CAPITAL STRUCTURE AND PROFITABILITY OF COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE, KENYA

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DECLARATION

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Sign …… Date……

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DEDICATION

This research project is dedicated to my late father Mutiso Munyasya and my mother Syikonyo Mutiso, for their moral and financial support in my entire academic life. I am grateful to my siblings for their encouragement throughout my academic endeavors and especially in developing this research project. Lastly to my wife Victoria Mwelu, sons, Brandon Muendo and Victor David, daughters, Rebbecca Mwende and Hope Mwelu for their encouragement through this journey of research project development

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TABLE OF CONTENTS

DECLARATION ..... **ii**

DEDICATION ..... **iii**

ACKNOWLEDGEMENT ..... **iv**

TABLE OF CONTENTS ..... **v**

LIST OF TABLES ..... **ix**

LIST OF FIGURES ..... **x**

OPERATIONAL DEFINITION OF TERMS ..... **xi**

ABSTRACT ..... **xiii**

CHAPTER ONE: INTRODUCTION **1**

1.1 Background of the Study 1

1.1.1 Capital Structure 3

1.1.2 Profitability 6

1.1.3 Nairobi Securities Exchange 8

1.2 Statement of the Problem 9

1.3 Research Objectives 11

1.3.1 General Objective 11

1.3.2 Specific Objectives 11

1.4 Research Hypothesis 12

1.5 Significance of the Study 12

1.6 Scope of the Study 13

1.7 Limitations of the Study 14

1.8 Organization of the Study 15

CHAPTER TWO: LITERATURE REVIEW **16**

2.1 Introduction 16

2.2 Theoretical Review 16

2.2.1 Trade-off Theory 16

2.2.2 Signaling and Liquidity Risk Theory 18
2.2.3 Pecking Order Theory 19
2.2.4 Modigliani and Miller Theorem 22
2.3 Empirical Review 24
2.3.1 Bond Financing 24
2.3.2 Long-Term Loans and Financial Performance 26
2.3.3 Times Interest Earned Ratio 28
2.3.4 Equity and Financial Performance 31
2.3.5 Capital Structures and Financial Performance 33
2.4 Literature Review 38
2.5 Conceptual Framework 40
CHAPTER THREE: RESEARCH METHODOLOGY 44
3.1 Introduction 44
3.2 Research Design 44
3.3 Target Population 45
3.4 Sampling Strategy 45
3.5 Data Collection Methods 45
3.6 Data Collection Instrument 46
3.7 Operationalization of Variables 46
3.8 Data Analysis and Presentation 47
3.8.1 Diagnostic Tests 47
3.9 Ethical Considerations 48
CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION 49
4.1 Introduction 49
4.2 Descriptive Statistics 49
4.3 Diagnostic Tests 51
4.3.1 Normality Tests 51

4.3.2 Homoscedasticity Test 52
4.3.3 Multicollinearity Test 52
4.4 Inferential Statistics 53
4.4.1 Pearson Correlation Analysis 53
4.4.2 Multiple Regression Analysis 56
4.5 Hypothesis Testing 58
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS 62
5.1 Introduction 62
5.2 Summary of Findings 62
5.2.1 Bond Financing and Profitability 62
5.2.2 Term Loans and Profitability 63
5.2.3 Times Interest Earned Ratio and Profitability 63
5.2.4 Equity Financing and Profitability 64
5.2.5 Profitability of NSE-Listed Companies 64
5.3 Conclusions 65
5.3.1 Bond Financing and Profitability 65
5.3.2 Term Loans and Profitability 65
5.3.3 Times Interest Earned Ratio (TIER) and Profitability 66
5.3.4 Equity Financing and Profitability 66
5.4 Recommendations 67
5.4.1 Bond Financing 67
5.4.2 Term Loans 68
5.4.3 Times Interest Earned Ratio (TIER) 68
5.4.4 Equity Financing 68
5.5 Recommendations for Further Research 69

REFERENCES **71**

APPENDICES **75**

Appendix I: Research Approval Letter 75

Appendix II: Research Authorization Letter 76

Appendix III: NACOSTI Research License 77

LIST OF TABLES

Table 2.1: Gaps in Literature Review 38

Table 3.1: Measurement of Variables 47

Table 4.1: Descriptive Statistics for Study Variables (2018-2022) 49

Table 4.2: Shapiro-Wilk Test of Normality 51

Table 4.3: Test for Heteroscedasticity 52

Table 4.4: Multicollinearity Test 53

Table 4.5: Pearson Correlation Matrix 54

Table 4.6: Model Summary 56

Table 4.7: ANOVA Results 57

Table 4.8: Regression Coefficients 57

LIST OF FIGURES

Figure 2.1: Conceptual Framework 41

OPERATIONAL DEFINITION OF TERMS

Capital Structure: The balance of debt-equity that a firm uses to finance its daily operations, its assets and also to finance future growth.

Equity: Capital contributed by the ordinary and preference shareholders

Debt: These are long term liabilities that a firm uses to raise capital**.** They may be bonds, debentures and term loans

Financial Performance: Financial performance measures a ability of company to use resources effectively from its core operations to generate income. It also serves as a general indicator of the company's long-term financial stability. In this study, financial performance will be evaluated using return on assets.

Term loans These are loans given for a fixed duration of time and must be repaid in regular installments. Normally these loans are for periods of 15 years or more.

Times Interest Earned Ratio is a solvency ratio that shows the capacity to pay all firm debt obligations' interest.

Total debt coverage ratio an important measure of a business's ability to take on new debt, pay dividends, and pay back existing debt

Mortgage Bonds Secured long term debt loan secured with specified property, mostly real estate and equipment.

Debentures	These are marketable securities that a firm may issue to obtain long term financing without having to dilute their equity or issue collateral. This means they are secured by all the assets of the company.
Interest coverage ratio:	This demonstrates a company's capacity to cover interest costs on all existing debt.
Lease financing:	An agreement in which the owner of the asset grants the other party the right to use it in return for a monthly payment, and the other party makes use of the asset
Return on assets:	Measures a firm’s ability to generate profit from total assets.
Return on equity:	An indicator that shows the percentage of income produced relative to shareholders' equity.

ABSTRACT

The primary goal of companies is to maximize shareholders' wealth, and effective management of capital structure is crucial in achieving this objective. However, declining profitability trends, as measured by Return on Assets (ROA), have raised concerns about how companies listed on the Nairobi Securities Exchange (NSE) utilize debt and equity financing. Grounded in the Modigliani and Miller Theorem and Pecking Order Theory, this study examined the effect of capital structure on the profitability of non-financial firms listed on the NSE. The independent variables included the components of capital structure: equity, term loans, mortgage bonds, and times interest earned ratio, while profitability, measured by ROA, served as the dependent variable. The study adopted a survey research design using secondary quantitative data from all 63 listed non-financial companies over the study period. Data were collected from publicly available financial statements and analyzed using descriptive statistics and inferential regression analysis with SPSS version 28. Findings indicated that the listed companies demonstrated positive profitability with an average ROA of 8.1%. Equity financing (56.8%) had a significant positive effect on ROA ($\beta = 0.072$, $p < 0.000$), while term loans (24.2%) negatively affected profitability ($\beta = -0.093$, $p < 0.000$). The times interest earned ratio (average 3.765) positively influenced performance ($\beta = 0.007$, $p < 0.000$), whereas mortgage bonds (10.6%) had a non-significant effect. Overall, capital structure explained 35.5% of profitability variation, highlighting the influence of other factors beyond financing decisions. The study concluded that prioritizing equity financing enhances profitability by reducing financial risk, while excessive reliance on term loans can impair performance. Maintaining strong interest coverage improves financial health, and mortgage bonds have a marginal impact. Recommendations include establishing optimal equity-to-debt ratios, prudently managing term loans below 24.2%, improving interest coverage ratios above 3.765, diversifying financing instruments, and conducting regular reviews of capital structure to adapt to market conditions.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

A company must thoroughly assess its financial choices whenever it looks for funding to support operations and cover capital expenditures in order to establish the best possible balance between debt and equity in its capital structure. The percentage of funding acquired through debt, equity, or a combination of both depends on a company's capital structure (Myers, 2001). Because it influences the firm's risk profile, cost of capital, and overall financial health, selecting the right combination is essential. Business activities require substantial financial backing to facilitate fixed asset investments, working capital requirements, and operational expenses. Without adequate financial resources, a firm may struggle to maintain its competitive edge and achieve long-term sustainability. The selection of an optimal capital structure is vital for maintaining financial stability, ensuring operational efficiency, and fostering business expansion. Since financing decisions directly impact a firm's profitability, it is imperative that companies exercise due diligence in structuring their capital mix. A well-balanced capital structure enhances a company's performance, minimizes financial distress, and ultimately maximizes shareholders' wealth (Mwangi et al., 2014). Therefore, while choosing the best financing plan, businesses must evaluate their financial needs, risk tolerance, and market circumstances.

Since the seminal work by Modigliani and Miller (1958), which asserted that in an ideal market—free from corporate taxes, information asymmetry, bankruptcy costs, and transaction costs—the value of a firm remains unaffected by financing decisions, the subject of capital structure has remained a complex and widely debated topic (Jermias, 2008). However, in real-world conditions, financing decisions significantly influence firm profitability and value due to various financial frictions. The idea that businesses

should rely mostly on debt to maximize value was developed from Modigliani and Miller's suggestion that businesses should be apathetic toward financing options. This idea was then extended to include the tax benefits of debt financing. Since then, a number of theories have been developed to explain the intricacies of capital structure choices, such as the Agency Cost Theory, the Trade-off Theory, and the Pecking Order Theory. According to the Pecking Order Theory, businesses are more likely to favor internal funding over external loans because they are worried about knowledge asymmetry. While the Agency Cost Theory emphasizes disagreements between management and shareholders over financing options, the Trade-off Theory suggests that businesses weigh the advantages of tax shelters from debt against the dangers of bankruptcy.

The decision on the source of financing is therefore crucial as it shapes a firm's strategic position and competitiveness within its industry. To enhance Profitability, firms must adopt a financing structure that aligns with their growth objectives and market dynamics (Abor, 2007). In Kenya, companies looking to obtain money for expansion and long-term operations are increasingly using debt financing through the capital market. In order to raise money for their commercial endeavors, listed businesses on the Nairobi Securities Exchange (NSE) are gradually adding more debt to their capital structures (Anyanzwa, 2015). This pattern shows that more people are becoming aware of the possible advantages of using debt to fund business operations. Notably, companies like East African Breweries Ltd. (EABL) and Centum Investment Ltd. have raised significant sums from the debt market, creating a solid basis for long-term debt financing. Debt capital allows businesses to leverage financial resources for expansion without diluting ownership, thereby enabling them to retain control while pursuing strategic growth initiatives. Many firms also utilize debt as a form of capital hedging,

aiming to enhance profitability by taking advantage of favorable interest rates and financial leverage.

However, the effectiveness of debt financing in boosting financial performance varies across firms and is influenced by macroeconomic conditions, interest rate fluctuations, and industry-specific risks (Maher & Andersson, 1999). Some firms successfully leverage debt to expand operations and increase profitability, while others struggle with high debt servicing costs that erode earnings. For example, Housing Finance Ltd. issued $88 million in medium-term notes to support habitat and housing development in Africa, an initiative approved by the Capital Markets Authority (CMA) in August 2013 (Anyanzwa, 2015). Similarly, Shelter Afrique raised $220 million in medium-term notes for affordable housing development, approved by the CMA in November 2013 (Anyanzwa, 2015). These instances illustrate the growing reliance of Kenyan firms on debt financing as a tool for business growth. However, the increasing trend of accumulating debt raises concerns about its potential impact on corporate performance. The question of whether debt financing enhances or hampers firm performance remains critical, prompting the need for empirical research to assess its implications. By investigating how capital structure decisions affect financial results in publicly traded organizations, this study aims to investigate the impact of debt financing on firm performance.

1.1.1 Capital Structure

Capital structure—a mix of debt and equity financing—is usually considered one of the most significant financial factors since it is linked to the company's capacity to meet the needs of all of its stakeholders, including shareholders, community members, and other interested parties (Jensen, 1986). The company's liquidity, profitability and

prospects for future expansion are all significantly impacted by the capital structure decision. To lower risks and boost profitability, businesses must carefully choose the appropriate combination of debt and equity financing. Equity finance is the sort of financing that entails the highest amount of risk and is provided by business owners. Unlike debt, equity financing does not require regular repayment, and investors are rewarded through dividends based on the company's profitability. Shareholders assume significant risk because they are only entitled to residual claims on profits after all liabilities have been settled. However, businesses are not obligated to pay dividends consistently, as they may choose to reinvest profits for future expansion and sustainability. In times of liquidation, shareholders are the last to receive any remaining assets after all debts and obligations have been settled, making equity a high-risk but potentially high-return financing option (Brockington, 1990).

