DEBT MATURITY, GDP GROWTH RATE, AND FINANCIAL PERFORMANCE OF LISTED FIRMS AT THE NAIROBI SECURITIES EXCHANGE

PETER W. WAINAINA

19/06610

MASTER OF SCIENCE IN COMMERCE (FINANCE & ECONOMICS)

KCA UNIVERSITY

APRIL 2026

DEBT MATURITY, GDP GROWTH RATE, AND FINANCIAL PERFORMANCE OF LISTED FIRMS AT THE NAIROBI SECURITIES EXCHANGE

PETER W. WAINAINA

19/06610

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE IN COMMERCE (FINANCE & ECONOMICS) TO THE SCHOOL OF BUSINESS OF KCA UNIVERSITY

APRIL 2026

DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

Signature  Date 02 May 2026

PETER W. WAINAINA

19/06610

I do hereby confirm that I have examined the master's dissertation of Peter W. Wainaina and have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed.

Signature…… Date…….…….

Dr. Ibrahim Tirimba Ondabu

Senior Lecturer of Financial Management

KCA University

ABSTRACT

This study examined how capital structure and debt maturity affect the financial performance of companies listed on the Nairobi Securities Exchange, with GDP growth as a moderating factor. Using panel data from 49 firms covering 2019-2024, sourced from annual reports and Central Bank of Kenya GDP data, the research employed quantitative analysis, including panel regression modeling in STATA, grounded in Modigliani-Miller and Trade-Off theories. Secondary data collection from company financial statements and official government databases supported the analysis. The study consisted of 294 observations from 49 companies across six years. Based on the findings, the average long-term debt across the years was 20.95%. Long-term debt was found to have a negative but significant impact on financial performance ($\beta = -0.1124$; $p < 0.05$). The findings mean that the high costs associated with long-term debts are likely to minimize the income, resulting in lower financial performance. Equally, the average short-term debt was 6.39%. Short-term debt was found to have a positive and significant impact on financial performance ($\beta = 0.0868$; $p < 0.05$). Short-term debts were found to offer firms liquidity and the ability to engage in short-term investments, which would enhance financial performance. Debt maturity structure was measured by considering the ratio of short-term to long-term debt. The average debt ratio was 0.542, implying that the companies were more dependent on long-term than on short-term debts. The variable was also found to have a negative and significant impact on financial performance ($\beta = -0.0946$; $p < 0.05$). GDP growth rate was found to have a positive and significant impact on financial ($\beta = 0.234$; $p < 0.05$), implying that financial performance was likely to increase with an increase in GDP. The variable GDP growth rate was also found to have a significant moderating effect ($p < 0.05$). The study recommends that companies avoid overreliance on long-term debt.

ACKNOWLEDGEMENTS

I wish to thank all people who have contributed to the success of this study so far. I wish to thank my supervisor Dr. Ibrahim Tirimba Ondabu for his commitment and assistance in the form of continuous feedback, which has made it possible to refine the study. I also wish to thank my family and friends for treating me with the utmost understanding during the study period.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS AND ACRONYMS

CBK	Central Bank of Kenya
GDP	Gross domestic product
KNBS	Kenya National Bureau of Statistics
NSE	Nairobi Stock Exchange
ROA	Return on assets
ROE	Return on equity

DEFINITION OF TERMS

Capital Structure: A mix of debt and equity that businesses use to finance their operations (Mutua & Atheru, 2020)

Debt Maturity: Specific date when a debt obligation is to be paid in full (Hu et al., 2021)

Financial Performance: Ability of the firm to use its resources (assets) to generate income (Mutua & Atheru, 2020)

GDP Growth Rate: Yearly percentage change in GDP (Ndegwa, 2017)

Long Term Debt: Any debt or financial obligation whose maturity date is more than one year (Shikumo et al., 2020)

Short Term Debt: Any debt or financial obligation whose maturity is less than one year (Shikumo et al., 2020)

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial performance is among the most critical indicators of success and stability of a firm in the world's economies. It indicates the efficiency with which a company deploys its assets and resources to make a profit, maintain operations, and create value for shareholders. Researchers worldwide have studied financial performance by using ratios like Return on Assets (ROA) and Return on Equity (ROE), which help to show how efficiently the managers utilize the resources invested in the company to generate earnings (Wu et al., 2022). In the advanced markets like the United States and the United Kingdom, effective corporate governance provisions, diversification in the sources of funds, and development of financial systems have increased the ability of firms to achieve long-term profitability (Ullah et al., 2021). Individually, performance-based capital allocation models, which allow companies to achieve maximum asset efficiency even in periods of economic uncertainty, have been proven resilient by financial market participants listed on the Financial Times Stock Exchange (FTSE 100) (Jungherr et al., 2022). These trends on the global scale reiterate that strong financial performance is not only a sign of internal efficiency but also a reaction against the external economic and policy realities.

In Asian economies like India and China, the strategic financing and innovation of firms are also associated with financial performance (Zhang, Noronha, & Guan, 2023). The research on these areas demonstrates that companies that can strike a balance between the cost efficiency of their capital structure and productive reinvestment deliver better ROA and ROE results (D'Amato, 2020). Additionally, moderate inflation, macroeconomic stability, and favorable fiscal policies have enabled companies in these nations to repatriate profits, leverage management, and have a stable growth in earnings (Zhang, Noronha, & Guan, 2023). The

international experience proves that the success of financial performance is not an outcome of the efficiency of the firm itself, but also of the macroeconomic environment that helps to maintain stable profitability.

African firms record a different trend in terms of regional financial performance. Unstable interest rates, depreciation of their currencies, and inaccessible long-term capital have negatively affected the profitability of firms in Nigeria, South Africa, and Ghana (Casino-Martinez et al., 2019). As an example, short-term bank loans remain the most important source of funds to listed companies in Nigeria, increasing the chances of refinancing risks and reducing the profit margins. According to Younsi and Nafla (2019), in most African regions, the corporate bond market and institutional investor response issues are structurally weak, which limits the potential of firms to achieve stable financial performance. Companies are faced with declining margins, liquidity pressure, and susceptibility to external shocks during economic downturns. However, we also have indicators that firms that are financially careful and efficient in their operations have high chances of providing a sustainable level of profitability even in harsh financial conditions.

Financial performance is still at the core of the competitiveness and growth of listed companies in East Africa, especially in Kenya. The Nairobi Securities Exchange (NSE) is a structured corporate financing platform, but the indicators of profitability have not been consistent over the past few years. The GDP growth of Kenya was between 5.4 percent in 2019 and -0.3 percent in 2020, which was affected by the impact the pandemic had on the economy, and the recovery was moderate over the next few years (Central Bank of Kenya, 2024). During the same period, interest rates were at an average of 12.8 percent, which made access to credit tighter and escalated the cost of financing. This macroeconomic instability has resulted in reduced returns for most companies, as demonstrated by a downward trend of ROA and ROE in all sectors. As an illustration, a number of manufacturing and agricultural companies saw

their profit grow or decline between 2020 and 2023 due to an increase in input prices and a declining consumer demand (Central Bank of Kenya, 2024). Moreover, a decrease in foreign portfolio investment in NSE-listed companies by 23 percent over the years 2020-22 is the indicator of decreased investor trust and diminishing access to external funds (Central Bank of Kenya, 2024).

The developments indicate that the financial performance of firms in NSE is influenced by internal financial decision-making on one hand and external economic forces on the other hand (Ateya, 2023). Companies have been using more conservative financing structures with a focus on liquidity conservation rather than expansion (Oanda, 2021). Consequently, the mean short-term debt ratio of listed firms rose by 41 percent in 2024, as compared to 34 percent in 2019, as these companies have become conservative in the use of balance-sheet strategies in the face of uncertain market environments (Ateya, 2023). This changing environment underscores the need to study the interactions among certain financing strategies (e.g., decisions on the maturity of debts) and macroeconomic considerations in their effect on profitability and sustainability.

1.1.1 Financial performance

Financial performance is a key metric of a firm's overall health and sustainability, including the ability to use resources efficiently to generate returns from them (Tudose et al., 2022). Globally, the financial performance is often measured through accounting-based financial indicators such as return on assets (ROA) which assesses the ability of a firm to convert asset base into profits. Strong financial performance is linked to higher investor confidence, improved firm value and better ability to weather economic storms, while poor performance is indicative of inefficiency, declining competitiveness and/or potential financial misfortune (Tudose et al., 2022).

In both developed and developing economies, the financial performance has been shown to vary according to the firm level decisions and overall economic conditions as observed by El Fallahi et al. (2023). Periods of economic expansion tend to be accompanied by higher firm profitability, as a result of higher demand, good credit conditions and stable operating environments (El Fallahi et al. 2023). On the other hand, economic downturns have often meant a drop-in revenue, limited liquidity, lower returns. These dynamics were especially apparent during the pandemic of coronavirus 2019 leading to disruption of global supply chains, reduced consumption, and poor performance of firms across different sectors.

In emerging markets, such as Sub-Saharan Africa, there is more volatility in financial performance from structural challenges such as developing financial markets, lack of access to capital and greater exposure to external shocks (Evbayiro-Osagie & Enadeghe, 2022). Firms operating in these economies are often subject to greater uncertainty, and are therefore more sensitive to their financial outcomes, and the decisions they make regarding financing their internal operations, as well as the macroeconomic environment (Evbayiro-Osagie & Enadeghe, 2022). Consequently, knowledge about the driving forces of financial performance in such situations is crucial for enhancing the resilience and long-term sustainability of the firms.

In Kenya, companies have also enjoyed different financial performances over the years and especially during economic instability. The economic contraction during the time of the Covid-19 pandemic resulted in the reduction of business operations, falling revenues and an increase in financial pressure for many firms (Nyongesa & Atadi, 2024). Firms listed in the Nairobi Securities Exchange (NSE) offer a particularly relevant context to analyse financial performance because of their exposure to market forces, regulatory requirements and fluctuations in the larger economy. These firms operate in a variety of different sectors and are required to produce audited financial statements; thus they are appropriate for empirical analysis. However, despite the availability of data, there is still a need for better understanding

of the specific factors in their financial performance, especially in relation financing decisions and changing economic conditions.

1.1.2 Debt maturity

One of the most vital elements of the financial structure of a firm, debt maturity determines the period in which a company must pay back its borrowed funds. It consists of short-term debt that does not exceed a year and long-term debt, which is more than a year (Hu et al., 2021). The structure of this maturity plays an important role in terms of liquidity management, cost of capital, and exposure of the firm to financial risk. A properly designed maturity mix enables firms to strike the right balance between flexibility and stability and work on optimal financing costs. D'Amato (2020) highlights that short-term debt increases flexibility since it enables companies to exploit a fluctuating interest rate or a new investment opportunity. It, however, also subjects them to refinancing risk in the event that credit markets are obstructed. Conversely, long-term debt allows financing stability but does not provide the chance to adjust to the short-term changes in the market.

The decision on debt maturity usually shows growth strategy, cash flow nature, and market anticipations of the firm. Ojeme et al. (2021) state that optimizing the debt maturity and the project life cycle would facilitate sustainability because cash inflows from investments are equal to the scheduled repayment. Companies that are able to achieve this alignment will alleviate the liquidity pressure and facilitate profitability. Another point that Rosana et al. (2024) note is that long-term borrowing has the potential to reduce interest payments, yet overly long-term borrowing can increase the risk of insolvency if the companies cannot fulfill their periodical obligations. Thus, a moderate method of short- and long-term financing provides a more robust operation.

Evidence-based research indicates that firms change their debt maturity structures across the world in response to macroeconomic and institutional factors. In one example, Abuamsha and Shumali (2022) discovered the preference of companies in developed economies towards long-term borrowing because the financial market is developed, and the interest regime is stable. On the other hand, the short-term credit facilities are usually relied on by firms operating in the emerging markets due to low access to long-term financing instruments and the lack of well-developed bond markets. This comparison highlights the influence that the development of the financial markets has on corporate debt behavior.

In the Kenyan environment, corporate debt maturity structure has undergone the most remarkable in transformation the past ten years. The growth of the domestic bond market and financial innovation has provided the firms with wider funding sources. Still, short-term commercial bank loans continue to play a significant role in most of the NSE-traded companies owing to bureaucracy, collateralization, and insufficient involvement of investors in the corporate bonds. According to the Central Bank of Kenya (2024), as of the year 2024, more than 60 percent of the corporate lending of NSE-traded non-financial companies consisted of short-term debts. This will place firms at risk of cash flow mismatch and refinancing risk that will negatively impact profitability.

This is because debt maturity is not only a financing decision but also a strategic tool for risk management and value creation. An optimal maturity structure by firms is in a better position to stabilize earnings, minimize financial distress costs, and maximize shareholder returns. Debt maturity is examined in this paper in terms of the short-term Debt Ratio (STDR) and the long-term Debt Ratio (LTDR), as suggested by Abuamsha and Shumali (2022). The ratios represent a precise financial evaluation of the impact of the distribution of debts among companies that are listed in the NSE during 2019-2024.

1.1.3 Relationship between debt maturity and financial performance

The relationship between debt maturity and financial performance has been a subject of long-term financial research. An optimal maturity structure has the ability to promote performance by balancing the repayment responsibility against cash inflows, reducing the cost of financing, and alleviating liquidity risks. Nevertheless, it is not a simple, context-based relationship. The evidence of the international practice shows that the companies tend to extend the terms of debts to fix the interest rate at a favorable level and minimize the risk of refinancing. As an illustration, Jungherr et al. (2022) discovered that FTSE 100 firms lengthened their mean debt maturity by 2.3 years between 2015 and 2020 to enable them to stabilize financing expenses during volatile credit markets.

