambia Reinsurance Plc, and Real Estate Investments Zambia Plc. However, Investtrust and Cavmont plc were delisted making them fall short of the criteria for consideration in this study.

The Financial Services Sector was selected due to its capital-intensive nature and its high sensitivity to fluctuations in leverage and interest rates. Capital structure decisions within this sector are especially pivotal, as they directly influence firms' financial outcomes. Additionally, the sector's stringent regulatory environment and mandatory financial disclosures offered reliable and consistent data, making it well-suited for a quantitative investigation into how capital structure affects firm performance.

### **Sampling Technique**

The study employed a purposive sampling technique to select firms from the Financial Services Sector listed on the Lusaka Securities Exchange (LuSE). Inclusion was limited to companies that had consistently published complete financial statements over the five-year period from 2019 to 2023. This focused approach was appropriate due to the strategic importance of the financial sector in Zambia's economy, as well as its heightened responsiveness to capital structure factors given its capital-intensive operations and regulatory demands.

The sampling criteria were specifically designed to ensure the availability of reliable and consistent quantitative data required for longitudinal analysis. By targeting firms with an established reporting history and active listing status, the study was able to conduct a rigorous examination of capital structure trends and their relationship to firm-level financial performance.

### **Sample Size**

The study employed a sample of five firms from the Financial Services Sector listed on the Lusaka Securities Exchange (LuSE), representing the entire population that met the inclusion criteria. These firms were selected based on the availability of comprehensive and consistent financial records spanning the five-year period from 2019 to 2023. This full-coverage sampling approach was deemed appropriate due to the relatively small number of eligible firms within the sector.

The chosen sample enabled a detailed quantitative assessment of key capital structure indicator, the Debt-to-Equity and its impact on financial performance, as measured by Net Profit Margin. The inclusion of all qualifying firms ensured representativeness, supported the application of longitudinal and correlational research techniques, and enhanced the reliability of findings relevant to the study's objectives.

### **3.4 Operationalization of Research Variables**

In this study, both independent and dependent variables were clearly defined to evaluate the impact of capital structure on firm financial performance. The independent variables, Debt-to-Equity Ratio (D/E) was selected as key indicators representing a company's capital structure. The dependent variable, Net Profit Margin, was used to measure financial performance outcomes.

Quantitative data for all variables were collected from audited financial statements, annual reports, and official Lusaka Securities Exchange (LuSE) filings covering the five-year period from 2019 to 2023. This longitudinal dataset enabled a thorough statistical examination of how variations in capital structure relate to changes in firm profitability. The approach ensured consistent, objective measurement of financial trends across the selected firms.

### **3.5 Data Collection Techniques**

This study utilized a longitudinal data collection approach, relying solely on secondary sources

to facilitate a comprehensive quantitative analysis. Data were obtained from audited financial statements, year-end reports, and official filings available through the Lusaka Securities Exchange (LuSE) for five selected financial services firms over the period from 2019 to 2023.

The extracted financial data included key capital structure indicator, Debt-to-Equity Ratio as well as Net Profit Margin, which was used as the primary measure of financial performance. These variables were analyzed annually to assess their relationship and trends over time.

All data were compiled and processed using Microsoft Excel, which supported both descriptive and inferential statistical analysis. This enabled the study to identify patterns and correlations between capital structure components and financial outcomes, ensuring a data-driven evaluation of how financing choices influence profitability in the Zambian financial services sector.

### 3.6 Data Analysis Methods

The study applied quantitative data analysis method to ensure accurate interpretation and strengthen the credibility of its findings. Financial data extracted from the audited statements of the selected firms were analyzed using Microsoft Excel, which facilitated the organization and computation of key financial metrics over the five-year study period (2019–2023).

The analysis primarily examined the effect of capital structure on firm performance by focusing on the core independent variable: the Debt-to-Equity Ratio whereas, Net Profit Margin was utilized as the dependent variable to represent overall financial performance. This analytical framework enabled the identification of trends and the evaluation of the strength and direction of relationships between capital structure components and profitability, thereby supporting the study's objectives through a consistent, data-driven approach.

### 3.7 Data Credibility and Reliability

To ensure the accuracy, credibility, and consistency of the data used in this study, a rigorous and structured approach to data collection and analysis was followed. The research relied exclusively on longitudinal data obtained from audited financial statements, annual reports, and official Lusaka Securities Exchange (LuSE) filings for the selected firms. These documents, sourced from reputable and publicly accessible platforms, were deemed reliable and verifiable.