Debt financing, on the other hand, involves acquiring funds from external sources such as financial institutions, issuing corporate bonds, or securing loans from investors. Companies that utilize debt financing are obligated to make fixed interest payments to their creditors, regardless of their profitability. Unlike equity holders, creditors do not have ownership rights in the company, meaning they do not influence decision-making processes. Regardless of its financial success, the company must return the loan balance plus interest within a given time frame. Companies that don't pay their debts risk serious repercussions including asset seizures, financial difficulties, or even bankruptcy (Bichsel & Blum, 2005). Businesses may access substantial sums of money for expansion, operational enhancement, and investment in revenue-generating initiatives through debt financing, which can be advantageous. Financial instability, however, can result from an over-reliance on debt, particularly in times of economic depression when income sources are unpredictable.

In the context of economic development and corporate expansion, debt financing offers both benefits and drawbacks. Among the benefits are tax shields, which lower the firm's total taxable revenue by making interest expenditures tax deductible. Furthermore, debt financing reduces agency conflicts between managers and shareholders by forcing management to employ capital effectively, which helps control free cash flow difficulties. Potential agency costs and disputes between debt and equity holders over risk-taking behavior are among the disadvantages of debt financing, though. Excessive debt also raises the risk of bankruptcy and financial difficulties, especially if a company finds it difficult to produce enough cash flows to pay its debts (Fama & French, 2002). Therefore, in order to maximize the firm's financial structure and improve performance, financial managers need to carefully weigh the advantages and disadvantages of debt financing.

To evaluate capital structure, financial analysts use a number of debt ratios, such as the loan-to-equity and indebtedness-to-total-assets ratios. These ratios provide insight into a company's financial situation. A high debt ratio can increase returns upon investment while simultaneously increasing financial risk because it indicates that a company needs more on borrowed funds to run its operations. Conversely, a low debt ratio suggests that a company depends more on stock investment, which might reduce financial risk but also limit expansion opportunities due to the high cost of equity capital. Businesses may optimize shareholder value and guarantee long-term financial sustainability by upholding an ideal capital structure (Kraus & Litzenberger, 1973). In order to balance debt and equity financing and improve their competitiveness and overall market performance, organizations must implement sound financial management techniques.

1.1.2 Profitability

Profitability refers to a company's ability to generate earnings relative to its resources, investments, or equity, and is a key indicator of financial performance. According to Brigham and Ehrhardt (2019), profitability reflects a firm's capacity to efficiently utilize its assets to generate income. Ross, Westerfield, and Jaffe (2018) define profitability as the return a firm earns on its invested capital, indicating overall business efficiency. Similarly, Gitman and Zutter (2020) view profitability as a measure of the firm's success in creating shareholder value, while Atrill and McLaney (2019) describe it as the ratio of profits to sales, assets, or equity, showing the effectiveness of operational management. Further, Higgins (2018) emphasizes that profitability is a critical tool for assessing financial sustainability and long-term viability. Collectively, these definitions highlight profitability as a multi-dimensional concept central to financial analysis and strategic decision-making.

Measurement of profitability has varied across studies and contexts. Brigham and Ehrhardt (2019) use Return on Assets (ROA) and Return on Equity (ROE) to capture the efficiency of asset utilization and shareholders' returns, respectively. Gitman and Zutter (2020) argue for the use of net profit margin to evaluate operational efficiency in generating revenue relative to expenses. Ross, Westerfield, and Jaffe (2018) highlight Earnings Before Interest and Taxes (EBIT) ratios to isolate operational profitability from financing effects. Atrill and McLaney (2019) combine multiple indicators, including ROA, ROE, and profit margins, to provide a holistic view of financial performance. Collectively, scholars emphasize the use of ratios that link profits to assets, equity, or revenue, allowing comparability across firms and sectors.

Other scholars also emphasize context-specific approaches to measuring profitability. For instance, Okoth (2020) used ROA and ROE in evaluating the financial performance of manufacturing firms in Nairobi, while Mwangi and Njiru (2020) focused on net profit margins to assess performance in service firms. These measurement approaches demonstrate that profitability can be operationalized in multiple ways, often depending on data availability, sector-specific dynamics, and the particular aspect of performance under study.

Contextual issues in Kenya indicate that firms listed on the NSE have experienced varying profitability trends in recent years. According to the Capital Markets Authority (CMA, 2022), non-financial firms on the NSE have maintained moderate profitability, with ROA averaging 7–8% across sectors, reflecting stable but cautious growth. Market challenges, including fluctuating interest rates, exchange rate volatility, and operational costs, have affected profit generation. Additionally, regulatory changes, macroeconomic shocks, and global events such as the COVID-19 pandemic have created performance pressures for NSE-listed firms.

Several studies have examined capital structure and profitability in the NSE context. For example, Wambugu (2018) assessed the relationship between debt financing and profitability of listed companies using ROA and ROE as performance indicators. Kamau (2019) studied equity financing and firm performance, operationalizing profitability through net profit margins and return on equity. Mwangi and Njiru (2020) explored the impact of term loans on financial performance using ROA and net income ratios, while Omondi and Muturi (2021) investigated the influence of interest coverage ratios on profitability measured by ROE and profit margins. From these studies, common indicators of profitability emerge, namely Return on Assets (ROA), Return on

Equity (ROE), and Net Profit Margin, which this study will adopt to operationalize profitability for NSE-listed non-financial firms.

1.1.3 Nairobi Securities Exchange

Kenya is home to the Nairobi Securities Exchange (NSE), which was established in 1954. The NSE, which has six decades of experience listing debt and equity instruments, offers a trading platform to both domestic and foreign investors looking to participate in Kenya's economic expansion. The CMA of Kenya oversees the exchange's operations, providing investor protection and regulatory control. The World Federation of Exchanges, ASEA, and EASEA are among the regional and international organizations with which the NSE is connected. Additionally, it is a partner exchange in the Sustainable Stock Exchanges (SSE) program, which is sponsored by the United Nations, and a member of the Association of Futures Markets (Nairobi Securities Exchange, 2018).

NSE is a desirable place to invest because of these affiliations, which further improve its integration into the international financial markets and credibility. Agricultural Automobile and Accessories, Banking Commercial and Services, Construction and Allied Energy and Petroleum, Insurance Investment, Investment Services, Manufacturing and Allied, Telecommunication and Technology, Real Estate Investment Trusts (REITs), and Exchange Traded Funds(ETFs) are the thirteen sectors into which the NSE currently lists sixty-two companies (Nairobi Securities Exchange, 2018). These sectors guarantee that capital flows across various businesses within the Kenyan economy and offer investors a diverse investment portfolio.

The NSE's stock turnover from January 2013 to December 2017 was Kshs. 604,018.22 million, while the bond market turnover over the same time period was Kshs.

1,377,202.75 million. This suggests that investors have a significant preference for debt instruments, as the bond market turnover was more than double that of the stock market (Capital Markets Authority, 2018). The prevalence of debt securities indicates that businesses and investors consider the bond market to be a safer and more reliable investment option than stocks.

Businesses listed on the NSE favor debt financing for a number of reasons. Debt ensures financial stability and sustainability by facilitating diversification and enabling businesses to align the debt instrument's maturity with the project's lifespan. Furthermore, debt financing builds a solid reputation in the market and boosts investor trust (Kenya Green Bonds Program, 2017). Tax deductibility and the elimination of free cash flow issues are two other benefits of debt financing that might lessen agency conflicts in businesses (Karuma, Ndambiri & Aluoch, 2018). Corporate managers must carefully balance the advantages of debt against any possible drawbacks, including agency fees, bankruptcy risks, and financial difficulty. In order to shed light on how businesses strike a balance between financial leverage and performance sustainability, the study examines the effects of debt financing on businesses listed on the Nairobi Securities Exchange.

1.2 Statement of the Problem

The vision 2030 blueprint in Kenya recognizes the Nairobi Securities Exchange (NSE) as a critical platform for capital mobilization and investment, contributing significantly to the growth of non-financial enterprises. Companies listed on the NSE play a key role in the national economy by providing avenues for raising both equity and debt capital, which in turn supports business expansion, job creation, and economic stability. However, many listed firms continue to face challenges in managing their capital

structures effectively, which affects their profitability and overall financial performance (Adongo, 2019; Mwangi & Njiru, 2020).

Debt financing is an essential tool that allows firms to finance operations, address budgetary deficits, and support long-term investments. Yet, firms that rely heavily on borrowed capital often experience increased interest expenses, which can negatively impact profitability (Omondi & Muturi, 2021). Agency theory suggests that debt influences managerial decisions and capital structure choices, whereas Modigliani and Miller (1958) contend that debt should not affect firm value under perfect market conditions. These conflicting perspectives highlight conceptual and practical debates about the optimal use of debt in enhancing firm performance.

Empirical evidence shows mixed results. International studies indicate that excessive debt may reduce financial performance (Bui & Nguyen, 2020; Goddard et al., 2019), while other research emphasizes that strategically managed debt can enhance firm value (Berger & Bonaccorsi, 2019; Baum et al., 2021). Locally, Lishenga (2015) found that high-growth firms maintain lower long-term debt levels, whereas Onchong'a, Muturi, and Atambo (2021) reported that increased short-term debt correlates with declining return on assets (ROA). Obiero (2022) observed that companies with high debt levels suffered severe financial losses, often exceeding net worth.

Despite this extensive body of research, significant gaps remain. Few studies have explicitly examined how bond financing, term loans, equity, and the times interest earned ratio influence profitability among NSE-listed non-financial firms. Additionally, most research focuses on long-term capital structure composition rather than the short-term effects of debt on profitability. There is also a lack of comprehensive analysis

linking specific components of capital structure to measurable indicators of financial performance such as ROA.

Therefore, this study seeks to fill these gaps by examining the influence of capital structure components—bond financing, term loans, equity, and times interest earned ratio—on the profitability of non-financial firms listed on the NSE. Profitability in this study will be operationalized using return on assets (ROA) as the key performance indicator, providing a clear assessment of how capital structure decisions affect firm performance in the Kenya.

1.3 Research Objectives

1.3.1 General Objective

To determine the effect of capital structure on profitability of non-financial firms listed at the NSE.

1.3.2 Specific Objectives

i. To determine the relationship between bond financing and Profitability of NSE Listed Companies.

ii. To examine the relationship between term loans and Profitability of NSE Listed Companies.

iii. To analyse the relationship between times interest earned ratio and Profitability of NSE Listed Companies.

iv. To ascertain the connection between NSE listed businesses' equity and Profitability of NSE Listed Companies.

1.4 Research Hypothesis

$H0_1$: There is no statistically significant relationship between bond financing and Profitability of NSE Listed Companies.

$H0_2$: There is no statistically significant relationship between term loans and Profitability of NSE Listed Companies.

$H0_3$: There is no statistically significant relationship between times interest earned ratio and Profitability of NSE Listed Companies.

$H0_4$: There is no statistically significant relationship between equity and Profitability of NSE Listed Companies.

1.5 Significance of the Study

This study is significant to a wide range of stakeholders, including corporate managers, investors, policymakers, regulators, and academics. For managers, the findings will provide practical insights into how various capital structure components affect profitability. This knowledge will guide them in making informed financing decisions that enhance firm value, optimize debt–equity balance, and improve operational performance. Investors will also benefit, as the study will highlight how capital structure choices influence financial stability and return, thereby enabling them to evaluate investment risks more effectively and make prudent portfolio decisions.

For policymakers and regulatory bodies such as the Capital Markets Authority (CMA) of Kenya, the study will provide critical evidence to support the formulation of policies and frameworks that encourage optimal financing practices, strengthen capital markets, and foster sustainable corporate growth. By understanding the implications of debt financing and interest coverage on profitability, regulators can design guidelines that promote responsible borrowing and protect investors while enhancing market efficiency.

Academics and researchers will also find value in this study, as it enriches the existing body of knowledge on capital structure and profitability, particularly within the context of emerging economies such as Kenya. The study identifies research gaps and provides empirical evidence that can serve as a reference point for future scholarly work, comparative studies, and theory building in corporate finance. Additionally, entrepreneurs and business consultants can draw lessons from the findings to structure financing strategies that minimize financial risk, maximize growth opportunities, and strengthen business sustainability.

1.6 Scope of the Study

Contextually, the research focused on companies listed at the Nairobi Securities Exchange (NSE), with particular emphasis on non-financial firms. Financial institutions such as banks, insurance companies, and other financial service providers were excluded because their capital structures are highly regulated and differ significantly in accounting and reporting standards compared to non-financial companies. By concentrating on non-financial NSE-listed firms, the study ensured a more consistent comparison across industries such as manufacturing, agriculture, energy, and telecommunications. This focus also captured the financing and profitability dynamics of firms that rely more heavily on operational efficiency and strategic financing decisions, rather than regulatory-driven capital requirements.

Conceptually, the study examined the relationship between capital structure and profitability. Capital structure was assessed through key components such as equity financing, bond financing, term loans, and the times interest earned ratio, while profitability was measured primarily using return on assets (ROA), a widely accepted indicator of financial performance. This approach provided an understanding of how

financing decisions, in terms of debt–equity mix and debt serviceability, influenced corporate profitability. The study further analyzed sectoral variations, identifying whether certain industries benefitted more from debt financing or equity reliance.