Conversely, Casino-Martinez et al. (2019) observe that companies in emerging economies are likely to have shorter debt durations because they are likely to lack long-term credit sources, the interest rates are likely to be volatile, and the investors lack confidence. In Nigeria, on average, corporate debt maturity is around 18 months, which is at par with the developed economies at 4.2 years. Younsi and Nafla (2019) explain this gap by poor capital markets and fragile macroeconomic settings, which are not conducive to long-term lending.

The same tends to be reflected in Kenyan firms. In the period of 2019-2024, NSE-traded companies were under significant macroeconomic change, with changes in interest rates and declines in GDP. According to the Central Bank of Kenya (2024), average interest rates increased to 12.8% in the year 2024, as compared to 10.5% in the year 2019, forcing most of the firms to reorganize debt portfolios in support of short-term borrowing. Another aspect during the same period was that the short-term debt ratio of the listed firms increased from 34 to 41%. Although this increased liquidity, it also raised the cost of refinancing and short-term financial exposure. These relations exemplify the way the debt maturity may directly influence the profitability and financial strength.

Additionally, the trade-off of stability and flexibility is a factor that should be considered by corporate decision-makers in the arrangement of the debt maturities. Companies that are overly dependent on short-term financing risk will find themselves without liquidity when the economy goes down, and those that are overly dependent on long-term borrowing will have the disadvantage of incurring higher cumulative interest costs. Therefore, the most appropriate debt maturity structure is influenced by the financial strategy, asset makeup, and the current macroeconomic environment of a firm. This balance is crucial to NSE-traded companies, which have to find their way through local and international financial strains and ensure a consistent performance level.

1.1.4 GDP Growth rate: moderating role

Economic growth denotes a very important external variable that determines the impact of the debt structure used by firms on their financial performance. The rate of economic growth in the form of GDP is what dictates the supply and demand of credit, investor confidence, and business confidence. Mutuku and Mwangi (2020) observe that during a boom, companies have a better chance to use long-term funds, which increases their investment and profitability. Conversely, when the economy is slowing down or in the case of a recession, companies opt to use short-term funding to maintain liquidity as well as minimize their vulnerability to future interest rate risk.

The unstable growth in GDP in Kenya in the years 2019-2024 had a major effect on the financial decisions of corporations. In 2020, the economic slowdown was 0.3 percent in the year after the COVID-19 pandemic, which was followed by a recovery of 5.6 percent in 2022 and 5.2 percent in 2023 (Central Bank of Kenya, 2024). The cycles had an impact on the capacity of firms to access long-term funds as lenders were risk-averse at times of uncertainty. As a result, corporate managers have changed their debt maturity structures according to the

macroeconomic perspectives, which demonstrates the moderating effect of GDP growth on the debt maturity-financial performance correlation.

This paper thus identifies the GDP growth rate as a moderating factor that dictates the manner in which the financing decisions are transformed into financial outcomes. It assumes that, during the epoch of high economic growth, the positive impact of the effective management of debt maturity on profitability will be increased, whereas during the decline, this impact will be decreased in the face of limited access to capital. An assessment of this moderating position offers more information on the impact that external macroeconomic factors have on corporate financial stability.

1.1.5 Context of listed firms at the Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) provides a diverse and dynamic environment when it comes to the evaluation of the interaction between the maturity of debt and financial performance. The NSE was founded in 1954 and is among the most advanced capital markets in East Africa, with firms in major industries in the banking sector, manufacturing, energy, telecommunications, and agriculture. All these companies define Kenya's economic curve and constitute a large part of Kenya's national GDP. The NSE is therefore a good platform to explore the relationship between financial strategies and macroeconomic factors that influence profitability.

Companies traded in NSE are subject to high levels of regulatory and disclosure standards by the Capital Markets Authority (CMA) and the Central Bank of Kenya. These are rules that guarantee transparency in the reporting of financial performance and accountability in listed entities. Consistent measurements of variables like ROA, ROE, and debt ratios are achievable due to the availability of audited financial statements, quarterly performance reports, and standardized accounting practices. Furthermore, NSE works in a very competitive

environment, where the perception of investors and the value in the market directly affect the process of managerial decisions. The listed firms are therefore called upon to be financially healthy; hence, they need to attract capital, sustain their share price, and maintain their corporate reputation.

The transaction is also reflective of the economic setup in Kenya in general, with sectors like banking and manufacturing showing the greatest impact on market capitalization. The banking industry, specifically, has dominated the NSE, and it is at the center of the provision of credit facilities, which define the corporate debt maturity profiles. Finally, the manufacturing and agricultural companies are placed under special financial strains due to seasonal, importation supply, and global supply chain interruptions. Such sectoral differences offer an analytical basis for studying the impact of debt maturity on the financial performance in varied business setups.

Also, the NSE is an indicator of the difficulties of an emerging market economy, such as a lack of access to long-term credit, high interest spreads, and global shock sensitivity. As the development of the capital market continues, companies are likely to explore more than just traditional bank loans as a source of funding; instead, they will look at corporate bonds and equity instruments. The analysis of the way listed companies overcome these structural issues will increase the knowledge of financial performance results within the Kenyan changing economy. The sample of NSE-listed companies thus makes it relevant and comprehensive, and offers generalizable results on corporate financing behavior in an emerging market model.

1.2 Statement of the Problem

The financial performance of companies that are listed at the Nairobi Securities Exchange has shown a lot of fluctuations in the past years, and this is an indicator of the

increasing difficulty in preserving profitability despite the rise in access to capital (Machiri et al., 2023). According to Nyongesa and Atandi (2024), this situation was worsened by the Covid 19 pandemic which has caused disastrous economic upsets such as a negative GDP growth in Kenya, which has changed the business landscape for many firms. Similarly, existing evidence further shows that a number of NSE listed companies such as the Standard Group PLC, Kenya Airways and Scan Group PLC experienced poor financial performance characterized by annual losses (Njuguna, 2025). For instance, between 2019 and 2024, the Standard Group witnessed a 55% drop in revenue performance with others such as Kenya Airways, ABSA and Britam Holdings experiencing significant drops as a result of the pandemic (Kamau & Murori, 2024).

At the Central Bank of Kenya (2024) shows that in 2018, the average ROA of listed companies was 7.2% and in 2023, it was 4.5% and ROE was 14.6% and 10.1%. This continued depreciation is raising questions about how effective the firm's financing strategy is, especially the debt maturity structures (Kanake et al., 2023). There has been a trend towards short-term borrowing whereby firms are trying to curb the volatility of interest rates and maintain liquidity. However, short-term debt will raise refinancing risk and financing cost, and thus, can wear down profitability in the long run.

Despite the importance associated with financial performance, a majority of the existing empirical studies only considered debt in general without any distinction on short-term debt and long-term debt with different cost and risk implication (Garmaise & Natividad, 2021; Ngungu, 2020). Moreover, the concept of debt maturity structure (i.e. the ratio of long-term debt to total debt) has received limited empirical attention, especially for the Kenyan case. The above presents a challenge since the maturity composition of debt may have a significant bearing on the performance of any firm, particularly in periods of economic instability where risks of refinancing and burden servicing of debt may vary. Hence, the study is focused on the issue of deteriorating financial performance of listed companies in the NSE by investigating

the role of debt maturity structures in determining profitability and the moderating role of the GDP growth rate in the association between the two variables in the Kenyan changing macroeconomy.

1.3 General Objective

The main purpose of the study is to examine the effect of debt maturity on the financial performance of listed firms at the Nairobi Securities Exchange.

1.3.1 Specific objectives

1. To determine the effect of long-term debt on the financial performance of listed firms at the Nairobi Securities Exchange
2. To assess the effect of short-term debt on the financial performance of listed firms at the Nairobi Securities Exchange
3. To evaluate the effect of debt maturity structure on the financial performance of listed firms at the Nairobi Securities Exchange
4. To evaluate the moderating effect of Gross Domestic Product growth on the relationship between debt maturity and the financial performance of listed firms at the Nairobi Securities Exchange.

1.4 Research Hypothesis

The following hypotheses were tested.

1. **H_{01}:** There is no statistically significant relationship between long-term debt and the financial performance of listed firms at the Nairobi Securities Exchange
2. **H_{02}** There is no statistically significant relationship between the short-term debt and the financial performance of listed firms at the Nairobi Securities Exchange
3. **H_{03}** There is no statistically significant relationship between debt maturity structure and the financial performance of listed firms at the Nairobi Securities Exchange

4. **H_{04}:** GDP growth has no statistically significant moderating effect on the relationship between debt maturity and the financial performance of listed firms at the Nairobi Securities Exchange

1.5 Significance of the Study

The results of this research would enable investment firms, researchers, policymakers, shareholders, financial managers, and investors to develop appropriate strategies that would help them make smart investment decisions to minimize risks and thereby maximize investment returns through capitalization of debt maturity impact on the financial performance.

1.5.1 Financial experts and investors

The results from this study will be impactful to various experts, financial analysts, entrepreneurs, and other institutions since it will enable them to gain knowledge about the life of debt financing instruments and other options. Additionally, findings from the study would provide insights into the interplay between GDP growth rate, debt maturity, and financial performance.

1.5.2 Financial analysts

Various analysts, such as security analysts, financial analysts, and investors, will find the findings of this research helpful since the relationship between debt maturity and financial performance has made a great contribution to investment study and portfolio formation. Understanding how debt maturity affects financial performance would allow financial analysts to formulate effective financial models to strike a balance between long-term and short-term debts for optimal financial performance.

1.5.3 Academicians

The study seeks to fill the current conceptual gap to enable scholars to understand the interplay of debt structure and firms' financial health. Findings would provide valuable

information on how GDP moderates the interplay of firms' debt maturity and financial performance. Additionally, the facts and the perceptions derived from this study could provide further areas for research.

1.6 Scope of the Study

This research explores the impact of debt maturity on the financial performance of 60 companies listed on the Nairobi Securities Exchange (NSE) between 2019 and 2024, with GDP growth acting as a moderating factor. The study excludes two companies, National Bank of Kenya and Mumias Sugar Company, due to their delisting and suspension respectively. Data at the firm level, such as debt composition, total assets, and profitability indicators, will be collected from audited annual reports and NSE disclosures, while GDP figures will be sourced from the Central Bank of Kenya (CBK) and the Kenya National Bureau of Statistics (KNBS).

The study spans various industries including banking, agriculture, energy, insurance, investment, and manufacturing, offering a broad perspective on capital structure and performance trends within Kenya’s financial market. By covering a five-year timeframe that includes both the pandemic period and subsequent economic recovery, the research underscores the influence of macroeconomic factors on firms’ financing decisions and overall performance in an emerging market context.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter includes a review of previous studies on how debts affect the financial performance of companies listed on the stock exchange. The chapter begins with a theoretical review, which outlines three main theories, including the tradeoff theory, Modigliani and Miller's theory and the pecking order theory. After the theoretical review, the chapter addresses an empirical review based on the three objectives of the study. The aim of the review is to address possible gaps in the literature. The final part of the review includes a conceptual framework and the operationalization of variables.

2.2 Theoretical Review

This study is guided by theories that explain how firms choose their capital structure and debt maturity under information frictions, risk, and macroeconomic conditions. Together, the theories clarify (i) why firms tilt between short- and long-term debt, (ii) how those choices transmit to financial performance, and (iii) why the strength/direction of this link varies across phases of the business cycle (captured by GDP growth).

2.2.1 Tradeoff theory

The tradeoff theory was first developed by Myers in 1984 and considers a balance between debt and profitability. This means that companies should consider borrowing while keeping in mind the tax-shielding effect of debt and bankruptcy expenses. They should also balance these factors with agency fees. The theory is a development from Modigliani and Miller but accounts for the impact of taxes and insolvency costs. The theory indicates that an optimal capital structure exists in every firm, which can be achieved by considering the benefits and costs associated with borrowing. According to Omukaga (2017), debts would have both negative and positive effects on an organization. For instance, high tax levels could result in

tax shields, given that interests on debts are tax-deductible, thereby increasing profit margins. Similarly, debt levels could also result in increased profitability, especially if that amount is invested in appropriate areas (Koech, 2013). Equally, high debt levels could result in increased financial risks, including bankruptcy, which may have a significant impact on profitability. Equally, the agency costs associated with high levels would also have a negative effect on an organization. Ideally, the value of a firm and the profits made would significantly reduce in the face of high debts (Casino-Martínez et al., 2019). A huge portion of the company's earnings may be used to pay off debts, and investors may avoid investing in companies with huge debts.

The tradeoff theory is criticized for failure to consider non-financial factors and overemphasizing tax benefits (Ai et al., 2020). The dynamic nature of capital structure decisions is not fully considered by the theory. The capital structure decisions made by companies are frequently affected by shifting market conditions, business trends, and internal elements like expansion prospects and cash flow volatility. The complexity of these dynamic aspects and their long-term effect on companies' financing decisions may be lost on the static approach of this theory. It is also criticized for its assumption of a perfect market where all the parties involved have perfect knowledge of the market (Zhang & Zhu, 2021). The theory assumes the efficacy of capital markets and that companies can issue debt or equity at reasonable rates without incurring any expenses.

However, Zhang and Zhu (2021) argue that in reality, there are imperfections in the capital markets, and when companies raise capital from outside, they may incur costs, including flotation fees, underpriced securities, and information asymmetry. These expenses may limit the Tradeoff Theory's practical relevance and hinder a firm's ability to reach its ideal capital structure. Additionally, the theory is also criticized for its assumption that companies that earn high profits will have higher levels of debt to increase capital availability and maximize taxation benefits (Zhang & Zhu, 2021). This postulation might not hold in reality. Although

tax advantages associated with debt financing may serve as a driving force behind a company's decision to employ debt financing, other factors, including growth prospects, financial risk, and capital market conditions, are equally important in determining a company's capital structure. Therefore, businesses may prioritize maintaining a stable financial position over taking on excessive debt, even if doing so implies giving up some of the tax advantages that come with debt. Furthermore, the tax structures of a company may depend on other factors such as the industry and tax laws, which may affect the best capital structure for them.