The inclusion criteria required firms to have maintained a consistent record of publicly published financial information for the full five-year period from 2019 to 2023. This criterion helped ensure the integrity of the dataset and allowed for meaningful trend analysis over time. Standardized financial ratios of the Debt-to-Equity Ratio (D/E) and Net Profit Margin, were used to evaluate capital structure and firm performance. These widely accepted financial indicators enhanced the comparability and robustness of the analysis.

All data were systematically processed and analyzed using Microsoft Excel, ensuring consistency

in calculations and statistical evaluations. By adhering to established financial metrics and sourcing data from reliable documentation, the study upheld high standards of methodological soundness and data reliability.

### 3.8 Data Validation Tools and Techniques

To ensure the accuracy, consistency, and validity of the data used in this study, a structured and methodical validation process was implemented throughout both the data collection and analysis phases. The primary dataset was drawn exclusively from audited financial statements and annual reports of financial services firms listed on the Lusaka Securities Exchange (LuSE) covering the period from 2019 to 2023. These documents were cross-checked against official LuSE filings to verify completeness, reliability, and authenticity.

Microsoft Excel was employed as the core analytical tool for data entry, cleaning, and computation of financial ratios. Functions such as IFERROR, VLOOKUP, AVERAGE, and ROUND were utilized to identify and correct inconsistencies, manage potential input errors, and ensure standardization across datasets from multiple firms and time periods.

The study focused on computing and analyzing established financial ratios, Debt-to-Equity (D/E) as well as the Net Profit Margin, which served as the performance indicator. The use of these universally accepted financial metrics enhanced comparability and analytical rigor.

Additionally, peer review and supervisor oversight were incorporated into the validation process to assess the reliability of data interpretations and minimize potential bias. Through the use of verified data sources, standardized analytical techniques, and systematic checks, the study ensured a high level of data integrity, reinforcing the credibility of its findings.

## 4. Data Analysis and Research Findings

### 4.1 Influence of Capital Structure on Firm Financial Performance

Capital structure refers to the way a company allocates debt and equity to finance its operations and strategic goals. This financial arrangement plays a pivotal role in shaping the firm's overall performance and risk profile. A well-structured capital mix can minimize financing costs and enhance returns to shareholders. While debt offers advantages such as tax deductibility on interest payments, overreliance on it increases financial exposure and can lead to insolvency in unstable economic environments (Kumar et al., 2017).

Research indicates that maintaining a moderate level of debt can improve profitability indicators like return on equity and net profit margins by efficiently utilizing fixed capital (Nguyen et al., 2020). However, beyond an optimal point, the costs associated with servicing debt may outweigh its benefits, thereby negatively impacting financial performance. The Trade-Off theory offer important frameworks for understanding how firms navigate the balance between risk and reward in

structuring their capital (Vernimmen et al., 2022). Ultimately, the strategic management of debt and equity proportions significantly influences a firm's profitability and long-term financial resilience.

#### 4.2 The Relationship Between the Debt-to-Equity Ratio and Net Profit

##### Debt to Equity Ratio Trends %.

The Commercial Banks maintained consistently high leverage (950% to 1654%) with Zanaco demonstrating a deleveraging trend (1549% in 2020 to 950% in 2023). The Non- Bank financial institutions, Zambia Reinsurance maintained a Conservative structure (21% to 44%), the Real Estate Investment had a Moderate leverage (34% to 79%) while Madison Finance exhibited negative equity ratios (-1095% to -2136%).

Table 2: source field survey 2025, D/E trends

Institution	2019	2020	2021	2022	2023	Trend
Standard Chartered Bank	1390	1654	1050	1497	1090	Fluctuating
Zanaco Bank	1182	1549	1171	1157	950	Decreasing
Madison Finance	-1095	-1026	-1657	-1929	-2136	Deteriorating

##### Net Profit Margin Performance Trends

Banks have been consistent performers, Zanaco recorded a 9% margin in 2020 and increased to 33% in 2023, on the other hand Standard Chartered bank recovered to 39% in 2023. Madison Finance exhibited persistent challenges with a drop in margin of 0.5% in 2023, while Real Estate Investment recorded extreme volatile margins of -552% in 2021 to 112% in 2022.

##### Capital Structure Impact

High leverage correlates with Strong profits in well managed banks and severe losses in undercapitalized institutions. Thus, optimal structure varies by institution type.