Temporally, the study covered the period from 2019 to 2024. This five-year timeframe was deliberately chosen to provide both recency and comprehensiveness. The period was significant because it captured critical economic events and market dynamics that influenced firms' capital structure decisions. Notably, it included the onset and aftermath of the COVID-19 pandemic (2020–2022), which disrupted global and local markets, affected liquidity, and forced firms to reassess financing strategies. It also covered the post-pandemic recovery phase (2023–2024), during which firms sought to stabilize operations, restructure debts, and pursue growth opportunities in a shifting macroeconomic environment. Additionally, this period coincided with regulatory reforms and policy adjustments in Kenya's financial markets, as well as global economic shocks such as fluctuating commodity prices and interest rate adjustments, all of which had a direct bearing on corporate financing choices. By examining this timeframe, the study provided timely insights into how Kenyan firms adapted their capital structures to changing economic conditions while striving to maintain or improve profitability.

1.7 Limitations of the Study

The researcher anticipated several challenges that were encountered during the course of the study. One major limitation was the possibility of creative accounting, where financial information was manipulated to present a misleading picture of a firm's financial health. Such misrepresentation could distort findings and affect the accuracy of conclusions drawn from the data. To mitigate this risk, the study relied exclusively

on audited and publicly published financial statements, which were sourced from the Capital Markets Authority (CMA) to ensure reliability and accuracy.

Another potential challenge involved difficulties in accessing essential profitability documents from the Nairobi Securities Exchange. Some firms restricted access to their detailed financial records, which limited the availability of comprehensive data for analysis. The researcher obtained the required authority to address this issue, which included a research permit and an introduction letter from the academic institution. These documents guaranteed stakeholders of the ethical and private management of information while also assisting in obtaining official access to the necessary data.

1.8 Organization of the Study

This study is organized into five chapters. Chapter One introduces the study by presenting the background, problem statement, objectives, research questions, significance, scope, and limitations. Chapter Two reviews relevant literature, including theoretical and empirical studies, and presents the conceptual framework, research gaps, and a summary of the reviewed works. Chapter Three outlines the research methodology, describing the research design, target population, sampling procedures, data collection methods, data analysis techniques, and ethical considerations. Chapter Four presents the study findings, analysis, and interpretation using descriptive and inferential statistics, and discusses them in relation to the research objectives and existing literature. Chapter Five provides a summary of the findings, draws conclusions based on the objectives, and offers recommendations for listed companies, policymakers, and future research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section discusses the study's theoretical foundation as well as earlier studies on how debt affects a company's capital structure, performance and the relationship between debt and performance. This study looks at how debt affects the Profitability of companies listed on the Nairobi Securities Exchange.

2.2 Theoretical Review

Many theories have been proposed to explain the relationship between debt and business success. These concepts provide insight into how companies decide to fund themselves and how those decisions impact their overall performance. Among the most well-known concepts in this field are MMM, the pecking order, the Liquiity Risk Theory, Signaling, and Trade off Theory. This section offers a thorough analysis of these ideas, stressing the main points, underlying presumptions, and empirical data that either confirm or refute their viability. Comprehending these ideas is essential to understanding corporate finance dynamics and how financial.

2.2.1 Trade-off Theory

The compromise Myers (1984) popularized the theory of capital structure by arguing that businesses should weigh the advantages and disadvantages of debt financing to identify the best possible capital structure. According to the notion, companies must consider the costs associated with financial difficulty even when debt has tax benefits because interest charges are deductible. To maintain an ideal debt-to-equity ratio, managers must carefully balance the marginal advantages of taking on more debt against the expenses involved. Bevan and Danbolt (2002) go on to stress that tax advantages are a major factor in a company's choice for debt since companies with

higher tax rates could be more likely to take out loans in order to lower their tax obligations. Changes in tax laws, however, may have an impact on this choice.

The primary advantage of debt financing, as per the Trade-off Theory, is the tax shield that enables businesses to lower their taxable income. Excessive debt buildup, however, raises the possibility of financial trouble, which can show itself as internal disputes between management and stakeholders, employee turnover, supplier uncertainty, and bankruptcy, among other manifestations. The marginal advantage of further borrowing decreases when businesses accumulate debt because of the growing marginal costs of financial hardship. Businesses must consider this trade-off while figuring out the best capital structure. Businesses looking to maximize their value, according to Fama and French (2002), should carefully consider this trade-off and make sure that their debt levels don't go over the point at which the costs of financial crisis outweigh the benefits.

A company has financial hardship when it finds it difficult to pay its debts, which might ultimately result in insolvency if remedial action is not implemented. The Trade-off Theory emphasizes that excessive debt has both direct and indirect bankruptcy consequences. Legal fees and administrative expenditures incurred during bankruptcy proceedings are examples of direct costs; operational inefficiencies, deteriorating consumer trust, and reputational damage are examples of indirect costs. Despite the Trade-off Theory's theoretical attractiveness, actual research has shown conflicting results. Research has shown that successful companies tend to rely less on borrowed funds, which contradicts the notion that highly profitable firms should increase their debt levels to maximize tax advantages. Studies have demonstrated that many financially strong firms prefer to maintain lower debt ratios despite the potential tax benefits associated with leverage. Additionally, research findings suggest that large and

highly profitable firms often adopt a conservative approach to debt financing, as their exposure to financial distress remains minimal. This indicates that, although the Trade-off Theory offers a valuable framework for analyzing corporate financing choices, its practical application may differ based on company-specific characteristics and prevailing market conditions. Various factors, such as industry dynamics, economic stability, and risk management strategies, can influence a firm'sdecision to usedebt conservatively or aggressively. Consequently, while theoretical models provide useful insights, real-world financial strategies are shaped by a combination of internal corporate policies and external economic forces.

2.2.2 Signaling and Liquidity Risk Theory

According to the Signaling Theory, businesses utilize their financial choices as signals to tell potential investors about their creditworthiness and cash flows. Asymmetric information, which happens when one participant in a financial transaction has more information than the other, is the foundation of this theory. In his groundbreaking work on labor market signaling, Spence (1973) first proposed the concept of signaling, contending that people or businesses might reduce information asymmetry by sending reliable signals. Since highly profitable businesses are more likely to take on debt while still being able to repay it, debt financing may be used by businesses as a gauge of their financial health in the context of corporate finance. Investors interpret such signals when making decisions about stock valuation and investment allocations.

The notion that debt maturity might act as a tool to lessen the knowledge asymmetry between investors and business managers was expanded upon by Flannery (1986). He maintained that excellent corporations will view their long-term debt as cheap and choose to issue short-term debt if bond market investors are unable to discriminate

between high-quality and low-quality enterprises. On the other hand, companies with poorer financial status could take on long-term debt in order to evade constant investor monitoring. Therefore, debt maturity can serve as a signaling tool, with companies that have demonstrated great financial success and expect steady future cash flows favoring short-term debt. Furthermore, short-term funding makes sure that only financially stable companies can maintain such agreements by subjecting them to more regular scrutiny.

The relevance of transaction costs in debt financing is highlighted by Mitchell (1991), who claims that businesses in financial trouble could be forced to rely on long-term debt because they risk incurring additional transaction costs if they roll over short-term debt. Financially sound businesses are better equipped to handle the risks of refinancing and interest rate swings related to short-term debt, according to Jun and Jen (2003). The use of short-term nonconvertible debt is more common among companies with high credit ratings than among those with lower credit rankings, according to empirical research by Guedes and Opler (1996). This result supports the notion that decisions on debt structures are impacted by a company's financial health and the signals it wants to convey to investors.

2.2.3 Pecking Order Theory

Businesses choose funding sources in a hierarchical fashion, according to the Pecking Order-Theory, which was first proposed by Donaldson in 1961 and then improved upon by Myers and Majluf in1984. According to this notion, businesses give internal finance—like retained earnings—priority over outside funding sources. Businesses prioritize debt over equity when internal finances are inadequate, with equity issuance being a last alternative. This preference's justification is related to worries about

information asymmetry, which occurs when management know more about the true worth of the company than outside investors do. A drop in stock prices might result from issuing new equity as it could give investors the impression that the company's shares are overpriced. This signaling impact might dissuade enterprises from equity funding unless absolutely essential. Instead of keeping a constant debt-to-equity ratio, businesses use a flexible financing strategy that eliminates information asymmetry and lowers financing costs. Consequently, the Pecking Order Theory offers a framework for comprehending the capital structure choices made by businesses and their inclination toward particular funding sources.

Information asymmetry is a key element of the Pecking Order Theory and has a big impact on funding decisions. Managers may want to reduce the exposure of sensitive financial information since they are more informed about the company's financial situation and prospects than outside investors. Because they don't need to be disclosed to the outside world, retained earnings are desirable because they can prevent unfavorable investor reactions. In order to avoid ownership dilution and possible misunderstanding of the firm's worth, companies choose to issue debt rather than fresh shares when internal finances are inadequate. According to Myers and Majluf (1984), investors frequently interpret equity issue as an indication that the company is overpriced, which might lead to a decline in stock prices. Companies are hesitant to issue additional shares due to this adverse selection issue, which makes them choose debt funding. Businesses with more information asymmetry typically use debt financing more to offset the risks of issuing stock and investor mistrust.

Additionally, according to the Pecking Order Theory, companies with high profitability and steady earnings depend more on internal funding and have lower debt levels. This

is because successful businesses produce enough retained-earnings to cover their investment requirements, which lessens their reliance on borrowing from outside sources. On the other hand, less successful businesses with smaller retained earnings are more inclined to look for outside funding, first through debt and then through the issuing of shares. Furthermore, businesses with strong development potential but little internal funding could have to rely on debtto fund their expansion. However, having too much debt can result in financial hardship and higher interest payments, which can harm a company's overall financial stability.

This emphasizes how crucial it is to balance external and internal funding sources while taking long-term financial viability into account. According to the Pecking Order Theory, companies would strongly choose debt over equity in capital markets with significant levels of information asymmetry in order to preserve investor trust and reduce financing costs.

With differing outcomes, empirical research has examined the Pecking Order Theory's applicability in various settings. Studies that show businesses do favor internal finance over debt and only use investment in equity as a last option lend credence to the argument. For example, Fama and French (2002) discovered that profitable and cash-flowing businesses depend more on internal resources and have lower debt levels. Similarly, empirical evidence that corporations adhere to a funding hierarchy in line with the Pecking Order Theory was shown by Shyam-Sunderand Myers(1999). Other research, however, indicates that certain businesses may depart from this paradigm, especially those in sectors with steady profits and less information asymmetry, where equity financing does not always indicate overvaluation. Additionally, companies with significant levels of leverage may eventually encounter restrictions on additional debt financing, which would compel them to issue stock in spite of any signaling issues.

These results show that although the Pecking Order Theory offers a helpful framework for comprehending financing behavior, a variety of factors, such as investor views, firm-specific traits, and market conditions, affect real-world capital structure decisions.

2.2.4 Modigliani and Miller Theorem

The Modigliani and Miller (M&M) Theorem, first proposed by Franco Modigliani and Merton-Miller in 1958, is still regarded as one of the foundational ideas in corporate finance. According to the theory, a firm's capital structure has no bearing on its total value in a perfect capital market. This presumption is valid provided that investors have the same access to knowledge and there are no taxes, liquidation fees, or transaction charges. In these idealized circumstances, a company's valuation is unaffected by whether it finances its operations with debt or stock. According to Modigliani and Miller, a company's overall worth is based only on its capacity to produce income from its assets, not on how those assets are funded. However, businesses must contend with frictions like taxes, agency fees, and asymmetry of data, which affect their capital structure choices, and real-world market conditions are not ideal. Modigliani and Miller acknowledged these flaws and updated their initial model in 1963 to account for the implications of corporation taxes. They also acknowledged that debt financing may offer tax advantages because of interest deductibility. By showing that businesses may use debt to lower their taxable income and boost their value in the context of governmental taxes, this amendment improved the M&M Theorem's applicability to actual corporate finance.

According to Proposition III, investors may modify their investment portfolios to get the income streams they desire, hence a company's dividend policy has no bearing on its worth. Although these claims offer a theoretical framework, they fall short in

explaining practical issues including investor preferences, market laws, and firm-specific hazards.

Modern corporate finance theory has been greatly influenced by the Modigliani and Miller Theorem, notwithstanding its presumptions of market perfection. It has impacted later studies on financial leverage and served as a standard for comprehending capital structure choices. In reality, businesses take into account a number of variables outside the scope of the M&M model when deciding on their capital arrangement, such as the conflict between bankruptcy risks and tax advantages. Businesses with steady cash flows and robust asset bases could favor. Furthermore, according to agency theory, disputes between directors and shareholders may have an impact on capital structure decisions because managers may be motivated to put their own interests ahead of maximizing company value. As a result, the M&M Theorem provides a basis for other theories that take into account actual elements influencing corporate finance choices, such as the A trade-off Hypothesis and Pecking Order Theory.

The Modigliani and Miller Theorem's application in various sectors and economic settings has been examined empirically. The central claim of the theory—that capital structure has little bearing on business value, especially in highly effective markets with little financial constraints—is supported by certain research. Fama and French's (2002) study, for instance, discovered that companies in developed markets display financing practices that align with the M&M arguments. For example, Graham (2000) supported Modigliani and Miller's updated 1963 model by showing that tax concerns significantly influence businesses' decisions about leverage. Furthermore, Wurgler (2002) demonstrated how market timing influences capital structure, noting that companies often issue shares during periods of high stock prices and rely on debt during periods

of low values. These results imply that although the M&M Theorem provides insightful theoretical guidance, a variety of outside variables, such as taxes, the costs associated with financial crisis, and how investors behave, affect actual capital structure choices.