The theory is applicable in the current study in illustrating how companies listed on the Nairobi Stock Exchange can achieve optimum capital structure by balancing costs and benefits associated with their debts. The study will examine how these companies can manage their debt levels and the possible effects of borrowing on profits.

Tradeoff Theory primarily helps conceptualize GDP growth rate as a moderator in this study. According to the theory, companies set their optimal debt maturity structure by balancing the tax advantages obtained by deductibility of interest paid with the risk of a loss in the event of financial distress, bankruptcy, and refinancing. These tradeoffs do not stand still but are strongly determined by the existing macroeconomic environment. When the GDP growth is high, the firms have greater cash flows, better investor confidence, and better access to the credit markets, which in turn lowers the default risk and promotes long-term debt to be used. On the contrary, given the greater uncertainty and more restrictive credit terms during economic slowdown or contraction, the refinancing Euro and default risks are higher, and companies will prefer to use short-term loans to retain flexibility and be more efficient in managing the liquidity. Therefore, GDP growth significantly influences debt maturity decisions and firms' overall financial performance.

2.2.2 Modigliani and miller theory

Modigliani and Miller (1958) posited a foundational theory suggesting that, under ideal conditions without taxes or bankruptcy costs, a firm's value is independent of its capital structure. In this view, financing via debt or equity does not affect a firm's overall value; rather, value depends on asset profitability and expected cash flows. However, the original M&M proposition ignores practical market imperfections such as taxes, transaction costs, and bankruptcy risk factors that can influence firm valuation and capital structure decisions.

Subsequent adaptations incorporated corporate taxes, recognizing that debt financing offers tax shields, which can increase firm value up to a point but also raise bankruptcy probability and cost of capital (Koech, 2013; Casino-Martínez, 2019). The M&M theory suggests that debt maturity itself, whether debt is long-term or short-term, does not affect firm value directly. Instead, firms consider refinancing risk, interest rate fluctuations, and financial flexibility in choosing debt maturities (Abdullah & Tursoy, 2021; Pervan et al., 2019).

One of the criticisms of Modigliani and Miller's theory is that it assumes there are no taxes. Koech (2013) criticizes the theorem irrelevance proposition, citing elements like profits, taxes, and assets that can impact a company's market value. Market conditions, corporate characteristics, and regulatory laws are the main determinants of a company's debt maturity, according to Casino-Martínez (2019). According to Abdullah and Tursoy (2021), the MM theorem posits that the business valuation remains unaffected, theoretically, by the duration of loan payments. The length of the period has no bearing on how much the firm is worth. However, to ascertain the debt maturity, a company must consider its financial stability and flexibility, refinancing risks, and interest rate fluctuations, as the debt duration affects a company's financial worth. The GDP growth rate has a significant impact on a firm's overall performance and investment rates. However, according to MM theory, a firm's valuation is unaffected by changes in the GDP growth rate (Abdullah & Tursoy, 2021). It also shows that

the intensity of firm value is the same for all businesses, regardless of size. According to Pervan et al. (2019), there has been criticism of the MM theory's perspective on the GDP growth rate because it has an impact on a firm's profitability, revenue growth, and market demand. Furthermore, although low rates suggest that the business is facing difficulties, high rates may imply that it is at its height.

The critics note that the Modigliani and Miller (M&M) theory does not adequately explain macroeconomic factors, including GDP growth, inflation, and fluctuations in interest rates, which are empirically found to affect firm profitability and levels of investment (Pervan et al., 2019). The theory assumes perfect market capital markets and reasonable investor behaviour, neither of which can be readily met in most economies where market imperfections and business cycles are influential factors in financing decisions. There are indications of empirical evidence that firms will respond to varying economic conditions, investor sentiment, and credit availability by varying their capital structure, meaning that macroeconomic dynamics are a moderating factor in performance. In the context of the current research, the M&M theory offers a theoretical foundation when assessing how the value of a firm can be unchanged by its capital structure in an idealised environment, whilst accepting that in reality, the relationship between debt maturity patterns and other factors in the broader economy (for example, GDP growth) influences the financial performance.

2.2.3 Pecking order theory

The Pecking Order Theory was developed in 1984 by Nicolas Majluf and Stewart C. Myers to explain how companies finance themselves (Ye et al., 2023). According to the theory, businesses prefer a sequence of financing investments and favour internal over external funding (Wambua, 2019; Ye et al., 2023).

Companies have to follow the order when analysing their financing options so that they can minimize the costs associated with it. According to the theory, the first option that companies should consider when in need of finances is their retained earnings, then debt financing, and finally raising equity after the other options are exhausted (Wambua, 2019; Ye et al., 2023). One reason for preferring internal funding over external funding is the costs associated with borrowing money from outside the company. The costs associated with external funding are higher compared to internal funding. Additionally, internal funding protects the company's reputation in the market since external funding sends undesirable information to the market, which may discourage investors from investing in the company. Companies worry that by issuing equity, they could be giving information that their stock is overpriced, which may create issues of adverse selection.

The pecking order theory is criticized for its simplifying assumptions (Wambua, 2019). The theory assumes that companies only have three choices: to use the retained earnings, debt, or equity. The theory assumes information asymmetry and that a perfect market exists, where managers have a duty to act in the best interest of investors, as they are aware of the future opportunities for growth for the company. However, Chirinko and Singha (2000) argue that the asymmetry of information between companies and investors may not be balanced, as companies might know more about their opportunities in the future and may not share them with investors (Chirinko & Singha, 2000). If all the information is shared with investors, it may affect their financing decisions. The theory is also criticized for failure to consider other factors such as market timing and signaling effect.

According to Chirinko and Singha (2000), the theory fails to consider that companies might time their equity issuances to capitalize on market conditions. Chirinko and Singha (2000) argue that companies may give equity when their stock is overrated, which contrasts with the pecking order concept that equity should only be issued as the final option. Chirinko

and Singha also contend that companies might have an optimum capital structure grounded on factors such as bankruptcy costs and tax advantages of debt that the Pecking Order Theory fails to consider (Chirinko & Singha, 2000). Companies listed on the Nairobi Stock Exchange can choose to employ the pecking order theory and prefer internal financing to external financing.

Pecking Order Theory provides complementary insight by linking macroeconomic performance to information asymmetry and financing choices. Higher GDP growth often improves market confidence and reduces the adverse-selection costs of external financing, while low growth magnifies these frictions, further influencing firms' reliance on specific debt structures.

Thus, GDP growth is conceptualized as a state variable that moderates the relationship between debt maturity and financial performance, strengthening or weakening the impact of maturity structure depending on the economic environment. When the economic growth is prolonged, a firm enjoys better sales, a greater future investment avenue and a lower credit crunch, all of which amplify the advantages of properly organized long-term debt and mitigate the exposure of refinancing. On the other hand, decelerating economic growth, companies experience stricter credit conditions, decreased consumer demand, and decreased cash flows, which can enhance the adverse consequences of excessive debt, notwithstanding its maturity. This means that GDP growth makes or breaks the correlation between debt maturity and performance based on the overriding economic conditions. However, this moderating effect can be used to better understand how macroeconomic conditions influence corporate financing choices and their impact on the profitability and stability of firms.

2.3 Empirical Review

2.3.1 Long-Term debts and financial performance

Long-term debt, which refers to borrowing with a maturity of over one year, has been one of the cardinal pillars of corporate financing since it directly affects the level of investment, risk of exposure, and long-term sustainability. Firms often use long-term borrowing to fund massive capital projects, acquisitions, or expansion programs, but the debt has its own weight of interest and principal repayment, which may undermine the liquidity and profitability in the case of mismanagement.

According to research by Abuamsha and Shumali (2022) long-term borrowing has been found to affect both profitability and solvency. The authors used a random effects regression model to study the relationship between debt maturity and return on assets (ROA) with the help of panel data on 41 exchange-listed firms between 2014 and 2019. As a result, this research found that long-term debt, when adjusted for profitability, is negatively related, which indicates that the cost of financial distress and interest payment is greater than the leverage advantage. Nevertheless, the research has been limited because of the small sample and the restricted study to one country, which limits the generalization to other economies with more developed capital markets.

On the other hand, Chandra and Juliawati (2020) also examined the same relationship in their article. The authors used financial statements from 53 manufacturing companies on the Indonesia Stock Exchange between 2012 and 2018, conducted multiple analyses, and conducted a correlation regression analysis. Their results revealed a negative, non-significant impact of long-term debt on profitability. They claimed that companies with large shares of long-term debt have greater interest payments, neutralizing the possible tax benefits. However, their research study was constrained by the fact that they did not include macroeconomic control factors like inflation and GDP growth that might affect the debt repayment ability.

Globally, Jungherr *et al.* (2024), in a paper on corporate debt maturity, studied firms in thirty countries to determine how debt maturity affects sensitivity to changes in interest rates. The authors utilized firm-level panel data and panel regression with fixed effects to discover that a higher long-term debt ratio resulted in greater insulation of the firm to monetary policy shocks and allowed the firm to remain profitable in tightening periods. Nevertheless, the research mainly centered on investment behaviour, not profitability indicators, which can be further explored through research on translating the results to new economies.

Aliyu (2019) studied long-term debt and the profitability of Nigerian manufacturing firms based on data between 2010 and 2018. The study used an ordinary least squares (OLS) regression method to find that the accumulation of long-term borrowing interest expenses negatively affected profitability. The author has blamed this on underdeveloped capital markets and the high cost of borrowing. The weakness of the study by Aliyu is that he did not use firm-specific control variables, including liquidity and asset turnover, which can also influence performance.

In East Africa, Karungu *et al.* (2020) studied long-term debt and sector performance of firms listed at the Nairobi Securities Exchange to analyse the performance of 25 firms in different sectors. Their analysis found that long-term debts had a statistically significant adverse effect on the overall performance of sectors, mainly because they increased the risk of bankruptcy and rigid repayment structures. The authors argued that capital-intensive companies, such as manufacturing and energy, were especially susceptible to large debts due to the long gestation period of their ventures. Nevertheless, they failed to adjust for macroeconomic shocks, which could confound the relationship between debt and profitability.

Expanding on the evidence, Wambua (2019) examined Kenyan listed companies between 2013 and 2017. Through panel data regression models, Wambua noted that long-term

debt does not positively influence the firm's value, even though it has low interest rates compared to short-term borrowing, because it exposes the firm to the risk of insolvency and rigid repayment periods. The study's findings are consistent with the pecking order theory, which states that firms would finance their operations internally before resorting to outside debt. Nevertheless, the dataset provided by Wambua is no longer current and relevant to the current situation, which will be constrained by the COVID-19 pandemic and the consequent economic shocks, ending its coverage in Kenya and its debt market dynamics.

Another Recent study by Mwiti and Gitagia (2023) explored this relationship using data from 2015 to 2022. Through the application of fixed and random effects models, the research has determined that in the long term, the effect of debt on Return on Equity (ROE) and Return on Assets (ROA) is negative and significant across manufacturing companies. The authors determined that overdependence on long-term borrowing takes away profitability because of enormous interest rates and wastage of capital. Their criticism pointed to the fact that Kenyan companies rely more on bank loans than diversified debt instruments like corporate bonds, which restricts flexibility in handling debt.

Lastly, the reviewed global, regional, and local studies describe a relatively uniform trend: even though long-term debt has the potential to stabilize funding and provide firms with freedom against short-term refinancing pressures, overreliance on such financing options is likely to weaken profitability because of high financing costs and covenants, as well as operational agility. The international experience points to the fact that the scale of this effect is strongly dependent on the stability of the macro economy, the trends of the interest rates, and the development of the financial markets. Long-term borrowing can be used in strategic planning and investment in mature economies with efficient bond markets. On the other hand, in emerging markets where lending rates are high and credit markets are shallow, long-term debt tends to be a drag on earnings. Therefore, to maintain profitability and long-term firm

stability, the appropriate use of debt maturity, to balance financial stability advantages and leverage disadvantages, is crucial.

2.3.2 Short-Term debts and financial performance

Short-term debts are considered current liabilities that include trade credit, bank overdrafts, and commercial papers, all of which last less than a year. It is an essential aspect of working-capital management in that it enables firms to be ready to access liquidity quickly and to fund their short-term needs. On the other hand, since short-term borrowing is flexible and allows firms to act quickly to seize market opportunities, it also increases the risk of refinancing and liquidity, undermining firms' profits. The short-term debt literature and performance of the firm show mixed findings, which are variations in economic conditions, industry structure, and financial market development.

In their article Cheng, Zhou, and Liu (2020) analyzed this correlation on the global level. They estimated endogeneity using the generalized method of moments (GMM) estimator based on data from over six hundred listed firms from 2010 to 2018. In the research, it was found that over-reliance on short-term debt augmented refinancing strain and had adverse impacts on the profitability of firms. The authors found that having a good balance between short-term and long-term liabilities is paramount to protecting performance. They also noted that companies dependent on short-term financing were more exposed during a credit crunch since they needed to borrow again in unfavourable terms. Nevertheless, their study was constrained by the fact that they focused on the banking system in China, which state-owned financial institutions essentially control, and this might not necessarily reflect the credit dynamics in developing markets like Kenya.

Globally, AMUGADA and Mwangi (2025) examined based on firm-level data from Indonesia, Malaysia, and Thailand. Using a dynamic panel GMM model, they discovered that

the higher the ratio of short-term debt, the lower the profitability due to liquidity constraints, making it difficult to invest in productive assets. Remarkably, the research also found that in economic growth, companies could maintain relatively high levels of short-term debt without negatively affecting their profitability, thus showing that macroeconomic growth moderates the debt-performance relationship. Even though the authors did not specifically test this moderation effect, their findings indicate that any external economic stability will be able to ensure firms against the risks of short-term borrowing.