##### Debt to Equity vs. Net Profit Margins Comparison



Figure 2: source field survey 2025, D/E Vs NPM

### 4.3 Discussion of Research Findings

#### Theoretical Framework Alignment

The findings have been examined through one (1) key theoretical lens:

**Trade-Off Theory (with taxes).** This theory predicts an optimal debt level balancing tax shields against bankruptcy costs (Khoa, B.T. and Thai, D.T., 2021). This is supported by Zanaco bank's high but stable leverage (1182% - 950%) coupled with strong profitability (9% - 33%) in net profit margin, demonstrating effective use of debt tax shield. The theory however, is also contradicted by Madison Finance 'negative equity and losses, illustrating excessive bankruptcy costs.

#### Hypothesis Testing

##### Debt to Equity Ratio and Net Profit Margin

Ho 1.6.1.1 (No relationship) Rejected; Strong evidence of relations; Banks with high D/E ratio (1000%+) with positive profits i.e Zanaco bank 33% in Net Profit Margin. Complementing this evidence is Madison finance with negative D/E ratio (-1236%) recording near zero Net Profit

Margin (0.5%). Supports Hi 1.6.2.1 Relationship in nonlinear (inverted U-shape per Trade-Off theory).

### Discussion Point

Sectorial Heterogeneity; Banking Sector aligns with Optimal leverage theory (high but sustainable debt), whereas non-bank institutions (especially distressed firms) do not, rather they follow bankruptcy cost dominance.

Table 3: source field survey 2025, Hypothesis testing

Hypothesis	Null (Ho1.6.1.x)	Alternative (Hi1.6.2.x)	Verdict	Theoretical Basis
D/E - NPM	Rejected	Supported	Non-Linear	Trade-Off Theory

## 5. Conclusions and recommendations

### 5.1 Conclusions

The study confirms significant relationships between Capital Structure and Profitability, but these are context-dependent. While banks benefit from moderate-to-high leverage, non-banks face disproportionate risks. This supports contingency-based capital structure theory rather than one-size-fits-all models. All alternative hypotheses (H1.6.2.x) receive stronger support than null hypotheses, though with nuances requiring sector-specific interpretation.

The findings of this study underscore the importance of strategic capital structure decisions in enhancing firm financial performance. These elements reflect prudent financial management practices that contribute to sustained profitability, operational efficiency, and increased shareholder value. These conclusions resonate with international evidence from various stock exchanges and suggest that despite contextual differences, the fundamentals of financial structure management remain globally applicable. The alignment of these results with other findings in literature review, reinforces the idea that capital structure optimization is a universally relevant aspect of corporate finance, regardless of geographical or economic distinctions (Olayinka, 2015; Mugo and Kibati, 2016).

### 5.2 Recommendations

The study's findings lead to several strategic recommendations aimed at helping managers, policymakers, and researchers improve capital structure to strengthen financial results.

- **Optimize Leverage:** Companies should assess and adjust their debt-to-equity ratio regularly to avoid over-leveraging. By maintaining an optimal level of debt, firms can maximize the benefits of leverage without increasing financial risks, such as those experienced by Madison. The study Confirms modified Trade-Off Theory where Optimal leverage varies by financial institution subsector type.

- **Improve Interest Coverage:** To stay financially secure in the near term, firms should work on raising their EBIT, which will enhance their ability to pay interest. Standard Chartered Bank serves as a good example of this approach.
- **Diversify Financing Sources:** Companies should reduce their reliance on debt by considering alternative sources of finance such as equity financing, retained earnings, or hybrid instruments. This will mitigate risks associated with borrowing and offer more flexibility in managing financial obligations the case of Zambia Reinsurance Plc.
- **Adapt to Economic Changes:** Firms should remain agile by continuously evaluating their capital structure in response to fluctuations in market conditions, such as changes in interest rates or new economic regulations. This will allow them to quickly adjust their strategies to maintain competitiveness.
- **Regulation:** Regulators such as LuSE should strengthen the Financial Sector specific capital adequacy rules (e.g stricter limits for debt accumulation for non-bank financial institutions) to avoid financial distress faced by Madison Finance.

### 5.3 Limitation

Timeframe; the period 2019 – 2023 is inclusive of covid shocks for all industries and sectors like the financial services. There is a reasonable potential to believe that perhaps performance would have been different for a different time period possibly affecting the empirical evidence documented above.

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