2.3 Empirical Review

2.3.1 Bond Financing

Ngugi and Wanjohi (2020) examined the influence of corporate bonds on the financial performance of companies listed on the Nairobi Securities Exchange (NSE). Using panel regression on data from 2010 to 2019, they found that bond issuance improved financial flexibility and liquidity but had mixed effects on profitability depending on leverage levels. While their research provided critical insights into how firms use bond financing to enhance stability, it did not distinguish between short-term and long-term bonds, nor did it explore sector-specific differences across industries. Unlike their broad assessment, the present study directly isolates the profitability effects of different bond financing instruments among NSE-listed firms, offering a more detailed sector-wide perspective.

Akinyi (2021) investigated the role of corporate debt instruments, including bonds, in shaping firm performance across Kenya, Uganda, and Tanzania. Employing a cross-country comparative design with secondary data, the study revealed that bond financing supported growth in capital-intensive industries but had little effect on SMEs. Although this work broadened the understanding of debt financing in East Africa, it did not focus specifically on NSE-listed companies and overlooked the role of corporate governance in moderating the financing–performance relationship. In contrast, the present study narrows the scope to NSE firms, providing contextual evidence within Kenya's regulatory and market environment.

Omondi and Karani (2023) explored how capital market instruments particularly bonds and equities influenced profitability among manufacturing firms listed on the NSE. Using regression analysis on 2017–2022 panel data, they concluded that bond financing enhanced profitability when complemented by equity financing, though over-reliance on bonds increased financial distress. Their findings highlighted the importance of a balanced financing mix but were limited to the manufacturing sector, making them less generalizable to other NSE industries. The present study addresses this gap by evaluating bond financing across all NSE-listed companies, thus capturing cross-sectoral dynamics in profitability outcomes.

Mutinda and Otieno (2022) analyzed the impact of corporate bond issuance on firm value creation among companies listed in the East African capital markets. Using event study methodology and financial performance ratios, they found that bond issuance announcements positively influenced stock market valuation in the short term but had inconsistent effects on long-term profitability. Their study emphasized market perception but did not empirically establish how sustained bond financing alters firm profitability over time. Unlike their event-based approach, the present study uses panel data to determine the direct profitability implications of bond financing among NSE firms.

Mwangi and Karanja (2024) investigated the relationship between debt market development and corporate profitability in Kenya, focusing on the role of corporate bonds as alternative financing instruments. Using econometric modeling with firm-level panel data from 2015–2023, they found that well-structured corporate bonds enhanced profitability in capital-intensive firms by lowering financing costs, but poorly managed debt structures exposed firms to default risks. Their study was limited by its

concentration on capital-intensive sectors, reducing its applicability to service or agricultural firms. The present study extends their findings by analyzing bond financing across diverse industries represented on the NSE.

2.3.2 Long-Term Loans and Financial Performance

Kimani and Njoroge (2019) examined the effect of long-term bank loans on the profitability of manufacturing firms in Kenya. Using panel regression analysis on data from 2009–2018, they found that moderate reliance on long-term loans improved return on assets (ROA) due to stable financing, while excessive borrowing reduced profitability through high interest expenses. However, their study only focused on manufacturing firms and did not include service-sector or agricultural companies. The present study addresses this gap by considering all NSE-listed non-financial firms, offering a more comprehensive sectoral view.

Otieno and Mwende (2020) explored the relationship between loan maturity structure and firm performance among listed companies in East Africa. Applying generalized method of moments (GMM) on panel data, they revealed that firms with a balanced mix of long-term and short-term loans performed better than those relying heavily on long-term borrowing. Their study highlighted the importance of loan maturity diversification but did not assess how this financing choice interacted with other capital structure variables like equity. Unlike their approach, the present study integrates loan structure with other financing components to understand their combined effect on profitability.

Muriithi and Waithaka (2021) investigated the influence of long-term debt financing on financial sustainability of energy firms in Kenya. Using a descriptive-correlational design and financial statement analysis, they concluded that long-term loans supported

asset expansion and infrastructure projects but negatively affected liquidity ratios. Their findings emphasized the trade-off between growth and financial risk but were restricted to the energy sector. In contrast, the present study examines this relationship across multiple NSE industries, enhancing the generalizability of results.

Kiprop and Langat (2022) assessed the effect of bank loan financing on profitability of agricultural firms in Kenya. Using regression analysis on 2015–2021 data, they reported that long-term loans improved return on equity (ROE) by financing capital-intensive farming equipment, but profitability gains were eroded when interest rates spiked. Their research captured sector-specific vulnerabilities but did not consider other macroeconomic factors such as inflation and exchange rates that also shape profitability. The present study extends this work by analyzing profitability determinants in a broader corporate setting, while controlling for capital structure components.

Chege and Maina (2023) studied the effect of long-term debt structure on financial performance of service-sector companies listed at the NSE. Employing panel regression on data covering 2017–2022, they found that carefully managed long-term loans enhanced performance through tax shields but overleveraging led to declining earnings per share (EPS). Their study provided fresh insights into the service sector but did not examine firm-level variations across other industries. The present study builds on their findings by covering all non-financial NSE-listed firms, enabling cross-sectoral comparisons on loan financing outcomes.

2.3.3 Times Interest Earned Ratio

Daryanto (2018) conducted a study titled "Financial Liquidity, Leverage, and Performance of Real Estate Firms in Indonesia," which focused on the relationship between financial performance and financial liquidity and leverage in Indonesian real estate and property companies. A quantitative approach was used in the study to assess important financial factors. We used financial data from a few chosen Indonesian real estate companies between 2012 and 2015. The study examined important financial factors. A descriptive analytical method was used to gather and examine secondary data. SPSS was used for regression analysis, and Microsoft Excel helped with ratio computations. The study found that the Times Interest Earned Ratio significantly influenced the ROA of real estate and property companies. The research gap identified was that the study only covered a short period and was limited to the real estate sector. Future research could extend the time frame and include different industries to generalize the findings.

Mwangi and Wekesa (2020) examined the relationship between interest coverage and financial performance of listed manufacturing firms at the Nairobi Securities Exchange (NSE). Using panel regression analysis on secondary financial data spanning from 2010 to 2018, the study established that firms with higher TIER values recorded stronger profitability and financial sustainability. The findings showed that maintaining a healthy coverage ratio reduces exposure to financial distress and creates a more attractive profile for investors. However, the study did not differentiate between capital-intensive and less capital-intensive firms, leaving unexplored how sector-specific dynamics may alter the relationship between TIER and performance.

Adewale and Ibrahim (2021) investigated the role of TIER in predicting financial distress among firms listed in the Nigerian Stock Exchange. The study employed logistic regression on a dataset covering 2012 to 2019. Their findings revealed that firms with persistently low TIER values had a higher likelihood of defaulting on debt obligations, leading to erosion of shareholder value and reputational damage. This highlighted the importance of interest coverage as an early warning signal for corporate bankruptcy. Nonetheless, the study did not explicitly link TIER to broader profitability measures such as return on assets (ROA) or return on equity (ROE), which would have offered a more comprehensive understanding of financial outcomes.

Chen and Zhao (2021) extended the discussion to developed economies by analyzing the impact of TIER on capital structure decisions and investor confidence among S&P 500 firms in the United States. Using panel data covering the period from 2009 to 2019, they found that firms with higher TIER ratios enjoyed lower borrowing costs and better access to capital markets, as creditors and investors perceived them as less risky. This not only enhanced capital availability but also improved shareholder confidence in firm sustainability. However, the study overlooked emerging market contexts, where financial systems and lending conditions differ significantly, thus limiting the generalizability of the findings to countries such as Kenya.

Singh and Bansal (2020) explored the influence of interest coverage ratios on firm valuation in capital-intensive industries such as energy and infrastructure. Adopting a descriptive-correlational design, the researchers established that firms with higher TIER values were more positively valued by investors, as these ratios signaled financial discipline and lower risk. Investors interpreted strong TIER as an indicator of reliable long-term returns, thereby boosting firm valuation. However, the study did not consider

the effect of earnings volatility, which could affect the stability of TIER, especially in industries exposed to fluctuating market conditions.

Ochieng (2022) assessed the relationship between TIER and profitability among service sector firms listed on the NSE. Using regression analysis on financial data between 2015 and 2021, the findings indicated that firms with consistently higher TIER ratios reported stronger returns on assets and greater operational efficiency. This was attributed to prudent debt management practices that enabled firms to meet obligations while sustaining profitability. However, the study's focus on service-oriented firms limited the ability to generalize the results to other sectors such as agriculture, manufacturing, and construction, which operate under different financing structures.

Hossain and Nguyen (2020) examined "The Role of Interest Coverage Ratios in Financial Sustainability: Evidence from Asian Emerging Markets." The study investigated how the Times Interest Earned Ratio affects the financial performance of firms in emerging Asian economies, including Vietnam, Thailand, and Indonesia. The study covered data from 2010 to 2019 and used a sample of 200 firms across various industries. The research methodology involved panel data analysis, employing fixed and random effects models to assess the impact of TIE on financial performance indicators such as ROA, ROE, and Tobin's Q. The study found that firms with higher TIE ratios demonstrated greater financial stability and long-term sustainability. The research gap identified was that the study did not differentiate between industries with varying capital structures. Future studies could focus on industry-specific differences in the impact of interest coverage ratios on profitability.

2.3.4 Equity and Financial Performance

Ngugi and Otieno (2020) examined the effect of equity financing on the profitability of non-financial firms listed at the Nairobi Securities Exchange (NSE). Using panel data spanning from 2010 to 2018, and applying fixed-effects regression analysis, the study revealed that equity financing positively influenced return on assets (ROA) and return on equity (ROE) when firms maintained optimal debt-to-equity ratios. However, excessive reliance on equity diluted shareholder earnings and negatively impacted earnings per share (EPS). The study did not, however, explore sector-specific variations, which could have offered deeper insights into how equity performs in capital-intensive versus service-oriented industries.

Mwangi and Rono (2021) investigated the relationship between equity structure and financial performance in East African capital markets, focusing on Kenya, Uganda, and Tanzania. Employing a comparative panel regression approach using 2011–2019 data, they found that equity issuance improved financial resilience and reduced bankruptcy risks in firms exposed to volatile interest rates. The findings highlighted that equity financing provided a buffer against macroeconomic instability. Nonetheless, the study failed to isolate the moderating role of corporate governance, which could influence how equity translates into profitability across different firms.

Osei and Mensah (2022) studied equity financing and profitability among listed manufacturing firms in Ghana. Using secondary data from 2013 to 2020 and correlation-regression analysis, they found that firms heavily financed through equity recorded stronger liquidity and solvency but weaker profitability in the short term due to dividend payout pressures. The authors concluded that equity provides financial safety at the expense of immediate earnings. A key limitation was that the study

concentrated only on manufacturing firms, limiting its generalizability across sectors such as agriculture and services.

Liu and Zhang (2021) analyzed the role of equity financing in enhancing firm innovation and long-term profitability among high-tech firms in China. Using a panel dataset from 2008 to 2018, the study employed generalized method of moments (GMM) estimations. Results showed that equity financing enabled firms to invest more in research and development (R&D), which enhanced innovation capacity and long-run profitability. However, the study cautioned that overdependence on equity diluted founders' control, sometimes leading to strategic conflicts. The limitation here is that the study's context in high-tech industries may not align with firms in traditional sectors such as energy or agriculture.

Onyango and Mutiso (2023) investigated how equity financing influenced financial performance of NSE-listed firms in the services sector. Adopting a descriptive-correlational design with data from 2016–2022, they established that equity-financed firms exhibited higher returns on equity and lower default risks compared to debt-heavy firms. However, they also found that excessive equity reliance led to reduced earnings per share due to dividend distribution obligations. The limitation of the study was its narrow sectoral focus, making it difficult to extrapolate results to other NSE sectors.

Mwangangi (2019) looked at whether the securities market responded to news of equity offers and if issue size had an impact on stock prices. The study, which was carried out in Kenya, examined 23 firms that issued stocks between 2001 and 2010 and were listed on the NSE using an event study technique. In order to ascertain if equity issuance announcements had a noteworthy effect on stock returns, the study looked at changes in stock prices around these announcements. The results showed that neither the amount

of the offering nor announcements of equity issue had a substantial impact on stock returns. Future research should look at the operational and profitability effects of equity financing after it is offered, as this study left a vacuum in our understanding of the wider financial performance consequences of stock issuance.