Similarly, Mugisha (2021) examined in Uganda based on a survey of sixty-five firms and secondary data. In the regression analysis, the researcher established that companies with a high short-term debt ratio registered lower profits in economic recessions. The rationale was that repayment requirements and high-interest rates ate up the working capital, limiting investment and operational options. The research provided important insights into the impact of access to long-term credit constraints on the Ugandan firms that have no choice but to rely too much on short-term loans. However, Mugisha can question the trustworthiness of his findings depending on self-reported survey data, as there is a possibility of bias in responses, and it can also lead to inaccuracy in disclosing financial information.

In the Kenyan context, Omollo et al. (2018), in their research on employed panel data of non-financial firms within 6 years in Kenya. Their findings showed a weak negative relationship between total debt, especially the short-term component, and the return on assets (ROA). Companies ought to slowly adopt long-term borrowing to reduce the negative impact of short-term liabilities. Even though it is well-informed research, the study is outdated because it fails to reflect the changes in finances after the pandemic or the effect of the recent interest-rate reforms in Kenya's banking industry.

Based on their result, Kibet and Simiyu (2022) explored the impact of short-term borrowing on the profitability of 50 listed firms between 2014 and 2021 by panel regression models. They found that greater short-term debt ratios always correlated with lower financial performance because companies that overused short-term loans were limited in liquidity, where the cost of refinancing increased, and investment capacity was low. The researchers observed that reliance on short-term borrowing subjects' firms to interest rate fluctuations and credit market shocks that constrain the flexibility of operations and destroy profitability. They found that careful handling of short-term liabilities is essential in ensuring stability and sustainability. Although the research offers valid empirical data on the issue of debt structure and performance, it failed to consider macroeconomic factors, including GDP growth and inflation, which may dampen the debt-profitability relationship.

In Kenya, Pyoko and Muchiri (2024) returned to the topic in their article Short-Term Debt, Liquidity Management, and Financial Performance of Non-Financial Firms Listed on the Nairobi Securities Exchange. The authors utilized fixed and random effects panel models using information from 2018 to 2023 to examine the effect of short-term debt on profitability. Their results revealed that firms' profitability with substantial short-term investment was lower, mainly because of the large interest payments and liquidity constraints. However, the companies that kept their liquidity ratios at optimum levels were in a position to suppress these effects. The authors have proposed that Kenyan companies implement tighter credit control measures to improve their ability to deal with short-term obligations efficiently. The study's weakness is that the researchers did not include the macroeconomic moderators, which can influence debt management capacity.

Overall, the evidence of existing studies at the global, regional, and local levels shows that, as much as short-term debt provides the firms with a leeway in undertaking their short-term operational and working capital requirements, it also subjects them to considerable

refinancing and liquidity risks that are capable of destroying profitability. Companies that depend more on short-term lending usually have difficulties rolling over their debts, especially when there is uncertainty in the economy or when they have tight credit conditions that increase their vulnerability. Nonetheless, the companies which plan their short-term liabilities against long-term sustainable financing are likely to have more stable cash flow and better profitability. Successful short-term debt management will enable companies to exploit the temporary benefits of funding without overreliance on the fluctuations of credit markets. Conversely, improper management of short-term liabilities may cause strain on liquidity, a rise in interest costs, and slow down long-term expansion. The results indicate that sound debt maturity planning is critical to maintaining firm performance and financial stability.

2.3.3 Debt maturity structure

Literature considers debt maturity structure as an essential aspect that shapes financial performance. A study by Adiya et al (2023) indicates that flexibility and pressures in a company are mainly monitored through frequent refinancing. On the other hand, long-term debt minimizes rollover risk and liquidity pressure.

The study by Missaoui and Brahmi (2025) is consistent with Feijó-Cuenca et al (2023), who consider optimal maturity choice to reflect a compromise between tax benefits and information asymmetry. Scholars have also noted a close relationship between debt maturity and firm value. For instance, a study by Chen et al (2025) indicates that whenever a debt is excessively short-term, there could be underinvestment, and this can easily depress returns.

However, a different study was conducted by Huang and Ritter (2021), where they note that stable cash flows enable organizations to consider long-term debts while matching asset lives. Through the above, firms could improve returns on assets. Similar observations were made by Phaup (2021), who noted that the main significance of short-term debt is enhancing

liquidity and return efficiency in the development of capital markets; on the other hand, in volatile economies, long-term leverage leads to exposure of firms to higher interest and default risks, thus reducing profitability.

Therefore, a well-structured maturity profile is very critical in enhancing a firm's reputation, minimizing refinancing risks, and improving market valuation. Consistent with existing studies, debt maturity structure was measured by considering the ratio of Short-Term Debt to long-term Debt.

2.3.4 Moderating role of GDP growth

GDP growth is one of the key macroeconomic indicators, which measures the annual growth of the economic activity in a country (Chiang et al. 2024). For firms, the growth of the GDP generates a broad scenario in which business operations are carried out, and it has a direct impact on the demand for goods and services, the cost of capital and the overall stability of the economy. Chiang *et al.* (2024) notes that in times of positive economic growth (GDP), businesses tend to see increased demand, consumer confidence, and access to credit, all of which could lead to improved profitability and financial performance. On the other hand, in times of negative economic GDP growth, there is a decrease in demand for firms, revenues and possibly an increase in costs, all of which can contribute to the financial distress of firms and impair outcomes. Some of the most recent studies reveal the moderating effect of GDP growth on the correlation between debt maturity and financial performance.

Globally, Dalci (2018) determined the impact of the GDP growth on the debt-performance nexus. Relying on panel data on 500 Chinese manufacturing companies between 2008 and 2017 and estimating using a two-step system generalized method of moments (GMM), Dalci discovered that the higher the GDP increase, the higher the capacity of firms to service capital accumulated in the long term, and the higher the profitability. The authors found

that expanding the macro-economy lowers the risk of bankruptcy by augmenting demand and liquidity. Nevertheless, its extrapolation was limited to one industry and one country setting. As influenced by the state, China's credit markets may not reflect the interests of economies where private credit allocation is the norm, hence limiting the generalizability of such findings to other emerging markets like Kenya.

In the same way, Purwohandoko and Iriani (2021) noted a pattern in Indonesia's economic growth, bank lending, and corporate performance. Their study used a sample of 200 publicly traded companies between 2010 and 2020. They applied structural equation modelling (SEM) to claim that GDP growth positively impacted both bank lending and corporate profitability. The authors argued that successful economic development persuades the banks to offer longer-term credit facilities so that the firms can lengthen the maturity of their debts without experiencing liquidity issues. This, on its part, enhances long-term profitability. However, the paper also recognizes that inflationary forces in the world and the depreciation of currencies might defeat this positive correlation by increasing the cost of borrowing. The authors suggested that macro-prudential policies should be maintained continuously to balance credit markets in economic transitions.

Similarly, a study by Suseno (2020) examined the moderating effect of GDP growth in a particular industry. Through multiple regression analysis, the research revealed that the adverse impact of debt on profitability was moderated by higher GDP growth, enhancing sales volumes and liquidity reserves. Throughout long-term economic growth, companies have had more chances to utilise short-term and long-term debt to fund activities and innovation. Nevertheless, the analysis presented by Suseno was confined to the consumer-goods industry only, and one might wonder whether the same effect is present in capital-intensive sectors like the energy industry or manufacturing.

Globally, Jungherr *et al.* (2024) reached similar conclusions, although their study was not explicitly aimed at GDP growth, it still indirectly showed how macroeconomic variables influence the results of debt-maturity relationships. The analysis conducted on 30 countries revealed that companies with high long-term debt ratios were less prone to an increase in interest rates and enjoyed better profitability during high GDP growth. These results are consistent with the ones in the emerging markets, which prove that the positive economic environment can offset part of the risks linked to longer debt terms.

In Africa, Heyns (2022) studied the economic growth and financial performance of Namibian firms from 2011 to 2020 based on panel data. The study found that there was a strong positive correlation between growth in the GDP and profitability. This should lead to an increase in macroeconomic growth and firms' abilities to meet their long-term liabilities. Heyns concluded that economic growth would reduce the effective burden of debt by raising revenues and diminishing the risk of default. However, the research also concluded that the gains may be subdued by high inflation rates and volatility in interest rates because the cost of borrowing will increase at a higher rate than profits. The weakness of this study is that it has omitted firm-specific factors like size and asset structure that may have affected the sensitivity of profitability to macroeconomic factors.

In the Kenyan context, the study by Mutuku and Mwangi (2020) was carried out a similar study using a panel data set from 2012 to 2019 and using regression models with interaction terms, the authors discovered that the relation between debt maturity and financial performance was significantly mitigated by GDP growth. In particular, GDP growth decreased the adverse effect of short-term debt on ROA, indicating that companies are more likely to cope with their short-term obligations during economic growth. The authors suggested that Kenyan companies match their debt structure with the state of the macroeconomy. However, the weakness of their study was the relatively short observation date and the omission of post-

pandemic data, which would have given information on how economic shocks impact debt-performance dynamics.

These findings are supported by further evidence from Mate et al. (2020) on GDP growth and manufacturing firms' performance in Kenya. Based on the information of the manufacturing companies listed on the NSE, they have seen that better GDP growth has positively affected profitability and the ability to repay debt. The authors concluded that GDP growth enhances the firms' resilience to risks associated with debt. Nevertheless, they failed to divide debt by maturity, and it is unclear which type of debt, short-term or long-term, is the most beneficial for economic growth.

In the context, Ndiritu (2024) tested the effect of macroeconomic fluctuation on corporate financing and profitability using panel data on 38 banks between 2008 and 2018, and a generalized method of moments estimation. The authors concluded that strong GDP growth and constant interest rates boosted liquidity formation, which increased the ability of the firms to manage their debt and remain profitable. On the other hand, the highly geared firms had lower profits during economic recessions or when the interest rates were unstable. The authors concluded that macroeconomic stability and good liquidity management are fundamental in maximizing financing decisions and supporting the performance of the firms in Kenya.

The literature reviewed supports the opinion that GDP growth is a moderating factor in the relationship between debt maturity and financial performance. The high liquidity, increased sales volume, and easy access to credit enjoyed by firms during the period of high economic growth cushion the adverse impact of both long-term and short-term debt. Adequate investor confidence and favourable lending situations at such times contribute to how firms cope with their debt liabilities and remain profitable. On the other hand, in times of recession, high debt exposure, irrespective of maturity, may enhance financial distress because of dwindling

revenue and constrained credit facilities; firms are less likely to sustain debt repayment liabilities. This trend shows that the performance of firms is sensitive to macroeconomic changes. As a result, the evidence confirms that corporate managers and policymakers should integrate macroeconomic variables like GDP growth in devising debt management and financing policies.

2.4 Critique of Literature and Research Gap

Debt has elaborate effects on the financial performance of any given company. Debt is one of the essential financing sources for companies' long-term operations and majorly affects their performance, as noted (Mamaro & Legotlo, 2020). It finances the company's activities, as Daniel (2017) added, by providing long-term debt, short-term debt, loans, and bonds. Finance literature in the contemporary corporate world, in both developed and developing corporations, gives theories that contradict the relationship between debt and the financial performance of companies, as some researchers have predicted the positive effects of debt on companies' performance (Muiruri & Wepukhulu, 2018). Debt affects companies' financial performance because it determines the financial position of any given company at a particular time of the year, and it determines the return on assets and returns on equity (Kirimi *et al.,* 2017). Return on assets is a company's profit from primary assets, while return on equity is the profit from invested capital.

Onchong'a *et al*. (2016) conducted a study for three decades, intending to examine the effects of long-term debt, short-term debt, and total debt on the financial performance of firms in Kenya, particularly the Nairobi stock exchange. The study utilized panel econometric strategies known as fixed effects, random effects, and ordinary least squares to form an analysis of how debt affects the financial performance of 40 non-financial companies listed on the Nairobi stock exchange. The results revealed that long-term, short-term, and total debt have significant statistical effects on returns on assets, have a negative impact on returns on assets

among ordinary least squares, and have random effects. Muiruri and Wepukhulu (2018) concluded similarly by noting that financial managers should be careful to adjust debt levels and ensure they operate within optimum points, as credit institutions only seek to finance companies up to a level of maximum profitability to mitigate risks associated with overleveraging.

A number of scholars have examined the performance of companies in the Nairobi Stock Exchange. For instance, Wambua (2019) examined the impact of debt financing on the financial performance of firms in the NSE. The study by Wambua (2019) controlled factors such as the firm size, but did not consider the moderating effect of GDP growth rate in the current study. These studies, including Ngungu (2020) and Omollo *et al.* (2018), only examined debt in general without focusing on short-term and long-term debts as in the current study. More recent studies, such as Rosana *et al.* (2024), examined long debts for listed companies but failed to compare them directly with financial performance. Other studies, such as Daniel (2017), Mukumbi et al. (2020) and Shikumo *et al.* (2020), only focused on non-financial organizations at NSE. To this end, there is a gap in regard to the moderating effect of GDP growth on long-term and short-term debts on the financial performance of companies listed at NSE.

2.5 Conceptual Framework

The study's conceptual framework consists of three key variables: Debt Maturity (independent variable), Financial Performance (dependent variable), and GDP Growth Rate (moderating variable).

Debt maturity is bifurcated into Long-Term Debt and Short-Term Debt, representing the structure and timing of a firm's debt obligations. Financial performance is measured primarily through accounting profitability indicators. GDP growth rate reflects the macroeconomic environment that influences the vitality of debt financing and firm operations.