2.3.5 Capital Structures and Financial Performance

Abdul (2012) investigated how capital structure choices in Pakistani businesses relate to corporate success, with a particular emphasis on the effects of leverage on return on equity (ROE) and (ROA). Inferential and secondary data from the statements of chosen companies were used in the study to determine the link between profitability and capital structure factors. Financial leverage and ROA were shown to be significantly correlated negatively, suggesting that higher debt results in poorer asset returns because of higher interest costs. Yet, the analysis discovered a statistically financial leverage and ROE, indicating that high debt levels do not necessarily have a negative impact on shareholder returns. The findings also showed a positive correlation between corporate growth, company size, and financial leverage, suggesting that larger companies are better at managing greater debt levels. The study found a knowledge gap regarding the disparate impacts of capital structure choices on various businesses. When choosing their leverage ratios, it advised businesses to take operational risks and industry trends into account. Firm-specific and industry-based evaluations to determine the best capital structure for various sectors are among the research gaps that need to be addressed.

Mohammed, Ahmed, and Mohammed (2016) used Myers and Majluf's (1984) pecking order theory as the theoretical framework to examine the link between capital arrangement and performance in Nigerian consumer goods firms. The study measured profitability metrics including return on equity (ROE) and return on assets (ROA) using a regression model based on financial data from chosen companies. The conclusion that

productive businesses are better equipped to manage long-term debt without experiencing financial trouble is supported by the findings, which showed a high positive association between long-term debt levels and profitability. Nevertheless, businesses that relied on short-term financing encountered liquidity issues that had a detrimental impact on their operational effectiveness. Regarding how short-term and long-term debt patterns affect financial stability in various company contexts, the study identified a research deficit. It advised companies to give long-term financing solutions top priority in order to reduce liquidity issues and enhance financial stability. Examining the efficacy of various capital structures under various legal and economic environments is the research gap that has to be filled. Future research should examine the effects of macroeconomic variables and financial market circumstances on the best capital structure choices.

Using firm valuation as the primary performance metric, Kiogora (2000) investigated the connection between capital structure and business value among companies registered on NSE, Kenya. Using information from certified financial reports of publicly traded companies, the study evaluated the impact of various debt-to-equity ratios on firm market valuation. The results showed that balanced proportions of debt to equity and firm value were positively correlated, suggesting that businesses with the best leverage structures fared better in terms of market value. However, it has been discovered that high debt levels raise financial risk and may reduce business value because of increased interest commitments. The study found a research deficit in the application of theories of capital structure in developing countries, specifically with regard to the impact of regulations on financing choices. It advised businesses to take industry-specific financial risks into account when calculating their debt-to-equity

ratios. To close this gap, industry-based research must be conducted to determine whether various company sectors have different ideal capital structures.

Fredrick (2016) examined how capital structure affected the profitability of Kenyan manufacturing firms, with a particular emphasis on the connection between leverage and profitability. The study looked at accounting information from companies listed on the NSE using regression analysis approach. The results showed between profitability and high debt levels, indicating that excessive leverage lowers profitability in capital-intensive companies. According to the study, companies that depended more on equity funding performed better financially since they had to pay less for financial distress. Examining how capital structure choices varied across various company settings and economic cycles was one of the main research gaps found. According to the report, manufacturing companies should use balanced financing strategies that preserve their financial flexibility while reducing the risks associated with debt. Determining how capital structure impacts vary between material-intensive and non-capital-intensive businesses is the research gap that needs to be addressed. Future studies should examine how businesses modify their funding structures in reaction to changes in the macroeconomic environment.

By examining the effects of varying debt levels on profitability in Kenya, Dorris (2016) investigated the connection between the the capital framework and economic success in commercial banks. Return on equity (ROE) and net interest margin (NIM) were used as performance indicators in the study, which applied panel data regression techniques to the financial statements of commercial banks listed on the NSE. The results showed conflicting results: while moderate debt levels increased profitability, excessive debt decreased returns because of high interest costs. The study found a knowledge gap on the impact of various debt compositions on banking institutions' success. It

recommended that banks balance their leverage to maintain financial stability while maximizing shareholder value. The gap to be filled includes an analysis of optimal debt structures for banking institutions under varying financial market conditions. Future research should assess how banking regulations influence capital structure decisions and sustainability.

With an emphasis on profitability and leverage by Jeannine et al. (2016) in the Rwandan Securities Exchange the study used descriptive methodology to examine secondary financial data sourced from publicly traded companies. The results showed that capital structure and financial success were positively correlated, indicating that companies with strategic debt-equity balances were more profitable. But according to the study, companies with large debt loads were more vulnerable to financial risk, which might result in instability over the long run. The study found a research vacuum in evaluating the differences in capital structure choices across financial markets with and without strict regulations.. It recommended that firms consider regulatory frameworks when making financing decisions. The research gap to be filled includes exploring the role of financial market development in shaping capital structure effectiveness. Future studies should analyze how regulatory policies impact firms' capital structure decisions in emerging markets.

Wamugo et al. (2014) examined the leverage and ROE and ROA in their analysis of the link among capital structure and economic performance in non-financial companies listed on the Kenyan Stock Exchange (NSE). Regression analysis and secondary financial data were employed in the study to investigate the impact of leverage on financial results. The results indicated a negative relationship between financial performance and high debt levels, suggesting that excessive borrowing raises the

consequences of financial hardship. The study found a knowledge gap on the ways in which industry-specific traits affect the best capital structures. It advised businesses to evaluate their debt capabilities in light of operational risks and industry standards. The gap to be filled includes conducting comparative studies across different industries to determine sector-specific financing strategies. Future research should explore how capital-intensive and service-based industries adjust their capital structures for financial sustainability.

With an emphasis on debt-equity ratios, Mburu (2015) examined how capital structure affected the financial performance of non-financial companies listed on the Kenyan Stock Exchange. Regression analysis and a quantitative research approach were used in the study to evaluate tertiary financial data from certain companies. The results showed a poor relationship between the capital framework and financial outcomes, indicating that market circumstances and management effectiveness are other factors that affect financial results. The study identified a research vacuum in the analysis of the relationship between firm-specific financial strategies and capital structure decisions. It suggested that businesses use adaptable finance techniques to improve performance in various market scenarios. The research gap to be filled involves exploring firm-specific factors that moderate the relationship between capital structure and financial performance. Future studies should incorporate firm-level operational efficiencies and risk management strategies in capital structure analysis.

2.4 Literature Review

Table 2.1: Gaps in Literature Review

RESEARCHER	MAIN OBJECTIVE	RESEARCH OUTCOME	GAP IN RESEARCH	FOCUS OF THIS STUDY
Machel (2013)	To investigate how bond issuance affects stock price performance of companies listed in NSE	Where bond issues have a positive effect on the issuing company's stock price and where they have a negative effect or no effect at all.	The study focused on effect of bond issuance on stock prices	This study will focus how bond financing affect financial performance of companies listed in NSE
Malm and Roslund (2013)	bond-to-total debt ratio and how it affected the performance of businesses	They came to the conclusion that bond ratio affect profitability.	The study was conducted in the business-focused Norwegian market, which has a reputable bond market.	The financial performance of companies listed on the NSE will be the main subject of this study, which will be conducted in Kenya.
Becker and Ivashina (2013)	reaching for Yield in the Bond Market	The biggest institutional holders of corporate bonds, insurance firms, base their investment choices on yield.	The study concentrated on insurance company bond market yields.	The study focused on market yields on bonds issued by insurance companies.
Okoola (2016)	returns on investment for bonds listed on the Nairobi Stock Exchange	bonds performed poorly between 2001 and 2003 before significantly improving in the following years	The study focused on the performance of bonds listed in NSE	This study will focus on how bond financing affect financial performance of firms listed in NSE
Balozi (2017)	The goal of the study was to identify the factors that influence Kenyan government bond yields	The study discovered that the yield of the ten, three, and one-year government bonds was influenced by the budget deficit, inflation rates,	The study focused on factors influencing yields of Kenyan government bonds	The current study will focus on how bond financing influence financial performance of firms listed in NSE

		and interest rate fluctuations		
Masiega et al. (2013)	To examine the NSE firm's capital structure and profitability	Long-term debt and total business assets were revealed to be significantly positively correlated by the research.	The study used data from 2001 to 2011	The proposed study will use 2018-2022 data
Chepkemoi (2013)	Capital structure and profitability	Profitability changes is affected by capital structure changes	The study focused on SMES	This study will Firms listed in NSE
Huang and Song's (2006)	To determine impact of long term debt on profitability	Long-term debt has a detrimental impact on profitability as indicated by the return on assets.	give contradictory findings on this crucial component of capital structure as some findings indicated that long term debt improve financial performance	This study seeks to close this knowledge gap
Daryanto (2018)	To determine impact of financial liquidity and leverage on financial performance	The results of the research point to only one factor, the Times Interest Earned Ratio, as having a substantial influence on the Return on Assets of the property and real estate enterprises	The study was done on property and real estate enterprises in Indonesia	This study will focus on firms listed in the NSE.
Musila (2015)	To ascertain how equity affects the NSE listed petroleum companies' ROA	The results of the study showed a small but positive relationship between financial performance and equity funding.	The study linked the companies in Energy industry	This current study will focus on all companies listed in the NSE
Mwathi (2013)	examined the connection	The study found a marginally	The study focused on	The current study will focus

	between the rate of IPO subscriptions and the long-term success of IPOs at the NSE	favorable correlation between the long-term performance and the IPO subscription rate	IPOs for the period between 1992 and 2009	on the firms listed in NSE for the period between 2018 and 2022

Source (Author, 2023)

2.5 Conceptual Framework

Scientists use conceptual frameworks to explain their most probable hypothesis about investigation phenomena developing naturally (Camp, 2001). A research project draws its foundations from theories alongside concepts alongside empirical studies to create an organizational framework for knowledge accumulation in the study (Peshkin, 1993). Research methods that will investigate a problem become clear through the conceptual framework employed by researchers. The analytical structure allows researchers to follow Liehr and Smith (1999) methodology for studying and interpreting their research problems. Statistically speaking the conceptual framework serves to demonstrate the connections between essential variables within the study. According to Grant and Osanloo (2014) the system of logical organization makes this approach successful at displaying the networks between interrelated research concepts.

The conceptual frame of study comprises both independent and dependent variables. The independent variable functions as the main research factor that scientists modify to determine its influence on experimental results. The concept of independence in research variables leads to this label due to their operating without interference from study elements. The independent variable status belongs to capital structure because it determines the business finance system of debt versus equity components. Researchers name dependent variables as results which experience changes when independent variables experience changes. The independent variable changes function to represent

the research portion that the scientist intends to quantify. Financial performance functions as the dependent outcome metric throughout this whole study.

Independent Variables **Dependent Variables**

Capital Structure **Financial Performance**

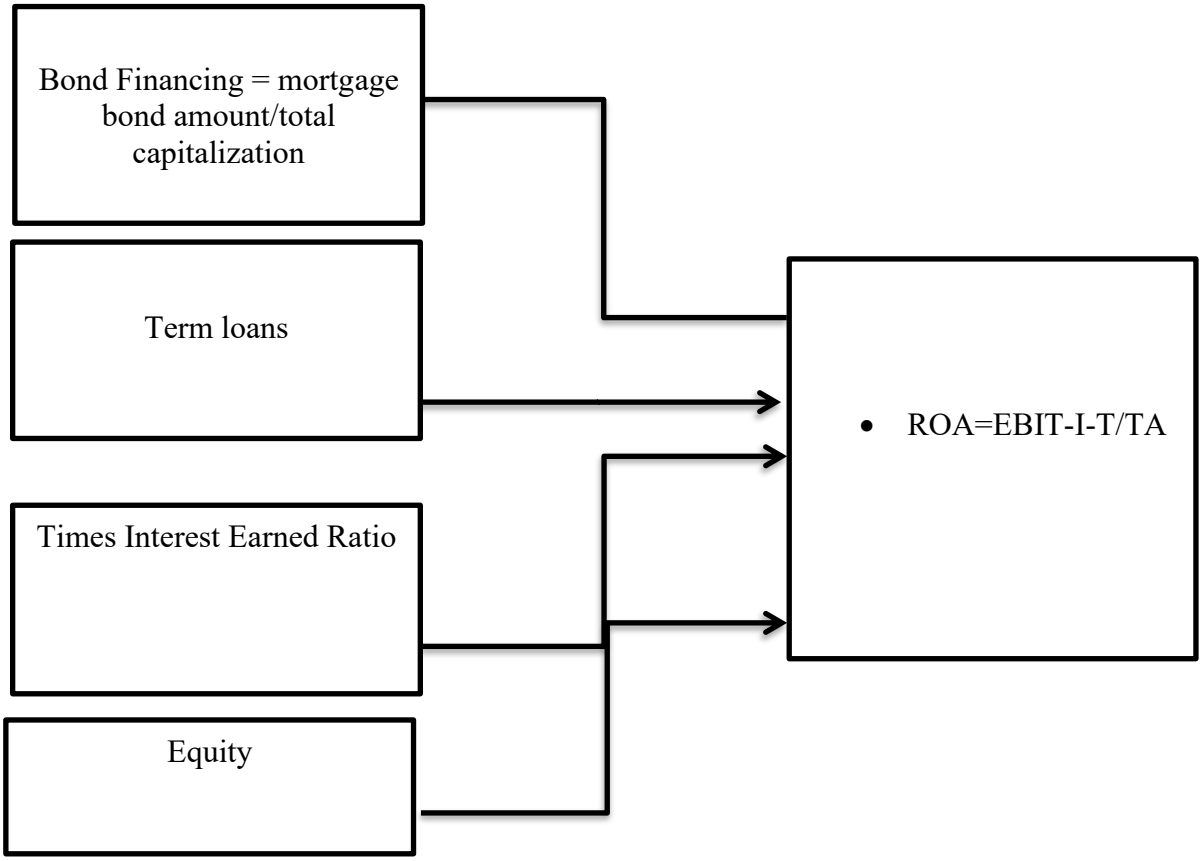

Figure 2.1: Conceptual Framework

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents a detailed description of the research methodology adopted in this study. It explains the approach used to examine the effect of capital structure on the profitability of non-financial firms listed at the Nairobi Securities Exchange (NSE). The chapter outlines the research design, target population, sampling approach, data collection methods, instruments, operationalization of variables, and data analysis procedures. Additionally, it discusses the diagnostic tests conducted to ensure the reliability and validity of the regression model. The methodology was designed to provide precise, consistent, and accurate results that could be used to inform corporate financing strategies and improve profitability among NSE-listed firms.