Control variables are included in this study as firm-specific characteristics which may affect financial performance but are not the main interest of analysis. Controlling for these variables helps isolate the impact of the principal independent variables, namely long-term debt, short-term debt and debt maturity structure on financial performance. In this research firm size, liquidity and tangibility of assets are used as control variables. Larger companies are generally linked with economies of scale and improved access to financing which may improve performance. Liquidity is an indication of the firm's ability to meet its short-term obligations and thus it is closely related to operational stability and profitability. Asset tangibility affects your capacity to borrow and collateral value that can affect your financing decisions and performance outcome. By controlling for these factors, the study is certain that estimated relationships between the debt variables and the financial performance are not biased by the omitted variable effects.

Based on the literature review, the framework hypothesizes that debt maturity affects financial performance directly. Moreover, GDP growth moderates this relationship by influencing firms' capacity to bear debt and their financial outcomes. For example, during periods of high GDP growth, firms might better manage long-term debt and realize improved profitability, whereas economic downturns may amplify the risks associated with short-term debt refinancing.

The variables and their indicators are operationalized as follows in Table 2.1.

The relationship between the variables is described in the conceptual framework in Figure 1 below.

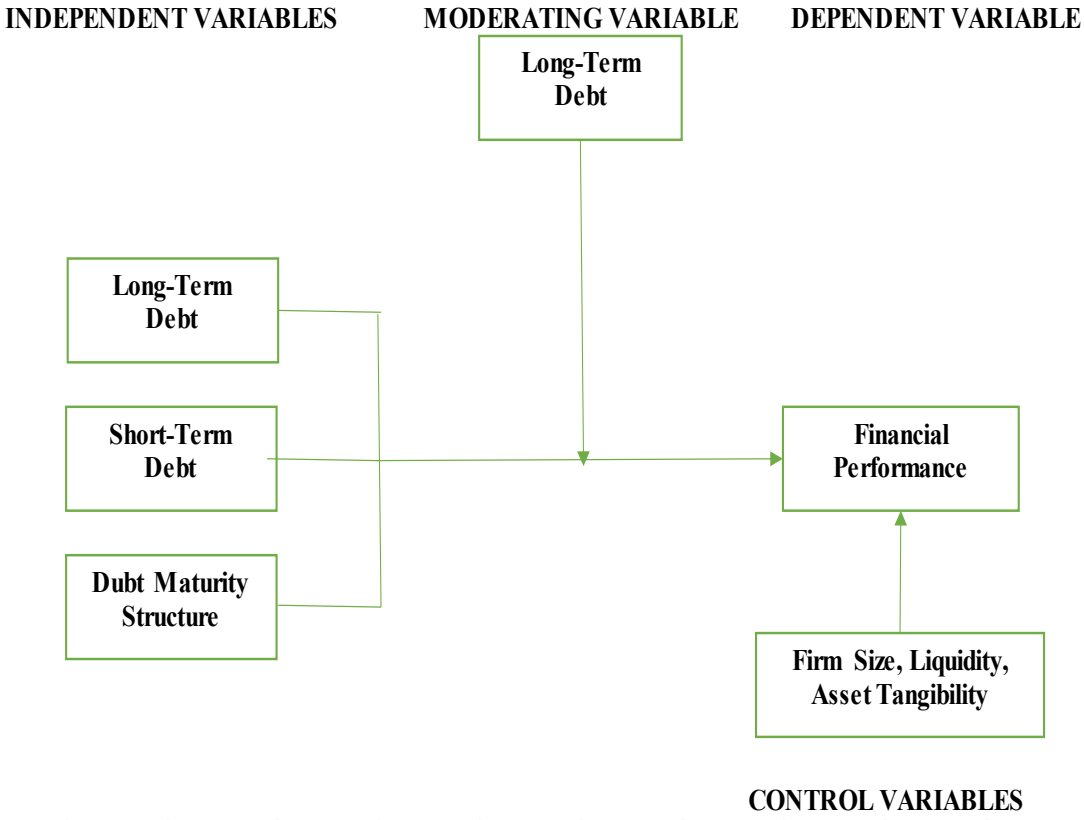


FIGURE 1
Conceptual Framework

2.6 Operationalization of Variables

TABLE 1
Operationalization of Variables

Variable	Indicator	Operational Definition	Formula	Measurement Scale	Citation
Independent Variable	Short-Term Debt Ratio	Proportion of total debt due within one year to total debt, reflecting refinancing risk and liquidity management	(Short-Term Debt / Total Debt) Ã— 100	Ratio	Mutua & Atheru (2020)
	Long-Term Debt Ratio	Proportion of total debt due after one year to total debt, indicating stability but potentially reduced agility	(Long-Term Debt / Total Debt) Ã— 100	Ratio	Mukumbi et al. (2019)
	Debt Maturity structure	Proportion of long-term and short-term debt ratios	Short-term debt / long-term debt	Ratio	Adiya et al (2023)
Moderating Variable	Annual GDP Growth Rate	Year-on-year percentage change in Gross Domestic Product, indicating economic expansion or contraction	((GDP_t - GDP_(tâ’1)) / GDP_(tâ’1)) Ã— 100	Ratio	Makanga (2015); Kipyego et al. (2022)
Dependent Variable	Return on Assets (ROA)	Measures of how efficiently a firm generates profit from its assets	(Net Income / Total Assets) Ã— 100	Ratio	Ngungu (2020); Shikumo et al. (2020)

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the research design, data sources, data type, and collection period, as well as the analytical models used in the study. It outlines the methodology applied to examine the effect of capital structure and debt maturity on the financial performance of firms listed at the Nairobi Securities Exchange, with the moderating role of GDP growth rate.

3.2 Research Design

This study adopted a quantitative causal-comparative research design. This design was appropriate because it allowed for the examination of the relationship between the independent variable and the dependent variable, as well as the assessment of potential moderation effects of short-term and long-term debt (Umstead & Mayton, 2018). According to Umstead and Mayton (2018), the causal-comparative approach is suitable for analysing existing secondary data to determine the nature and strength of relationships without manipulating the variables. The current study was secondary, involving selecting variables related to financial performance in terms of profitability and debts. Most importantly, Umstead and Mayton (2018) noted that the design is particularly important when determining the cause-and-effect association between the variables. In the current study, the focus was on establishing the link between capital structure, debt maturity, and financial performance, making the design appropriate for the study.

In their study, Umstead and Mayton (2018) note that in most cases, the design is often affected by the lack of randomization, which increases the likelihood of bias. However, in the current study, the entire sample selected involved the entire selection of firms listed at NSE, which minimized the associated limitations. The design ensures systematic investigation of the

hypotheses, providing reliable results that can support evidence-based conclusions. By focusing on measurable financial indicators over a defined period, the design facilitates a clear and structured analysis of how capital structure and debt maturity influence the relationship between the independent and dependent variables. Lastly, scholars have found the design to be appropriate in situations where it is not possible to conduct the actual experiment for either practical or ethical reasons. Therefore, the fact that the current study was not experimental but makes use of historical data further justifies the use of the design.

The design adopted in this study was guided by the positivist research philosophy, which holds that reality is objective and can be observed, measured, and analyzed using empirical data (Park et al., 2020). Under positivism, knowledge is derived from facts and quantifiable evidence rather than subjective interpretation. Guided by positivist philosophies, design allowed for the use of secondary quantitative data from audited financial statements and national economic reports to identify cause–and–effect relationships without manipulating the variables. Consistent with positivist principles, the study employed statistical modeling (panel regression) to test hypotheses, ensuring objectivity, replicability, and generalizability of findings. This approach aligns with the positive view that social and economic phenomena can be studied in the same systematic and scientific manner as natural sciences.

3.3 Study Population

The total population in the study consisted of all companies listed on the NSE. On the other hand, the target population in the study was made up of companies that had been consistently listed over the study period, which was between 2019 and 2024. According to the official NSE listing and confirmation from the Central Depository and Settlement Corporation (CDSC) as of 2025, a total of 62 companies were publicly traded across various industry sectors, including banking, agriculture, commercial services, energy, insurance,

manufacturing, investment, real estate, and ICT, among others (Nairobi Securities Exchange, 2024).

TABLE 2
Target Population

Industry	No. of Companies
Banking	12
Commercial and Services	11
Automobile and Accessories	1
Agricultural	9
Construction industry	5
Energy Industry	4
Insurance Industry	6
Investment sectors	6
Manufacturing Industries	5
IT and Communication	1
Real estate industry	1
ETFs	1
Total	**62**

Source: https://www.nse.co.ke/listed-companies/

The list of publicly traded companies each year between 2019 and 2024 was also obtained to determine those that had been consistently listed and had remained operational. The NSE annual report of 2019 indicates that at this point, there was a total of 51 listed companies. The number of listed companies grew to 62 by the end of the year 2024 (Nairobi Securities Exchange, 2024). The focus of the current study, therefore, was on the 51 companies that were listed initially as of 2019 and remained throughout the study period. The criteria for inclusion were companies whose financial reports contained all the variables in the study and were listed on the Nairobi Securities Exchange during the study period from 2019 to 2024. First, two companies were excluded: National Bank of Kenya (NBK), which was delisted in November 2021 following a full acquisition by KCB Group through a share swap, and Mumias Sugar Company, which was suspended from trading on October 15, 2019**,** due to financial insolvency and has since remained inactive on the NSE. After excluding the two companies, 49 companies remained, which were further examined to determine suitability in terms of the

presence of data and variables listed in the study. Therefore, the actual sample of companies included for the final analysis was 49. The companies were distributed across different industries as shown below.

TABLE 3
Criteria for Inclusion

Industry	No. of Companies
Banking	10
Commercial and Services	9
Agricultural	7
Construction Industry	5
Energy Industry	4
Insurance industry	5
Investment Sectors	4
Manufacturing Industry	3
IT and Communication	1
Real estate industry	1
Total	**49**

3.4 Data Collection

Secondary data was collected from the annual financial statements of 49 firms listed on the Nairobi Securities Exchange for the period 2019 to 2024. Data on capital structure components (long-term and short-term debt), debt maturity structure, and financial performance indicators (ROA) were extracted. Macroeconomic data on annual GDP growth rates over the same period were obtained from the Central Bank of Kenya and the Kenya National Bureau of Statistics. The macro-economic data was further compared with information acquired from the World Bank due to the credibility associated with the institution. The data collection period covered both pre-pandemic, pandemic, and recovery phases to capture economic dynamics.

The study explored data from the company websites, particularly the income statements and financial statements. The statements were considered to be appropriate in providing valuable data on assets, short- and long-term debts, and profit accruals from financial year

revenues. The use of data from financial statements from the respective companies was important in acquiring information that is the actual representation of the status of the organization. The data collection tool applied in the study is presented in Appendix I. The presence of a data collection tool assisted in not only achieving credibility but also increasing the likelihood of replicating the research process, as observed by Mazhar et al. (2021). In this data collection tool, it would be important to note that variables such as financial performance were measured using a ratio, which was the return on assets. Given that the companies had different sizes and therefore different asset values, the use of the ratio was important in standardizing the datasets. Similarly, the variable debt maturity was also computed as a ratio, which also assisted in standardizing the variables.

Notably, the study utilized panel data, which combines both cross-sectional and time-series dimensions. Biørn (2017) considers this type of data to be longitudinal data acquired over time. Specifically, data were collected for multiple firms listed on the Nairobi Securities Exchange (NSE) over the period 2019 to 2024. This structure allowed the study to observe variations across firms (cross-sectional) and over time (time-series), providing a richer dataset than a purely cross-sectional or time-series approach. The panel design enabled the researcher to control unobserved heterogeneity among firms, improving the accuracy of parameter estimates and the validity of causal inferences. Financial indicators such as debt maturity, capital structure, GDP growth rate, and financial performance were compiled from audited financial statements and national economic reports, making the dataset suitable for further analysis.

3.5 Data Analysis

The study was quantitative, which implies that quantitative approaches to analysis were adopted. The first step in the analysis was descriptive statistics, which was achieved by considering the summary for the variables. Specifically, summaries in terms of average and

standard deviation were important in describing the variables in the most appropriate way. Equally, the same summary statistics were also appropriate in providing trends for variables such as GDP over the study period. To test the research hypotheses, the study employed multiple regression analysis, which allowed examination of the relationships between the independent and dependent variables and the moderation effects of GDP. Given that the analysis was a time series involving the use of panel data, the Statistical Software for Data Analysis (STATA) was used.

3.5.1 Model specification

Different models were adopted to execute panel analysis in STATA. The first was the baseline model, including all the variables.

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon$$

Where:

Y_{it} = dependent variable (financial performance)

X_1 = Independent variable (short-term debt)

X_2 = Independent variable (long-term debt)

X_3 = Independent variable Debt Maturity Structure (Ratio of short term to long term debt)

β_0 = Constant

β_1- β_2 – β_3 = Coefficients of Independent variables

ε = Error Term

Moderation analysis was conducted to determine whether GDP affects the relationship between capital structure, debt maturity structure, and financial performance.

Analytical Regression Model with Moderating Variable

$$Y_{it}=\beta_0+\beta_1X_{1it}+\beta_2X_{2it}+\beta_3X_{3it}+\beta_4X_{4it}+\beta_5(X_{2it}\times X_{3it})+\beta_5X_{5it}+\beta_6X_{6it}+\beta_7X_{7it}+\varepsilon$$

Where:

Y_{it} = dependent variable (financial performance)

X_1 = Independent variable (short-term debt)

X_2 = Independent variable (long-term debt)

X_3 = Independent variable Debt Maturity Structure (ratio of long term to short term debt)

X_4 = Moderating variable (GDP Growth)

X_5 = Size of the firm (control variable)

X_4 = Liquidity (Control Variable)

X_4 = Asset Tangibility (Control Variable)

β_0 = Constant

β_1- β_7 = Coefficients

ε = Error Term

In this analysis, the direct effect of GDP on financial performance was also computed. While GDP, in this case, was a moderating variable, the analysis was important in determining whether GDP influences financial performance for the listed companies. By treating the moderation effects separately, the analysis allows clear interpretation of sub-hypotheses, ensuring that the impact of short-term and long-term debt is distinctly identified.

3.6 Diagnostic Tests

Given that the study was quantitative, involving inferential analysis, some diagnostic tests had to be conducted to determine the overall suitability of the datasets. The following specific tests were conducted.

3.6.1 Stationarity test

Stationarity tests, particularly the Augmented Dickey-Fuller (ADF) test or the Levin-Lin-Chu test, were critical diagnostic tools in time series analysis, especially for research that examined the relationship between debt maturity, GDP growth rate, and financial performance of listed firms at the Nairobi Securities Exchange (NSE). Time series data often exhibit trends or non-constant means and variances over time, which can result in spurious regressions if not addressed appropriately (Gujarati & Porter, 2021). The ADF test helped to determine whether the variables under study are stationary—meaning their statistical properties do not change over time—or if they contain unit roots, indicating non-stationarity. Non-stationary data can produce misleading relationships, undermining the validity of the regression results (Wooldridge, 2020). Therefore, applying the ADF test ensures the robustness of econometric modeling by confirming that variables are appropriately differenced or transformed before analysis, thus enabling meaningful interpretation of the effects of capital structure, debt maturity, and GDP growth on firm performance over time

3.6.2 Hausman test

The test was carried out to determine the most reliable model among ordinary least squares, fixed model, and random effects models. The ordinary least squares model seems to be a perfect model in this study as it uses data from individuals and periods, is simple to work with, and outlines unprejudiced estimates of parameters (Wooldridge, 2010). The test is used to determine if there is a correlation between the unique errors and the regressors in a model. It tests the null hypothesis that the preferred model is the random effects model against the

alternative hypothesis that the fixed effects model is more appropriate. This distinction was crucial because fixed and random effects models handle panel data differently. The fixed effects model assumes that omitted variables can be correlated with the included variables and removes the effect of time-invariant characteristics. In contrast, the random effects model allows for the inclusion of time-invariant variables (Deutsch, 2012).

3.6.3 Multicollinearity test

The study calculated the Variance Inflation Factor (VIF) for each independent variable to assess multicollinearity. The VIF measures how much the variance of an independent variable is inflated due to its correlation with other variables in the model. To compute the VIF, each variable is regressed against all the other variables, and the resulting score indicates how well an independent variable is explained by the others. A VIF between 1 and 5 is considered acceptable, while a value above 5 indicates high levels of multicollinearity. High multicollinearity can lead to poorly estimated coefficients and biased p-values, which can compromise the reliability of the model (Kim, 2019).

3.6.4 Linearity test

To determine if our predictor variables adequately explain the dependent variable, we'll conduct linearity tests. We'll evaluate the linearity by examining two key plots: one showing observed versus predicted values and another showing residuals versus predicted values. For the data to be considered linear, we expect the points in the residuals versus predicted values plot to be symmetrically distributed around a diagonal line with approximately constant variance (Flatt & Jacobs, 2019).

3.6.5 Normality test

The Shapiro-Wilk test was used to study normal distribution in this study. This statistical test is appropriate given our sample size and the characteristics of our data. The null

hypothesis for the test posits that the data are normally distributed. If the p-value obtained from the test is greater than 0.05, we do not reject the null hypothesis, indicating that the data can be considered normally distributed (Mishra et al., 2019).

3.6.6 Heteroskedasticity test

The Breusch-Pagan test was used to study whether the variance of errors is constant. The heteroskedasticity test is an essential diagnostic tool in regression analysis, particularly when examining financial data such as the relationship between debt maturity, capital structure, GDP growth rate, and the financial performance of listed firms at the Nairobi Securities Exchange (NSE). In financial datasets, the variance of error terms is often not constant, which violates the classical linear regression assumption of homoskedasticity and can lead to inefficient and biased estimations (Gujarati & Porter, 2021). For instance, firms with varying capital structures or exposure to macroeconomic shocks may exhibit differing levels of risk and volatility, resulting in heteroskedastic residuals. Detecting and correcting for heteroskedasticity using tests such as the Breusch-Pagan enhances the reliability of inferences drawn from econometric models (Wooldridge, 2020). This is particularly important in analyzing firm-level financial performance influenced by both internal (debt structure) and external (GDP growth) variables. Ensuring robust estimations through heteroskedasticity testing strengthens the empirical findings and policy implications derived from the study.

3.7 Ethical Considerations

The current study adhered to established research ethics to ensure integrity, credibility, and respect for stakeholders. Since the research relied on secondary data, ethical risks are minimal; however, several considerations were still necessary. The above is consistent with a number of scholars, including Hasan (2021), who found that all research studies, including secondary research, should have ethical considerations. One of the considerations was data integrity and accuracy, which was achieved by ensuring that all financial and macroeconomic

data were obtained from credible and verifiable sources such as audited company reports, the Nairobi Securities Exchange (NSE), the Central Bank of Kenya (CBK), and the Kenya National Bureau of Statistics (KNBS). Throughout the research, there was no manipulation or misrepresentation of data, as all findings were presented objectively. To ensure accurate representation, information related to variables such as debt maturity and financial performance was acquired directly from the annual financial statements rather than from other third-party sources. The above implies that the findings presented in this case are a real representation of the dataset obtained.

The next consideration was regarding reputation and the overall status of the business. Although the data were publicly available, the study avoided misusing firm-specific information in ways that could harm reputations or stakeholder interests. The above was achieved by ensuring that the results have been reported at an aggregate level where appropriate to preserve organizational anonymity. In this regard, no firm-specific information was provided in the study. The findings, therefore, relate to the entire context of companies listed at the Nairobi Stock Exchange rather than a specific organization. All secondary sources (journals, books, reports) were properly cited using the APA 7th edition referencing style. The researcher ensured originality of work by avoiding plagiarism and using similarity-check software before submission.

Since no primary data collection involving human participants was undertaken, risks such as informed consent, privacy violation, or participant harm were not applicable. Nonetheless, the study complied with KCA University's ethical standards and guidelines for the responsible use of secondary data. Prior to execution, the research proposal was submitted to the School of Graduate Studies for review and ethical clearance. Lastly, the researcher also observed that the findings and results in the study were only used for academic purposes and not for any other purpose not intended in the study.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The chapter presents an analysis of findings in the current study aimed at examining the influence of capital structure, debt maturity and GDP growth rate on the financial performance of listed firms at the NSE. The chapter begins with a description of data sources and proceeds with descriptive statistics. Diagnostic tests are further conducted to determine the suitability of the data for inferential analysis. The chapter makes use of a panel dataset covering 25 firms listed at the NSE between 2019 and 2024.

4.2 Description of Data Sources

This research uses the secondary data sourced from the audited financial statements of the firms listed in the Nairobi Securities Exchange (NSE) for the period between 2019-2024. The financial statements were taken from company annual reports available from official company's websites, from the Nairobi Securities Exchange database and publications by the Capital Markets Authority. The use of audited financial statements ensures reliability and accuracy of the financial data that is used in the analysis. To ensure the consistency of measurement, financial performance is operationalized through the Return on Assets (ROA). ROA is used because it is how efficiently a firm is using its asset base to generate earnings and is widely used in empirical finance literature, in particular, in panel data studies involving firm-level performance.

The study further differentiates between different components of debt in order to deal with ambiguity in earlier studies. Long term debt is calculated as the ratio of long-term liabilities to total assets and short-term debt is calculated as the ratio of short-term liabilities to total assets. In addition, debt maturity structure is operationalized as the ratio of long-term to

total debt, reflecting the share of stable, long-term financing relative to overall debt obligations. This definition guarantees that debt maturity is clearly distinguished from total leverage as well as maturity expressed in years. Macroeconomic data (GDP growth rate) was obtained from the World Bank and Central Bank of Kenya in order to maintain consistency and comparability throughout the period of the study. GDP growth is measured as the percentage annual changes in real gross domestic product and is used as a time varying moderating variable.

As evident in Appendix II, the total population was 62 companies listed on the NSE. However, the study only selected companies that were consistently listed between 2019 and 2024 and in which the information related to income, assets, long-term and short-term debt for the six-year period between 2019 and 2024 was publicly available. As a result, 49 companies met the criteria. The data set utilized in this study, therefore, contains a total of 294 observations for the 49 companies across six years.

4.3 Descriptive Statistics

This section presents descriptive statistics for the three variables in the study. The mean value for the debt ratio over the six-year period between 2019 and 2024 was 0.542 (SD = 0.0953), implying that, on average, the companies were more dependent on long-term compared to short-term debts, resulting in ratios below 1. The findings indicate that in most cases, the debts were scheduled to mature for a period of more than twelve months. On financial performance, the average ROA was 4.54% (SD = 0.0712), which means that the listed companies generate approximately 5 cents of net profit for every 1 shilling of assets they own. The ROA value was considered to be within acceptable levels.

TABLE 4
Descriptive Statistics of Study Variables (2019–2024)

Variable	Mean	Std. Dev.	Min	Max	Obs.
Debt Maturity Structure	0.542	0.0953	0.315	0.728	294
GDP Growth Rate (%)	4.57%	0.0230	-0.30%	7.60%	294
ROA (%)	4.54%	0.0712	-22.63%	34.54%	294

In this study, debt maturity was a combination of short-term and long-term debt. Figure 2 is a visual description of long-term and short-term debt within the organization. From the findings in Figure 2, it is evident that the long-term debts were consistently higher for the organizations selected in the study. In general, the average long-term debt across the years was 20.95% while the average short-term debt was 6.39%. Findings are an indication that, in general, a majority of the listed companies may have preferred to fund long-term and growth-oriented projects and operations using long-term debt.

FIGURE 2
Debt Comparison

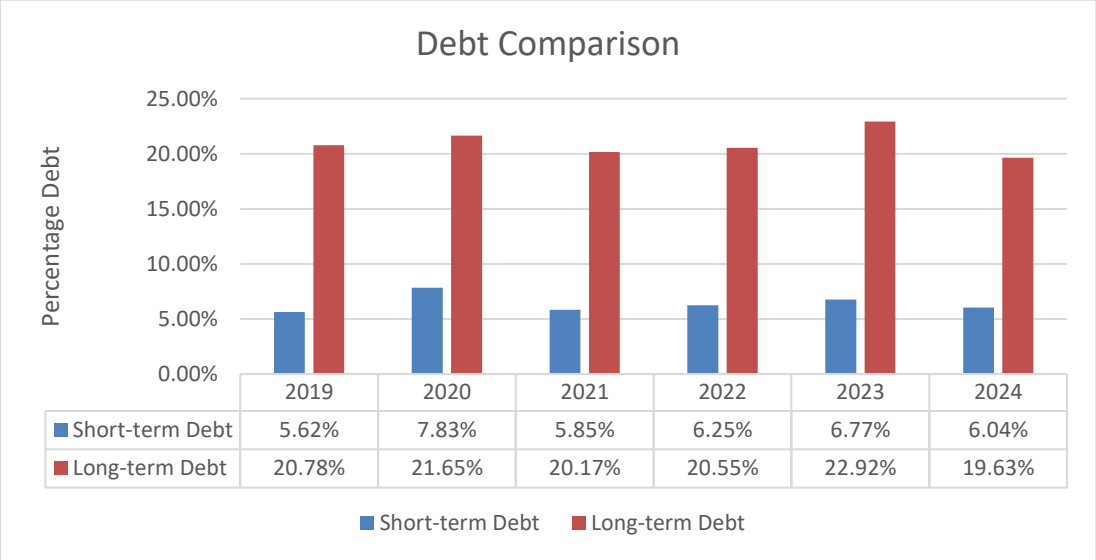
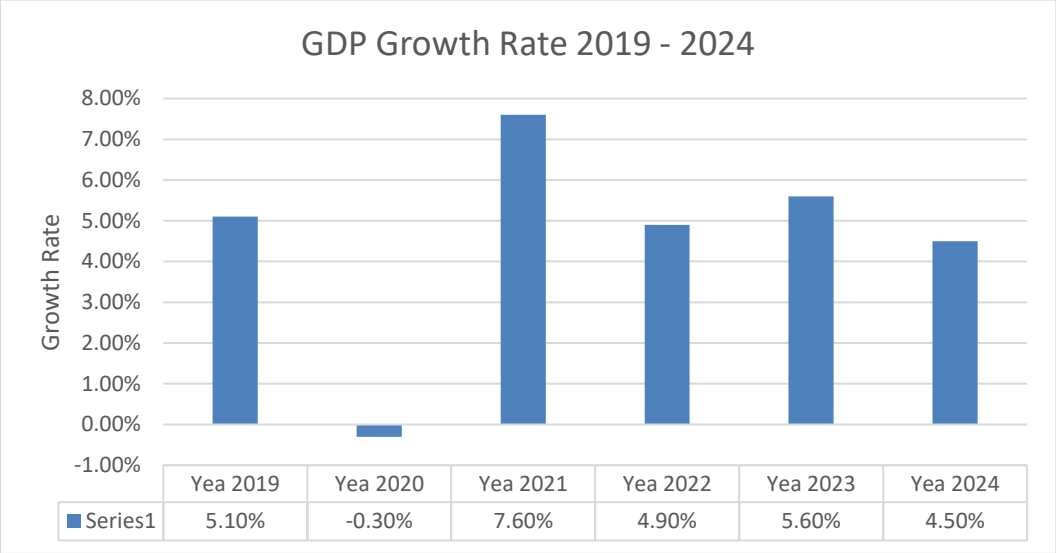


Figure 3 is a visual representation of the GDP growth rate between 2019 and 2024. The information on GDP growth rate was drawn from the World Bank Group (2025). As evident in Figure 3, GDP growth was lowest in 2020, which may have been a result of the COVID-19 pandemic. The average GDP growth rate over the period was 4.57% (SD = 0.023). The growth

rate was highest in 2021 as the economy began to recover from the initial impacts of the COVID-19 pandemic.