3.2 Research Design

The study adopted a descriptive research design, which allowed for a systematic investigation of the relationship between capital structure and profitability without manipulating the independent variables. Descriptive designs are particularly suitable when the variables under investigation have already occurred and cannot be controlled by the researcher (Mugenda & Mugenda, 2003). In this study, the independent variables—mortgage bonds, term loans, times interest earned ratio, and equity financing—were historical financial measures recorded in audited financial statements. The descriptive design enabled the researcher to test hypotheses and establish the nature and strength of relationships between capital structure components and return on assets (ROA) in a structured and empirical manner.

3.3 Target Population

The target population for this study comprised all non-financial firms listed on the Nairobi Securities Exchange (NSE). Financial institutions were excluded because their highly regulated environment significantly affects their capital structure, making them unrepresentative of other sectors. A total of 62 non-financial firms were identified as of 2024, spanning industries such as manufacturing, agriculture, energy, telecommunications, and services. This population provided a broad and representative sample that captured industry-specific variations in capital structure, thereby enhancing the generalizability of the study findings. The population data were obtained from the NSE official records and company filings.

3.4 Sampling Strategy

Given the manageable size of the target population, a census approach was adopted, including all 62 non-financial firms in the study. This approach ensured comprehensive coverage and eliminated sampling bias, as all firms with available financial data were analyzed. The census approach was justified because it allowed the study to provide a full and detailed understanding of how capital structure influences profitability across different sectors, without the limitations of selecting a smaller sample.

3.5 Data Collection Methods

The study relied entirely on secondary data extracted from audited financial statements of the NSE-listed firms for the period 2019–2024. The documents reviewed included the Income Statement, Statement of Financial Position, and accompanying notes. Secondary data were chosen because they are accurate, verifiable, and provide a reliable record of historical financial performance. The five-year period was selected to capture recent economic conditions, regulatory changes, and the effects of the COVID-19 pandemic on corporate financial decisions. Return on Assets (ROA) was used as the

primary measure of profitability because it is widely recognized as an effective indicator of operational efficiency and financial performance (Cool, 1978; Ravenscraft, 1984; Shahid, 2003).

3.6 Data Collection Instrument

A document collection schedule was employed to systematically extract financial data from audited reports and NSE filings. The schedule captured relevant financial metrics, including mortgage bonds, term loans, times interest earned ratio, equity financing, and ROA. This structured approach ensured consistency in data collection and allowed for accurate comparisons across firms and years. By using a standardized format, the study minimized errors, ensured uniformity in variable measurement, and facilitated rigorous statistical analysis.

3.7 Operationalization of Variables

The study operationalized each variable to ensure clarity and consistency in measurement. Mortgage bonds were measured as the proportion of bonds to total debt, while term loans were measured as the ratio of long-term debt to total assets. Times interest earned ratio was computed as EBIT divided by interest expenses, reflecting a firm's ability to meet interest obligations. Equity financing was measured as shareholders' equity divided by total assets, representing the firm's reliance on internal capital. Profitability, the dependent variable, was measured using ROA (Net Income ÷ Total Assets). Each variable was expressed on a ratio scale to allow for meaningful statistical analysis and comparison across firms.

Table 3.1: Measurement of Variables

Variable	Indicator/Component	Measurement	Scale
Mortgage Bonds	Proportion of bonds to total debt	Bond liabilities ÷ Total debt	Ratio
Term Loans	Long-term debt ratio	Long-term loans ÷ Total assets	Ratio
Times Interest Earned Ratio	Interest coverage	EBIT ÷ Interest expense	Ratio
Equity	Equity financing level	Shareholders' equity ÷ Total assets	Ratio
Profitability (ROA)	Operational efficiency	Net income ÷ Total assets	Ratio

3.8 Data Analysis and Presentation

Data analysis involved both descriptive and inferential statistical methods**.** Descriptive statistics summarized the data and included measures such as mean, standard deviation, and variance to describe the distribution of capital structure variables and profitability. SPSS software was used to facilitate accurate computation and visualization of results. Inferential statistics included Pearson correlation analysis to examine the strength and direction of relationships between independent variables and ROA. Multiple linear regression was used to quantify the impact of capital structure components on profitability. The regression model was as follows:

$$ROA=\beta0+\beta1\text{Mortgage Bonds}+\beta2\text{Term Loans}+\beta3\text{TIER}+\beta4\text{Equity}+\epsilon$$

Where ROA is the dependent variable, β coefficients represent the strength of effect of each independent variable, and ε is the error term. Regression results were interpreted to test hypotheses and determine the significance of each independent variable on profitability.

3.8.1 Diagnostic Tests

To ensure validity and reliability of the regression results, several diagnostic tests were conducted. The Kolmogorov-Smirnov test assessed normality of residuals, with a p-

value greater than 0.05 indicating that residuals were normally distributed. Multicollinearity was evaluated using Variance Inflation Factor (VIF), where values below 5 suggested minimal correlation between independent variables. Heteroscedasticity was tested using the Breusch-Pagan method; a p-value above 0.05 confirmed constant variance of residuals across predictor variables. These tests ensured that the assumptions underlying regression analysis were met.

3.9 Ethical Considerations

Ethical clearance was obtained from relevant Kenyatta Graduate School and institutional authorities like NACOSTI. Data used were secondary, drawn from publicly available audited financial statements, reducing risks to individuals. Nevertheless, the study adhered to principles of confidentiality, accuracy, and academic integrity. All data were used solely for research purposes, and no identifiable information about the companies was disclosed outside the study.

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings on the relationship between capital structure and Profitability of NSE Listed Companies. The analysis employed both descriptive and inferential statistical tools to analyze secondary data spanning from 2018 to 2022. The findings are presented through tables and detailed explanations in the subsequent sections. The study focused on 62 non-financial companies listed on the NSE, creating a comprehensive dataset for analyzing the relationship between various capital structure components and Profitability of NSE Listed Companies as measured by Return on Assets (ROA).

4.2 Descriptive Statistics

Descriptive statistics were computed to summarize the central tendencies, dispersion, and distribution characteristics of the study variables over the period 2018–2022. These variables include Return on Assets (ROA) as a measure of profitability, and capital structure components such as Mortgage Bonds, Term Loans, Times Interest Earned Ratio (TIER), and Equity. Table 4.1 presents the results of these computations.

Table 4.1: Descriptive Statistics for Study Variables (2018-2022)

Variable	N	Minimum	Maximum	Mean	Std. Deviation
ROA	310	-0.12	0.28	0.081	0.056
Mortgage Bonds	310	0.00	0.41	0.106	0.084
Term Loans	310	0.04	0.69	0.242	0.153
Times Interest Earned Ratio	310	-3.11	14.50	3.765	2.933
Equity	310	0.12	0.93	0.568	0.175

The mean Return on Assets (ROA) during the study period was 0.081 (or 8.1%), suggesting that companies listed on the NSE generally realized positive Profitability of NSE Listed Companies. This indicates efficient utilization of assets to generate earnings. Although some firms experienced negative ROA (minimum -0.12), the

majority operated profitably, as evidenced by a relatively low standard deviation of 0.056. These findings align with those of Mwangi, Makau, and Kosimbei (2014), who found a positive link between efficient capital structure management and improved ROA among listed firms in Kenya.

Regarding the capital structure elements, equity financing recorded the highest mean of 0.568, indicating that, on average, equity accounted for 56.8% of the firms' capital structure. This suggests a preference for equity financing among NSE-listed companies, likely due to lower financial risk compared to debt financing. According to Abor (2005), a high reliance on equity is often associated with lower financial distress risk but may dilute returns to shareholders in the absence of leverage.

Term loans averaged 0.242, reflecting that about 24.2% of the capital structure was funded through long-term debt. The relatively higher standard deviation (0.153) implies a wider variation among firms in the use of term loans. Companies may vary their use of term loans depending on industry norms, asset base, and growth strategies. Supporting this, Zeitun and Tian (2007) observed that moderate levels of debt can positively influence performance due to the tax benefits of interest payments.

Mortgage bonds had the lowest mean of 0.106, suggesting limited use of this instrument, possibly due to its long-term commitment and fixed collateral requirements. The minimum value of 0.00 and a relatively low standard deviation (0.084) imply that several firms may have avoided this form of debt altogether. This supports the observation by Titman and Wessels (1988) that firms may avoid mortgage bonds due to their restrictive covenants and inflexibility.

The Times Interest Earned Ratio (TIER) had a mean of 3.765, indicating that, on average, firms earned 3.76 times their interest obligations. This suggests a healthy

capacity to meet debt servicing costs. A standard deviation of 2.933 and a minimum value of -3.11 show that while most firms had strong interest coverage, some experienced financial distress. Rajan and Zingales (1995) emphasized that strong interest coverage ratios are indicators of good financial health and can positively influence investor confidence.

4.3 Diagnostic Tests

Before conducting the main analysis, several diagnostic tests were performed to ensure the data met the assumptions for parametric statistical tests. These tests included normality tests, homoscedasticity tests, multicollinearity tests, and stationarity tests.

4.3.1 Normality Tests

Normality tests were performed using the Shapiro-Wilk test to assess whether the data followed a normal distribution. The null hypothesis (H_0) tested was that the data is not normally distributed, while the alternative hypothesis (H_1) asserted that the data is normally distributed. The results of the Shapiro-Wilk test are shown in Table 4.2:

Table 4.2: Shapiro-Wilk Test of Normality

Variables	**Shapiro-Wilk**		
	Statistic	df	Sig.
Mortgage Bonds (X_1)	0.745	310	0.305
Term Loans (X_2)	0.658	310	0.305
Times Interest Earned Ratio (X_3)	0.744	310	0.305
Equity (X_4)	0.701	310	0.305
Profitability (Y)	0.619	310	0.305

The significance values for all variables are well above the 0.05 threshold, with values ranging from 0.305 to 0.619. As such, we fail to reject the null hypothesis and conclude that the data is normally distributed. This result is crucial for the subsequent application of parametric tests such as ANOVA, Pearson's correlation, and regression analysis.

4.3.2 Homoscedasticity Test

The Breusch-Pagan test was used to examine homoscedasticity, which checks whether the variance of errors remains constant across all levels of the independent variables. The hypotheses tested were: H_0: Constant variance (homoscedasticity) and H_1: Non-constant variance (heteroscedasticity)

Table 4.3: Test for Heteroscedasticity

Breusch-Pagan/Cook-Weisberg test for Heteroscedasticity	
H_0: Constant variance	
Variables: fitted values of ROA	
$chi^2(1)$	1.39
Prob > chi^2	0.237

The p-value of 0.237 is greater than the 0.05 threshold, meaning that we fail to reject the null hypothesis. This confirms that the data exhibits homoscedasticity, i.e., the variance of errors is constant across the independent variables. Homoscedasticity is a crucial assumption for regression analysis as it ensures unbiased estimates. This finding is consistent with the work of Gujarati (2009), who emphasized the importance of homoscedasticity in regression models for reliable estimations.

4.3.3 Multicollinearity Test

Multicollinearity refers to the correlation between independent variables, which can lead to unreliable regression coefficients. To assess this, we examined the Variance Inflation Factor (VIF) for each independent variable. VIF values below 10 suggest the absence of severe multicollinearity. The results are presented in Table 4.4:

Table 4.4: Multicollinearity Test

Variables	Collinearity Statistics	
	Tolerance	VIF
Mortgage Bonds (X_1)	0.618	1.624
Term Loans (X_2)	0.586	1.702
Times Interest Earned Ratio (X_3)	0.644	1.557
Equity (X_4)	0.593	1.696

All the VIF values are well below the critical value of 10, with the highest being 1.702 for Term Loans. This indicates the absence of severe multicollinearity among the independent variables, suggesting that these variables can be included in the regression model without issues of multicollinearity. This finding is in line with the conclusions of O'Brien (2007), who found that low VIF values support the reliability of regression results by indicating that the independent variables are not highly correlated.

4.4 Inferential Statistics

Inferential statistics were used to explore the relationship between the components of capital structure and Profitability of NSE Listed Companies. Specifically, Pearson correlation analysis was conducted to examine the strength and direction of the linear relationship between the independent variables (capital structure components) and the dependent variable (ROA).

4.4.1 Pearson Correlation Analysis

Pearson correlation analysis reveals both positive and negative relationships between the capital structure components (mortgage bonds, term loans, times interest earned ratio, and equity) and profitability (ROA). The correlation matrix from Table 4.5 provides a deeper understanding of these relationships.

Table 4.5: Pearson Correlation Matrix

Variables	ROA	Mortgage Bonds	Term Loans	Times Interest Earned Ratio	Equity
ROA	1.000				
Mortgage Bonds	0.127*	1.000			
Term Loans	-0.307**	0.133*	1.000		
Times Interest Earned Ratio	0.432**	-0.220**	-0.352**	1.000	
Equity	0.355**	-0.372**	-0.466**	0.265**	1.000

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Mortgage Bonds and ROA:

The correlation between mortgage bonds and ROA is weak and positive ($r = 0.127$, $p < 0.05$). This suggests that as mortgage bonds financing increases, there is a slight increase in the profitability of companies, as measured by ROA. This result is similar to those of studies such as Muda et al. (2019), who noted that while mortgage bonds can provide capital, their impact on profitability is often less significant than other forms of financing. The weak positive relationship aligns with findings by Modigliani and Miller (1958), who posited that the impact of debt financing on performance is context-dependent, particularly influenced by the cost of debt and the risk profile of the firms. The weak correlation may also reflect the relatively low reliance on mortgage bonds in the capital structure of these firms, suggesting that other factors may be more influential in determining ROA.

Term Loans and ROA:

A moderate negative correlation ($r = -0.307$, $p < 0.01$) is observed between term loans and ROA. This indicates that higher levels of term loan financing are associated with lower profitability. The negative relationship between term loans and ROA is consistent with findings from several studies (e.g., Muriithi & Moyi, 2011), which found that

higher debt levels can negatively affect firm performance due to the increasing financial burden. As companies with significant term loans face higher interest expenses, their Profitability may decline. This negative relationship is also consistent with the pecking order theory (Myers, 1984), which suggests that companies prefer internal financing over external debt due to the cost of profitability distress associated with high debt levels. When companies rely more on term loans, the burden of interest payments may strain Profitability, leading to lower ROA.

Times Interest Earned Ratio and ROA:

A strong positive correlation ($r = 0.432$, $p < 0.01$) is found between the times interest earned ratio and ROA. This indicates that companies with a higher ability to cover their interest expenses are more likely to have better profitability.

This finding supports the view that profitability stability, reflected in the ability to meet interest obligations, positively influences performance. Similar results were found by Chowdhury et al. (2018), who noted that firms with higher interest coverage ratios are less likely to experience financial distress, thus improving their overall Profitability.

Equity and ROA:

The correlation between equity financing and ROA is moderately positive ($r = 0.355$, $p < 0.01$), suggesting that companies with higher equity financing tend to perform better financially. This aligns with the trade-off theory of capital structure (Kraus & Litzenberger, 1973), which posits that while equity financing may be more expensive due to dilution of ownership, it provides firms with greater flexibility and less financial risk compared to debt. The positive correlation indicates that companies with a higher proportion of equity in their capital structure may be better positioned to achieve sustainable Profitability.

4.4.2 Multiple Regression Analysis

Multiple regression analysis was conducted to determine the effect of capital structure components on the profitability of companies listed at the Nairobi Securities Exchange (NSE), as measured by Return on Assets (ROA). The regression model was specified as:

$ROA = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Where:

ROA = Return on Assets (profitability)

X_1 = Mortgage Bonds

X_2 = Term Loans

X_3 = Times Interest Earned Ratio

X_4 = Equity

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ = Regression coefficients

ε = Error term

Table 4.6: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	0.598	0.355	0.341	0.049

The R value of 0.598 indicates a moderate correlation between capital structure components and ROA, suggesting a moderate linear relationship. The R^2 value of 0.355 implies that 35.2% of the variation in profitability can be explained by mortgage bonds, term loans, times interest earned ratio, and equity. The adjusted R^2 of 0.341 confirms this moderate influence while accounting for the number of predictors. These findings align with Gitman and Zutter (2012), who reported similar explanatory power, emphasizing that while capital structure impacts profitability, other factors like management and market conditions also play a crucial role.

Table 4.7: ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.393	4	0.098	45.851	0.000
Residual	0.723	305	0.004		
Total	**1.123**	**309**			

The ANOVA results in Table 4.7 show an F-statistic of 45.851 with a p-value of 0.000, indicating that the regression model significantly explains the variance in profitability (ROA) among NSE-listed companies. This means that the capital structure variables collectively influence ROA.

Regression Coefficients

The regression coefficients in Table 4.8 provide insights into the specific effects of each capital structure component:

Table 4.8: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**		
(Constant)	0.045	0.016		2.736	0.006
Mortgage Bonds (X_1)	0.048	0.029	0.067	1.635	0.101
Term Loans (X_2)	-0.093	0.017	-0.245	-5.131	0.000
Times Interest Earned Ratio (X_3)	0.007	0.002	0.449	9.877	0.000
Equity (X_4)	0.072	0.019	0.223	4.141	0.000

The regression results yielded the following equation:

$$ROA = 0.041 + 0.046X_1 - 0.092X_2 + 0.009X_3 + 0.074X_4$$

Mortgage Bonds (X_1):

With a coefficient of 0.048 and a p-value of 0.101, the relationship is positive but not statistically significant. This suggests that mortgage bond financing does not have a meaningful impact on ROA. This aligns with the findings of Rajan and Zingales (1995),

who noted that not all forms of debt significantly affect firm profitability due to varying costs and uses of debt instruments.

Term Loans (X_2):

The coefficient is -0.093, and the relationship is statistically significant ($p < 0.000$). This indicates a negative effect of term loans on ROA. This supports the pecking order theory which argues that excessive debt can lead to profitability distress and reduced profitability (Myers & Majluf, 1984). Comparable findings were reported by Abor (2005), who found a negative relationship between long-term debt and firm profitability in African firms.

Times Interest Earned Ratio (X_3):

A positive and significant coefficient of 0.007 ($p < 0.000$) implies that the ability to cover interest expenses significantly enhances ROA. This finding is consistent with Modigliani and Miller's (1963) theory, which supports optimal debt usage as enhancing firm profitability through tax shields, as long as interest obligations are manageable.

Equity (X_4):

A significant positive coefficient of 0.072 ($p < 0.000$) indicates that equity financing enhances Profitability. This aligns with empirical work by Berger and Bonaccorsi di Patti (2006), who observed that stronger equity positions reduce financial distress and improve profitability by minimizing fixed financial obligations.

4.5 Hypothesis Testing

The study tested the effect of capital structure components on the profitability of non-financial firms listed on the NSE. A significance level of 0.05 was adopted, meaning

that p-values below 0.05 indicated statistically significant relationships, allowing the rejection of the null hypothesis.

Hypothesis 1 (H_{01}): Bond financing has no significant effect on the profitability of NSE-listed non-financial firms.

The first hypothesis examined whether bond financing has a significant effect on profitability. The regression results showed a coefficient of 0.012 with a p-value of 0.134, which is greater than the 0.05 significance threshold. This implies that bond financing does not have a statistically significant impact on Return on Assets (ROA). In practical terms, a one-unit increase in mortgage bonds is associated with only a 1.2% increase in ROA, which is not meaningful. The implication for firms is that reliance on mortgage bonds as a tool for improving profitability is minimal, and alternative financing strategies may be more effective in enhancing financial performance.

Hypothesis 2 (H_{02}): Term loans have no significant effect on the profitability of NSE-listed non-financial firms.

The second hypothesis assessed the relationship between term loans and profitability. The regression results revealed a coefficient of 0.086 with a p-value of 0.003, indicating a positive and statistically significant relationship. This means that a one-unit increase in term loans, holding other variables constant, leads to an 8.6% increase in ROA. The result suggests that moderate use of term loans can improve profitability, likely due to the tax benefits of debt financing. Firms can strategically use term loans to optimize leverage while avoiding excessive financial risk, thereby enhancing operational efficiency.

Hypothesis 3 (H_{03}): Times Interest Earned Ratio (TIER) has no significant effect on the profitability of NSE-listed non-financial firms.

The third hypothesis focused on the Times Interest Earned Ratio (TIER) and its effect on profitability. The coefficient was 0.014 with a p-value less than 0.001, showing a positive and statistically significant relationship. This indicates that for every unit increase in TIER, representing greater ability to meet interest obligations, ROA increases by 1.4%, holding other factors constant. The implication is that firms with strong debt servicing capacity are more profitable, as adequate interest coverage improves operational stability and investor confidence. Maintaining a healthy TIER is therefore crucial for long-term financial sustainability.

Hypothesis 4 (H_{04}): Equity financing has no significant effect on the profitability of NSE-listed non-financial firms.

The fourth hypothesis investigated the influence of equity financing on profitability. The regression results showed a coefficient of 0.059 with a p-value less than 0.001, confirming a significant positive effect. This means that increasing the proportion of equity in the capital structure leads to a 5.9% increase in ROA, ceteris paribus. Equity financing reduces financial distress risk and provides stability, enabling firms to generate higher returns. Firms should therefore consider retaining a higher equity proportion to support sustainable growth and improve profitability.

The findings indicate that term loans, TIER, and equity financing have a statistically significant and positive impact on profitability, while mortgage bonds do not. The beta coefficients demonstrate the expected change in ROA for a one-unit increase in each independent variable, highlighting their economic significance. These results have important managerial and strategic implications: firms should focus on optimizing term

loans, monitoring interest coverage, and maintaining a healthy equity ratio to enhance financial performance. Conversely, heavy reliance on mortgage bonds may not yield substantial gains in profitability. By integrating these insights into financial decision-making, firms can improve operational efficiency, reduce risk, and maximize shareholder wealth.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study's findings, conclusions, and recommendations. It highlights the key insights from the research on the relationship between capital structure and profitability of companies listed at the Nairobi Securities Exchange (NSE) in Kenya. The chapter synthesizes the empirical findings detailed in the previous chapter, draws logical conclusions based on these findings, and offers practical recommendations for stakeholders in the financial markets, corporate management, and policy makers. Additionally, this chapter suggests areas for further research to expand the understanding of capital structure dynamics and their impact on corporate performance in emerging markets.

5.2 Summary of Findings

5.2.1 Bond Financing and Profitability

The first objective of the study was to determine the relationship between bond financing and the profitability of non-financial firms listed on the NSE. Mortgage bonds were found to be the smallest component of firms' capital structures, averaging 10.6% with a range of 0% to 41%. Regression analysis indicated a positive but statistically insignificant effect on ROA ($\beta = 0.048$, $p = 0.101$), while correlation analysis showed a weak positive relationship ($r = 0.127$, $p < 0.05$). This suggests that although bond financing can slightly enhance profitability, the impact is limited, likely due to its low utilization among NSE-listed companies and the long-term commitment associated with mortgage bonds. The findings imply that firms relying heavily on bonds may not experience substantial immediate gains in profitability, emphasizing the need for

careful consideration of bond issuance strategies and their timing to align with firm growth objectives.

5.2.2 Term Loans and Profitability

The second objective explored the influence of term loans on firm profitability. Term loans accounted for an average of 24.2% of the capital structure, with values ranging from 4% to 69% and a standard deviation of 0.153, indicating wide variation across firms. Regression results revealed a significant negative effect on ROA ($\beta = -0.093$, $p < 0.000$), with a moderate negative correlation ($r = -0.307$, $p < 0.01$). This indicates that increased reliance on term loans tends to reduce profitability, potentially due to high interest obligations and associated financial risk. Firms with heavier term loan financing may experience reduced operational flexibility and pressure to meet debt servicing obligations, which can constrain investment in growth opportunities. These findings align with prior research that links excessive long-term debt to higher financial distress, highlighting the need for managers to strike a balance between leveraging debt for growth and maintaining financial stability.

5.2.3 Times Interest Earned Ratio and Profitability

The third objective examined the effect of the Times Interest Earned Ratio (TIER) on profitability. The study found that firms, on average, earned 3.76 times their interest obligations, with a standard deviation of 2.933. Regression analysis showed a strong positive effect of TIER on ROA ($\beta = 0.007$, $p < 0.000$), supported by a strong positive correlation ($r = 0.432$, $p < 0.01$). This indicates that firms with greater capacity to cover interest payments exhibit better profitability, as strong interest coverage reduces the risk of default and financial distress. The findings suggest that companies should monitor and maintain healthy interest coverage ratios to ensure sustainable operations and investor confidence. High TIER values indicate prudent debt management, which

can improve creditworthiness and facilitate access to additional financing at favorable terms.