FIGURE 3
GDP Growth Rate 2019-2024



4.4 Diagnostic and Model Specification Tests

The diagnostic tests were conducted in STATA with the aim of checking the overall suitability of the data for regression analysis. The first step entailed declaring the dataset as panel data. Seven main diagnostic tests were conducted in the study. The first test was the test of normality. The above was achieved using the Shapiro-Wilk test in STATA. Five outputs were obtained for each of the variables in the study. The findings have been summarized in Table 4.2 below. The test is based on the null hypothesis that the data is normally distributed. For each of the variables in Table 5, the p-values were greater than 0.05, which means that we fail to reject the null hypothesis. Another observation from Table 5 would be W values, which are closer to 1, which is further confirmation that the data is likely to be normally distributed. The conclusion made from this, therefore, is that the data were normally distributed and, therefore, appropriate for undertaking further inferential analysis.

TABLE 5
Test of Normality

Variable	Obs.	W	V	Z	Prob>Z
Financial Performance	294	0.81216	18.711	1.302	0.1608
Debt Maturity Structure	294	0.69352	29.408	1.800	0.0864
Short-term Debt	294	0.73026	24.673	1.734	0.0934
Long-term Debt	294	0.76351	26.678	1.642	0.1025
Growth Rate	294	0.80934	22.654	1.489	0.1132

The second test was linearity, which was achieved using the Ramsey Reset test. The test was conducted in STATA, and the findings are shown in Table 6. The test assumes that the model is likely to be linear. For p>0.05, we fail to reject the null hypothesis, confirming the likelihood of linearity of the data.

TABLE 6
Test of Linearity

Ramsey RESET test using powers of the fitted values of Financial Performance.
Ho: model has no omitted variables
F (5, 288) = 1.34
Prob > F = 0.4132

The next test was the Levin–Lin–Chu test of stationarity. The test was conducted for each of the variables in the study. Table 7 shows a summary of findings. The test is based on the null hypothesis that the data is non-stationary and contains a unit root. As evident in Table 7, the p-value for each of the variables was below 0.05, which implies that the null hypothesis was rejected, indicating that the variables are stationary and therefore suitable for regression analysis.

TABLE 7
Stationarity Tests

		Statistic	P - Value
Financial Performance	Unadjusted t	-18.7624	
	Adjusted t	-17.3561	0.0000
Long-term Debt	Unadjusted t	-21.6759	
	Adjusted t	-20.5616	0.0000
Short-term Debt	Unadjusted t	-23.3451	
	Adjusted t	-22.2786	0.0000
Debt Maturity Structure	Unadjusted t	-27.0972	
	Adjusted t	-25.4176	0.0000
GDP Growth Rate	Unadjusted t	-24.5412	
	Adjusted t	-23.0041	0.0000

The fourth test was multicollinearity, measured by considering the variance inflation factors (VIF). From the findings in Table 8, the VIF values were below five, which is an indication that multicollinearity was within acceptable levels. At the same time, tolerance measured by 1/VIF was above 0.2, which is a further confirmation of low levels of multicollinearity.

TABLE 8
Test of Multicollinearity

Variable	VIF	1/VIF
Long-term Debt	3.98	0.2513
Short-term Debt	4.03	0.2481
Debt maturity structure	3.75	0.2667
Growth rate	3.83	0.2611

The fifth test was the test of heteroscedasticity measured using the Breusch-Pagan test. The test is based on the null hypothesis or assumption of the presence of homoscedasticity. From Table 9, we fail to reject the null hypothesis for $p > 0.05$. The assumption is that there is no heteroscedasticity, and the data are therefore appropriate for regression analysis.

TABLE 9
Test of Heteroscedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of Financial Performance
chi2(1) = 7.23
Prob > chi2 = 0.1023

The sixth test was the Wooldridge test for autocorrelation. The test assumes that there are no first-order autocorrelations in the dataset. From Table 4.10, we fail to reject the null hypothesis for $p > 0.05$. The assumption made is that there are no significant autocorrelations in the dataset.

TABLE 10
Test of Autocorrelation

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F (5, 288) = 2.245
Prob > F = 0.1108

The seventh test was the Hausman test. The null hypothesis in this model is on the presence of random effects, which are consistent. From Table 11, we fail to reject the null hypothesis for $p > 0.05$. The findings imply that the random effect is the most appropriate model for the data. The model was considered effective in that it allows for the inclusion of time-invariant variables.

TABLE 11
Hausman Test

Test: Ho: difference in coefficients not systematic chi2(3) = (b-B)'[(V_b-V_B) ^ (-1)] (b-B) = 1.63 Prob>chi2 = 0.8132

4.5 Panel Regression Analysis

4.5.1 Effect of long-term debt on financial performance

Table 12 shows regression analysis testing the relationship between long-term debt and financial performance. The relationship was found to be negative and significant, implying that financial performance is likely to be higher when long-term debt is low ($\beta = -0.1124$; $p < 0.05$). The overall R-squared value was 0.0764, meaning that the model explains 7.64% of the variation in the dependent variable, financial performance. The findings mean that high reliance on long-term debt is likely to have a negative impact on financial performance in terms of income and profitability.

TABLE 12
Long-term Debt and Financial Performance

Random-effects GLS regression Number of obs. = 294
Group variable: firm id Number of groups = 49
R-sq: Obs. per group: min = 6
within = 0.0517 avg = 11.8
between = 0.1345 max = 12
overall =
0.0764

Wald chi2(3) = 18.37
Corr (u_i, X) = 0 (assumed) Prob > chi2 = 0.0004

Financial Performance	Coefficient	Std. Err.	z	P>|z|	[95% Conf.	Interval]
LTD_RA	-0.11245	0.03328	-3.38	0.001	-0.17767	-0.04723
Growth Rate	0.05891	0.01932	3.05	0.002	0.02113	0.09669
_cons	0.00483	0.00194	2.49	0.013	0.00103	0.00863

4.5.2 Effect of short-term debt on financial performance

Table 13 shows regression analysis testing the relationship between short-term debt and financial performance. The relationship was found to be positive and significant, implying that financial performance is likely to be higher when long-term debt is low ($\beta = 0.0868$; $p < 0.05$). The overall R-squared value was 0.0894, meaning that the model explains 8.94% of the variation in the dependent variable, financial performance. The findings mean that high reliance on long-term debt is likely to have a negative impact on financial performance in terms of income and profitability.

TABLE 13
Long-term Debt and Financial Performance

Random-effects GLS regression Number of obs. = 294
Group variable: firm id Number of groups = 49
R-sq: Obs. per group: min = 6
within = 0.0643 avg = 11.8
between = 0.1496 max = 12
overall = 0.0894

Wald chi2(3) = 21.74
Corr (u_i, X) = 0 (assumed) Prob > chi2 = 0.0001

Financial Performance	Coefficient	Std. Err.	z	P>|z|	[95% Conf.	Interval]
STD_RA	0.08677	0.02685	3.23	0.001	0.03417	0.13937
Growth Rate	0.04754	0.01870	2.54	0.011	0.01089	0.08419
_cons	0.00391	0.00172	2.28	0.023	0.00054	0.00728

4.5.3 Effect of debt maturity structure on financial performance

Table 14 shows regression analysis testing the relationship between debt maturity and financial performance. The relationship was found to be negative and significant, implying that financial performance is likely to be higher when the debt ratio is low ($\beta = -0.0946$; $p < 0.05$). The overall R-squared value was 0.0815, meaning that the model explains 8.15% of the variation in the dependent variable, financial performance. The findings mean that high reliance on debt (long-term and short-term) is likely to have a negative impact on financial performance in terms of income and profitability.

TABLE 14
Debt Maturity and Financial Performance

```
Random-effects GLS regression                Number of obs.     =       294
Group variable: firm ID Number of groups  =         25
R-sq:                                  Obs. per group: min =          6
    within  = 0.0573                                   avg =       11.8
    between = 0.1432                                   max =         12
    overall         =
0.0815

                                       Wald chi2(3)      =      19.42
Corr (u_i, X) = 0 (assumed)                    Prob > chi2       =     0.0002

------------------------------------------------------------------------------
Financial Performance | Coefficient  Std. Err.      z    P>|z|     [95% Conf. Interval]
----------------------+-------------------------------------------------------------------
Debt Maturity Structure|   -0.09463    0.02981   -3.17   0.002     -0.15205    -0.03721
      Growth Rate    |    0.05126    0.01794    2.86   0.004      0.01611     0.08641
          _cons      |    0.00452    0.00187    2.42   0.016      0.00086     0.00818
----------------------+-------------------------------------------------------------------
```

4.5.4 Effect of GDP growth rate on financial performance

Table 15 shows regression analysis testing the relationship between GDP Growth rate and financial performance. The relationship was found to be positive and significant, implying that financial performance in terms of ROA is likely to increase with an increase in GDP growth rate of the country ($\beta = 0.234$; $p < 0.05$). The r-squared value was 0.0546, implying that the model explains 5.46% of the variation in the dependent variable, financial performance. The findings indicate that the financial performance of listed companies increased with an increase in GDP in the country.

TABLE 15
GDP Growth Rate and Financial Performance

Random-effects GLS regression Number of obs. = 294
Group variable: Firm ID Number of groups. = 49

R-sq: Obs. per group:
within = 0.0439 min = 6
between = 0.0087 avg = 6.0
overall = 0.0546 max = 6

Wald chi2(1) = 8.45
Corr (u_i, X) = 0 (assumed) Prob > chi2 = 0.0036

(Std. Err. Adjusted for 49 clusters in Firm ID)

Financial P~e	Robust Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Growth Rate	.2343333	.0806109	2.91	0.004	.0763388	.3923277
_cons	.0347793	.0131374	2.65	0.008	.0090305	.0605282

4.5.5 Moderation effect of GDP growth rate

In this study, GDP growth rate was considered to be a moderating factor, implying that it significantly affects the association between debt maturity and financial performance. The results for the moderation analysis are described in Table 16, where the interaction term was found to be significant ($p < 0.05$). The findings would be interpreted to mean that the moderation term affects the association between debt maturity and financial performance. Specifically, the significant interaction term (Debt Maturity × GDP Growth Rate) indicates that the effect of debt maturity on financial performance is not constant across different levels of GDP growth. During periods of strong economic growth, the negative impact of high debt maturity on performance may weaken as firms experience better cash flows and improved market conditions. Conversely, during downturns such as the COVID-19 period, when GDP growth was negative, long-term debt could have had a stronger adverse effect due to reduced revenues and higher financing risk.

TABLE 16
Moderation Analysis

Random-effects GLS regression   Number of obs. = 294
Group variable: Firm ID   Number of groups = 49

R-sq: Obs. per group:
within = 0.0725   min = 6
between = 0.0059   avg = 6.0
overall = 0.1027   max = 6

Wald chi2(3) = 33.96
Corr (u_i, X) = 0 (assumed) Prob > chi2 = 0.0000

(Std. Err. Adjusted for 49 clusters in Firm ID)

Financial Performance	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
Debt Maturity	-.0671168	.0244951	-2.74	0.006	-.1425593	.0083257
Growth Rate	.2240011	.0903201	2.48	0.013	.0469771	.4010252
c.DebtMaturity#c.GrowthRate	.1944021	.0848917	2.29	0.0220	-1.100618	1.489423
_cons	.0431575	.0135432	3.19	0.001	.0166133	.0697017

4.6 Discussion of Findings

4.6.1 Effect of long-term debt on financial performance

The first objective of the study was to determine the effect of long-term debt on financial performance. The study found long-term debt to have a negative but significant effect on financial performance ($\beta = -0.1124$; $p < 0.05$). The negative association would mean that financial performance in terms of return on assets is likely to increase with a decrease in long-term debts. Consistent with existing studies such as Abuamsha and Shumali (2022), the result suggests that firms that rely heavily on long-term borrowing tend to experience reduced profitability, possibly due to higher interest costs, long-term repayment obligations, and exposure to financial distress risks. Based on the trade-off theory, it can be argued that while

long-term debt is likely to provide relief in terms of benefits, it is also likely to result in more costs, resulting in financial distress for the business. The cumulative costs associated with long-term debts, therefore, mean that the business is likely to have less income and profitability, resulting in lower financial performance.

4.6.2 Effect of short-term debt on financial performance

The second objective of the study was to determine the effect of short-term debt on financial performance. The study found short-term debt to have a positive and significant association with financial performance ($\beta = 0.0868$; $p < 0.05$). The findings imply that taking debt over a short period of time is likely to be associated with better financial performance. Consistent with AMUGADA and Mwangi (2025), the findings could be interpreted to mean that short-term debt provides liquidity that enables businesses to respond to their needs, including short-term investment opportunities. At the same time, the lower costs associated with short-term debt would mean that they provide working capital, which makes it possible to engage in investment opportunities sustainably (AMUGADA & Mwangi, 2025). Therefore, unlike long-term debts, short-term debts are likely to have a more direct and positive impact on financial performance.