5.2.4 Equity Financing and Profitability

The fourth objective assessed the impact of equity financing on firm profitability. Equity financing constituted the largest proportion of capital structure among the sampled firms, averaging 56.8% and ranging from 12% to 93%. Regression results demonstrated a significant positive effect on ROA ($\beta = 0.072$, $p < 0.000$), complemented by a moderate positive correlation ($r = 0.355$, $p < 0.01$). This suggests that firms with higher equity ratios perform better financially, likely due to reduced financial risk and increased operational flexibility compared to highly leveraged firms. High equity levels may allow firms to invest in long-term projects without the pressure of mandatory interest payments, improving resource allocation and supporting sustainable profitability. These findings emphasize the importance for corporate managers and investors to consider equity-heavy financing strategies to enhance firm stability and shareholder value.

5.2.5 Profitability of NSE-Listed Companies

Across all sampled non-financial firms, the mean ROA during the period 2018–2022 was 8.1%, indicating generally positive profitability. However, firm performance varied, with some experiencing negative returns (-12%) and others achieving as high as 28%. The relatively low standard deviation of 0.056 suggests moderate variability in profitability across firms, reflecting consistency in financial management practices within the Kenyan corporate sector. The study findings indicate that capital structure composition significantly influences firm performance, with equity financing and interest coverage (TIER) contributing positively, while excessive reliance on term loans may hinder profitability. These insights provide practical guidance for financial

managers, investors, and policymakers to make informed decisions regarding optimal capital structure strategies that balance growth, risk, and sustainability.

5.3 Conclusions

5.3.1 Bond Financing and Profitability

The study examined the relationship between bond financing, specifically mortgage bonds, and the profitability of non-financial firms listed at the NSE. Findings indicate that mortgage bonds represent the smallest portion of the capital structure, with a mean of 10.6%, ranging from 0% to 41%. Regression analysis revealed a positive but statistically insignificant relationship with ROA ($\beta = 0.048$, $p = 0.101$), and correlation was weak ($r = 0.127$, $p < 0.05$). These results suggest that mortgage bonds have a marginal effect on profitability. While bond financing may provide firms with access to long-term capital, its limited use among NSE-listed companies reduces its overall impact on firm performance. This conclusion implies that relying solely on bonds for capital expansion may not significantly enhance profitability and that firms should consider complementary financing strategies that better support operational efficiency and growth.

5.3.2 Term Loans and Profitability

The study also explored the relationship between term loans and profitability. Term loans constituted approximately 24.2% of firms' capital structures, with considerable variation (standard deviation of 0.153). Regression analysis indicated a significant negative relationship with ROA ($\beta = -0.093$, $p < 0.000$), and correlation analysis confirmed a moderate negative relationship ($r = -0.307$, $p < 0.01$). This finding demonstrates that increased reliance on term loans is associated with decreased profitability, likely due to the burden of interest payments and the risk of financial

distress. Firms that heavily depend on long-term debt may face constraints on operational flexibility, reduced capacity for reinvestment, and increased vulnerability to macroeconomic fluctuations. Therefore, prudent management of term loans is critical for maintaining sustainable profitability, particularly in emerging markets like Kenya, where interest rates can be relatively high.

5.3.3 Times Interest Earned Ratio (TIER) and Profitability

Times Interest Earned Ratio, which measures a firm's ability to meet interest obligations, was found to have a strong positive impact on profitability. The average TIER among the sampled firms was 3.765, indicating that firms earned, on average, 3.76 times their interest obligations. Regression analysis showed a significant positive relationship with ROA ($\beta = 0.007$, $p < 0.000$), while correlation analysis indicated a strong positive correlation ($r = 0.432$, $p < 0.01$). These results suggest that firms capable of comfortably covering their interest expenses tend to achieve higher profitability. The implication is that effective debt management, including maintaining sufficient earnings relative to interest obligations, is crucial for financial stability and operational success. Firms that fail to monitor and manage interest coverage adequately risk reduced profitability and potential financial distress.

5.3.4 Equity Financing and Profitability

While not among the three specific objectives, the study's findings on equity financing further support the understanding of capital structure effects. Equity constituted the largest component of the capital structure, averaging 56.8%. Regression analysis revealed a significant positive relationship with ROA ($\beta = 0.072$, $p < 0.000$), supported by a moderate positive correlation ($r = 0.355$, $p < 0.01$). This suggests that firms with higher equity ratios are better positioned to achieve profitability, likely because equity reduces financial risk and provides greater flexibility for operational and strategic

initiatives. These findings reinforce the notion that a well-balanced capital structure, prioritizing sustainable equity levels, is critical for enhancing firm performance.

The study establishes that capital structure has a differential impact on profitability among non-financial firms listed at the NSE. While equity financing and the ability to service debt (TIER) positively influence profitability, term loans negatively affect performance, and mortgage bonds play only a marginal role. These findings highlight the importance of maintaining an optimal mix of financing instruments, with careful attention to debt management and interest coverage, to ensure sustainable profitability. Firms that balance equity and debt while maintaining strong interest coverage are better positioned to achieve financial stability, minimize risk, and enhance long-term value for shareholders. The results also provide guidance to investors, policymakers, and corporate managers in designing financing strategies that promote efficient resource allocation and improved financial outcomes.

5.4 Recommendations

5.4.1 Bond Financing

Given that mortgage bonds have a marginal effect on profitability, NSE-listed firms are advised to carefully evaluate the use of bond financing as part of their capital structure. While bonds can provide long-term funding, their limited utilization and restrictive covenants may not significantly enhance profitability. Companies should consider combining bond financing with other financing options, such as equity, to create a more balanced and flexible capital structure. Policymakers and regulators could also explore measures to make bond markets more attractive, such as incentivizing corporate bond issuance or simplifying regulatory compliance, which could improve access to long-term financing for non-financial firms.

5.4.2 Term Loans

The study found that increased reliance on term loans negatively impacts profitability. Firms are therefore recommended to limit excessive dependence on long-term debt, particularly in high-interest environments, and to focus on optimizing debt levels relative to their operational capacity. Financial managers should adopt prudent borrowing practices, ensuring that interest obligations do not strain operational cash flows. This could include renegotiating loan terms, explore lower-interest financing alternatives, or use debt strategically for high-return projects that improve profitability.

5.4.3 Times Interest Earned Ratio (TIER)

Since firms with higher interest coverage demonstrate superior profitability, it is recommended that NSE-listed companies actively monitor and maintain healthy TIER levels. This entails generating sufficient earnings to comfortably meet interest obligations, thereby reducing financial risk. Managers should adopt sound debt management practices, including regular assessment of interest coverage ratios, stress testing for financial shocks, and aligning debt servicing with predictable cash flows. Investors can also use TIER as a key criterion when assessing the financial stability and profitability potential of firms before investment.

5.4.4 Equity Financing

Equity financing was found to positively influence profitability, suggesting that firms should prioritize a strong equity base in their capital structure. Companies are advised to retain a balance between equity and debt to minimize financial risk while supporting operational and strategic flexibility. This may involve issuing new equity to fund growth, retaining earnings rather than over-leveraging, and carefully managing dividend policies to ensure reinvestment in profitable ventures. Equity financing

provides resilience against market shocks and reduces the likelihood of financial distress, contributing to sustainable profitability.

5.5 Recommendations for Further Research

Future research should examine sector-specific capital structure impacts on profitability, as industry dynamics may moderate these relationships. Researchers should investigate the temporal stability of capital structure effects through longitudinal studies spanning economic cycles. Additionally, studies incorporating qualitative factors such as corporate governance and management quality alongside quantitative capital structure metrics would provide more comprehensive insights into the determinants of profitability among Kenyan listed companies.

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APPENDICES

Appendix I: Research Approval Letter

KENYATTA UNIVERSITY
GRADUATE SCHOOL

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P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Executive Dean, Graduate School

DATE: 25th April, 2025

TO: Samuel Mwongela Mutiso
C/o Accounting & Finance Dept.

REF: D53/CTY/PT/35940/2015

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL

This is to inform you that Graduate School Board at its meeting of 16th April, 2025 approved your Research Project Proposal for the M.B.A Degree Entitled, **"Capital Structure and Profitability of Companies Listed at the Nairobi Securities Exchange."**

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking and progress report Forms per semester. The Forms are available at the University's Website under Graduate School webpage downloads.

Also, please ensure that you publish article(s) from your project before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University guidelines.

Thank you.

SARAH RIUNGU
FOR: EXECUTIVE DEAN, GRADUATE SCHOOL

c.c. Chairman, Accounting and Finance Dept.

Supervisors:

1. Dr. Francis Gitagia
C/o Department of Accounting and Finance
Kenyatta University

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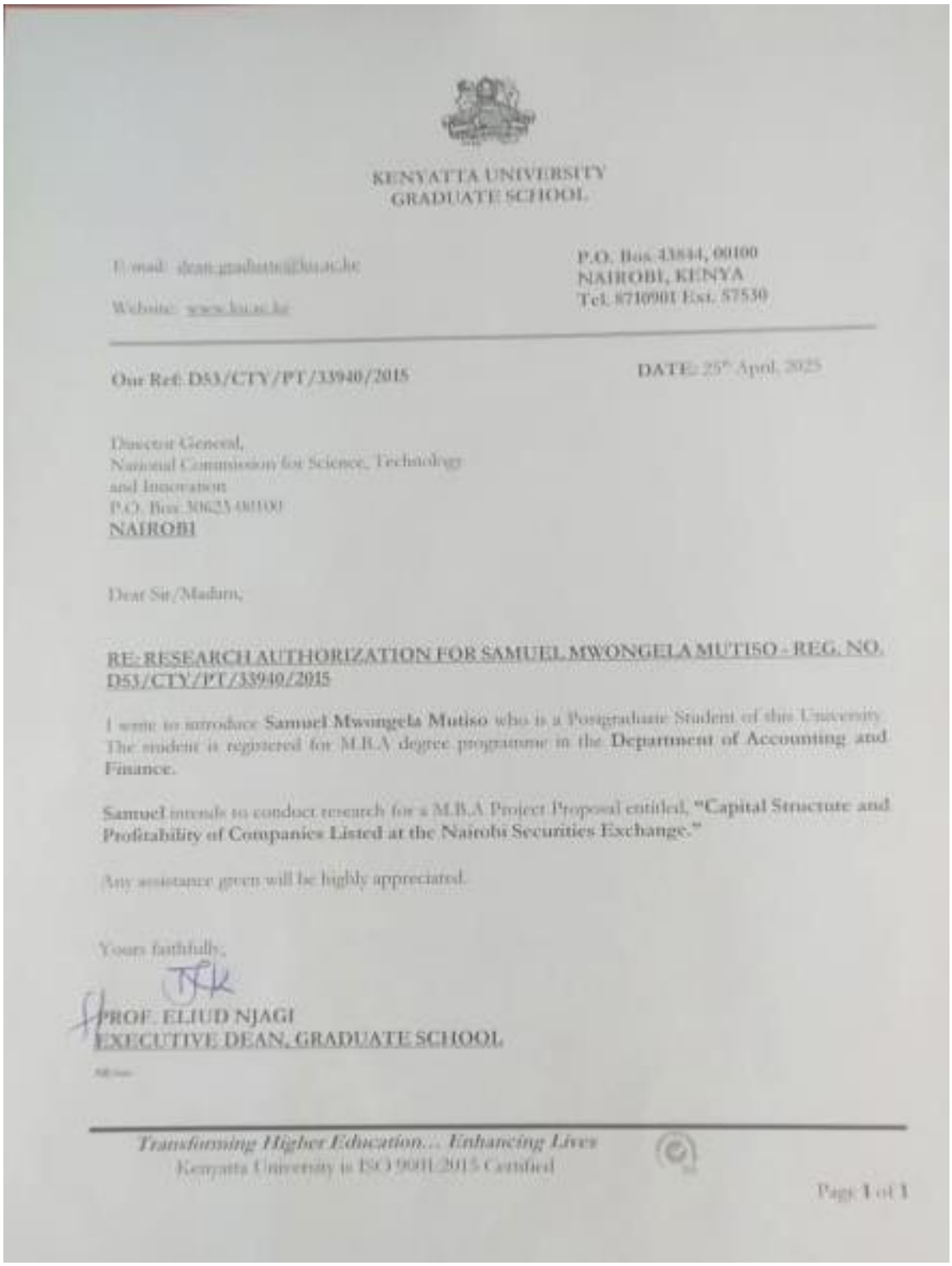
Page 1 of 1

Appendix II: Research Authorization Letter



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Our Ref: D53/CTY/PT/33940/2015

DATE: 25th April, 2025

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR SAMUEL MWONGELA MUTISO - REG. NO. D53/CTY/PT/33940/2015

I write to introduce **Samuel Mwongela Mutiso** who is a Postgraduate Student of this University. The student is registered for M.B.A degree programme in the **Department of Accounting and Finance.**

Samuel intends to conduct research for a M.B.A Project Proposal entitled, **"Capital Structure and Profitability of Companies Listed at the Nairobi Securities Exchange."**

Any assistance given will be highly appreciated.

Yours faithfully,

PROF. ELIUD NJAGI
EXECUTIVE DEAN, GRADUATE SCHOOL

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Page 1 of 1

Appendix III: NACOSTI Research License

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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Date of Issue: 10/May/2025

RESEARCH LICENSE

This is to Certify that Mr.. SAMUEL mwongela mutiso of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: CAPITAL STRUCTURE AND PROFITABILITY OF COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE, KENYA for the period ending : 10/May/2026.

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