4.6.3 Effect of debt maturity structure on financial performance

The third objective of this study was to analyse the effect of debt maturity structure on the financial performance of listed firms at the NSE. The regression analysis revealed a statistically significant and negative relationship between the debt maturity ratio and financial performance, as measured by Return on Assets (ROA) *($\beta = -0.0946$; $p < 0.05$)*. This finding rejects the null hypotheses H_{01} and H_{02}, which posited no significant relationship between these variables. This implies that higher debt levels relative to their maturity structure led to lower profitability for the firms and the period under study. The negative coefficient suggests that the leverage costs outweighed the tax advantages for the average NSE-listed firm during the 2019–

2024 period. The negative relationship can be interpreted through the Trade-Off Theory, suggesting that debt introduces costs related to financial distress, bankruptcy risk, and agency costs despite offering tax-shield benefits (Omukaga, 2017). This theory frames the balance between tax benefits and the risks presented by debt financing as a prerequisite for the organizational capital structure. Furthermore, agency costs, a critical component of the Trade-Off Theory, explain that high debt levels create conflicts of interest between shareholders and debtholders. As a result, creditors impose restrictions in debt agreements to protect their interests, which limit a firm's strategic flexibility and hinder its ability to pursue profitable investment opportunities (Omukaga, 2017). Successively, this leads to an underinvestment problem and lower return on assets (ROA) as managers forgo positive Net Present Value (NPV) projects for their reduced benefits to shareholders and the restricted firm's ability to generate returns from its asset base.

Consequently, these results corroborate the findings gathered by Aliyu (2019) in Nigerian firms and Wambua (2019) on NSE-listed firms that long-term debt negatively affected profitability due to the increased burden of fixed interest obligations and heightened insolvency risks, especially in volatile economic conditions. Similarly, Abuamsha and Shumali (2022) indicated an adverse effect of long-term debt on ROA for Palestinian firms due to reduced benefits of debt in terms of their costs. From the perspective of the Pecking Order Theory, the negative relationship between debt maturity and performance implies that firms might resort to debt financing due to insufficient retained earnings, due to their financing hierarchy that favours internal funds over debt and equity (Wambua, 2019; Ye et al., 2023). In this sense, profitable firms rely on internal resources. In contrast, less profitable ones prefer debt financing, thereby explaining the observed inverse relationship between leverage maturity and profitability, a problem further exemplified by Kibet and Simiyu's (2022) analysis of the impact of debt maturity on NSE firms' performance. Notably, they identified that higher short-term

debt ratios led to poorer performance at the NSE due to high refinancing risk and restricted financial flexibility even in the context of short-term debt. Inversely, Kibet and Simiyu (2022) also confirmed that long-term debt locks firms into high interest rates or restrictive covenants that limit their operational flexibility. This dual vulnerability helps explain the overall effect of a higher debt maturity ratio depressing profitability. Thus, the economic uncertainty characterising the pandemic and post-pandemic period increased the perceived probability and potential costs of financial distress, diminishing the appeal of the tax shield offered by debt financing.

However, these results diverge from the main argument presented by Modigliani and Miller's (1958) irrelevance theorem that, under perfect market conditions, debt maturity structure does not influence firm value. Karungu et al. (2020) suggest that practical realities such as imperfect capital markets, information asymmetry, and fluctuating interest rates make debt maturity highly consequential for performance. This means that in practice, NSE-listed firms operate in markets with asymmetric information, high transaction costs, and limited access to low-cost long-term financing, where the assumption of frictionless capital markets is unrealistic, thus making debt maturity choices consequential for firm performance. Consequently, this sharp contrast highlights the theorem's limited applicability in real-world, imperfect markets like Kenya's, which requires acknowledging that a capital structure that accommodates these elements is imperative in the presence of taxes, bankruptcy costs, and other frictions. Therefore, this study's findings extend the previous research by warning against excessive leverage for its detrimental effects (liquidity risk for short-term debt or solvency risk for long-term debt) on the financial performance of NSE-listed firms during the study period.

4.6.4 Effect of GDP growth rate on financial performance

Analysing the macroeconomic environment and firm-level outcomes yielded a positive and statistically significant relationship between GDP growth rate and financial performance

($\beta = 0.234;\ p < 0.05$). This indicates that the profitability (ROA) of listed firms tends to increase as the Kenyan economy expands, while weaker macroeconomic performance, such as the 2020 contraction (-0.3%), coincided with reduced profitability. With these findings validating the effects of macroeconomic conditions on firms' performance, the trade-off theory notes that this occurs because default risks and refinancing challenges are shaped by the broader economic environment, where robust growth encourages liquidity, increased consumer demand, and better debt servicing, thereby improving profitability (Dalci, 2018). The first channel for this transmission mechanism is the revenue channel, where a growing economy boosts household disposable income and corporate investment, and leads to higher aggregate demand (Zhang & Zhu, 2021). This translates directly into increased sales and revenue growth for NSE-listed firms. The second channel is the cost of capital channel, where macroeconomic stability and growth reduce the perceived risk of investing in the country, leading to lower interest rates and favourable lending conditions from banks. It is these conditions that Koech (2013) links with making it cheaper for firms to finance their operations and investments. Lastly, the operational efficiency channel ensures that firms operate closer to full capacity in a booming economy, spreading fixed costs over a larger output volume and improving asset turnover ratios, which is a direct component of ROA.

In this light, Heyns' (2022) analysis of the Namibian macroeconomic environment, coupled with Mate et al.'s (2020) and Kirimi et al.'s (2020) analysis of the Kenyan context, all underscore the positive influence of economic growth on firm profitability as the expanding macroeconomic activity supports investment and stabilises debt servicing capacity. The slowed GDP growth in 2020 due to the COVID-19 pandemic limited the firms' profitability, but rebounded in 2021 as the economy recovered. This indicates that GDP growth is a fundamental determinant of a firm's financial performance. This finding offers an interesting perspective on the Pecking Order Theory regarding a firm’s preference for internal financing (retained

earnings) over debt financing. Specifically, Ye et al. (2023) illustrate that during periods of high GDP growth, firms naturally generate higher profits due to higher aggregate demand, which increases their pool of available internal funds and allows them to finance growth opportunities without resorting to expensive external financing like debt or equity, susceptible to macroeconomic conditions. Their ability to fund their firm's needs from the top of the pecking order avoids the adverse selection costs and maintains financial flexibility, contributing to stronger overall organizational performance. Conversely, challenges with internal funding in a recession force firms down the pecking order to debt at the very time when it is most costly and risky, thus reducing the firm's profitability and financial performance. Therefore, this means that GDP growth facilitates adherence to the preferred financing hierarchy, thereby supporting profitability.

However, although Modigliani and Miller's irrelevance proposition states that macroeconomic variables like GDP growth do not affect firm valuation, these findings highlight the theory's limitations. This is because fluctuations in GDP growth alter the cost of capital, risk perception, and investment opportunities characterising the broader economy. Equally, from the Pecking Order Theory viewpoint, GDP growth indirectly influences financing decisions by shaping firms' access to external capital, where market optimism and investor confidence during economic booms reduce the adverse-selection problem that makes debt financing less costly. The access to cheap debt financing, in turn, enhances the firm's financial performance. Conversely, as previously reiterated, the inaccessibility of external financing during recessions due to higher costs forces firms to rely on internal funds that may be insufficient for expansion. As a result, these findings reaffirm the necessity of embedding macroeconomic considerations into firm-level financing decisions given the positive association between GDP growth and firm profitability.

4.6.5 Moderating effect of GDP growth rate on the debt maturity–performance relationship

The joint regression results demonstrate the combined effects of debt maturity ratio and GDP growth rate on financial performance ($p < 0.05$). Findings further indicate that GDP growth rate significantly moderates the relationship between debt maturity and financial performance, whereby periods of robust GDP growth mitigate the adverse effects of high debt maturity ratios on profitability, whereas economic downturns exacerbate them. According to the trade-off theory, this moderation occurs because firms optimise their maturity structures by weighing the tax benefits of debt against the risks of refinancing and financial distress. However, this balance is predicated on the economic environment, where in periods of strong GDP growth, lower default risks and higher liquidity availability enable firms to bear higher debt maturity without suffering significant profitability losses. Conversely, refinancing risk rises in recessions or periods of low growth, such as in 2020, making long-term debt particularly burdensome. This is consistent with the views by Suseno (2020) and Mutuku and Mwangi (2021) that GDP growth affected the strength and direction of the relationship between debt maturity and firm performance, with GDP growth dampening the harmful effect of short-term debt on a firm's profitability, as indicated in this research's findings.

This is consistent with Suseno's (2020) and Mutuku and Mwangi's (2021) findings that GDP growth affected the strength and direction of the relationship between debt maturity and firm performance, dampening the harmful effect of short-term debt on a firm's profitability. In Indonesia, GDP growth moderated the adverse effect of debt on firm performance in the consumer goods sector by improving liquidity and sales (Suseno, 2020). This validates the finding in this research that GDP growth coincided with improved organizational performance. The rationale behind these strategies is informed by the Trade-off theory, where firms weigh the tax benefits of debt against potential costs of financial distress when determining their optimal capital structure, as previously established.

Additionally, the pecking order theory explains this moderating effect, positing that macroeconomic expansion reduces adverse-selection costs and improves market confidence, which increases the viability of external financing while reducing the damage posed to firm performance. Reducing information asymmetry between firms and investors during economic expansion and GDP growth reduces the perceived risk of external borrowing. It encourages firms to utilise debt efficiently as a strategy for productive investment. However, firms struggle to access affordable credit during economic downturns as credit markets tighten, and borrowing costs rise, making reliance on debt maturity increasingly risky. For instance, the 2021-2022 period illustrates the contextual sensitivity of debt maturity outcomes whereby Kenya's post-pandemic recovery improved liquidity in the banking sector and allowed firms to restructure or refinance long-term loans on favourable terms, thus mitigating financial strain experienced during *2020's* negative GDP growth. Consequently, these findings suggest the need to tailor debt maturity strategies to firm conditions and macroeconomic trends for NSE-listed firms.

4.7 Summary of the Chapter

The chapter presents the findings on the effects of capital structure, debt maturity and GDP growth rate on the financial performance of companies listed at NSE. The dataset used was drawn from the annual financial statements of the World Bank Group. The data includes a total of 294 observations from 49 companies for the six-year period between 2019 and 2024. Diagnostic tests were conducted to confirm the suitability of the data for further analysis. Regression analysis indicates that all variables had a significant impact on financial performance for listed companies.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter presents a summary and a conclusion of the findings presented across the main objectives of the study. The chapter presents different recommendations for policy, practice, academia, and future research.

5.2 Summary of Findings

The study's primary purpose was to examine the effect of debt maturity (measured by considering long-term and short-term debt) on the financial performance of firms listed at the Nairobi Securities Exchange (NSE). Specifically, the research sought to determine the effect of long-term debt on firm performance, examine the effect of short-term debt on firm performance, assess the effect of GDP growth rate on firm performance, and evaluate the moderating influence of GDP growth rate on the relationship between debt maturity and firm performance. The study adopted a quantitative causal-comparative research design using a balanced panel dataset of NSE-listed firms from 2019 to 2024. Financial performance was assessed by Return on Assets (ROA), while debt maturity structure was measured by the ratio of long-term debt to total assets and short-term debt to total assets. GDP growth rate represented the macroeconomic factor. Finally, the analysis was guided by the Trade-Off Theory, the Pecking Order Theory, and Modigliani and Miller's propositions.

5.2.1 Long-term debt and financial performance

The study found long-term debt to have a negative and significant impact on financial performance. ($\beta = -0.1124$; $p < 0.05$). On average, long-term debt across the six-year period was 20.95% for the 49 selected companies. The findings mean that high reliance on long-term debt is likely to have a negative impact on financial performance in terms of income and profitability. Studies have found that firms that rely heavily on long-term borrowing tend to

experience reduced profitability, possibly due to higher interest costs, long-term repayment obligations, and exposure to financial distress risk, resulting in a negative relationship.

5.2.2 Short-term debt and financial performance

The study found short-term debt to have a positive and significant impact on financial performance ($\beta = 0.0868$; $p < 0.05$). On average, short-term debt across the six-year period was 6.39% for the 49 selected companies. Short-term debt was associated with liquidity, which enables businesses to engage in short-term investment opportunities. At the same time, short-term debt was associated with lower costs, resulting in better financial performance.

5.2.3 The Effect of debt maturity on financial performance

The study found debt maturity to have a negative but significant influence on financial performance for companies listed on NSE between 2019 and 2024. With the average debt levels being considerably low for the analysed firms, a key deduction obtained from this study is that increased reliance on long-term debt adversely affects firm profitability. This is informed by the finding that firms, in preference for long-term financing as indicated by their high debt maturity ratios, recorded lower returns on assets, which suggests that the cost of long-term borrowing outweighs its benefits in the NSE context. The negative association can be explained through the Trade-Off Theory, which acknowledges that although debt provides a tax shield advantage, excessive reliance exposes firms to high interest expenses, agency costs, and potential bankruptcy risk, hence the lower profitability with high debt levels. From the perspective of short-term debt, the study gleans that it negatively influenced a firm's financial performance, with the short-term obligations exposing firms to refinancing and liquidity risks. During periods of economic uncertainty or rising interest rates, this effect is aggravated, a deduction supported by the empirical evidence from prior studies, such as Wambua (2019) and Aliyu (2019). They note that both forms of leverage erode a firm's profitability when poorly managed or in unstable market conditions. Therefore, the findings suggest that debt maturity

composition plays a crucial role in determining firm performance in emerging markets like Kenya, where the high cost of borrowing, limited access to long-term credit facilities, and volatile interest rates make debt financing a double-edged sword.

5.2.4 Effect of GDP growth rate on financial performance

The next objective of the study was to examine the influence of GDP growth rate on financial performance. The study found the GDP growth rate to positively and statistically significantly impact financial performance for companies listed on NSE between 2019 and 2024. This means improved financial performance as the economy grows. Economic growth enhances consumer purchasing power, increases investment opportunities, and fosters favourable credit conditions, boosting corporate revenues and profitability. Conversely, the tighter credit markets and reduced profitability characterising periods of economic downturns, such as the 2020 pandemic-induced contraction, reduced the firms' performance. This aligns with the views of Dalci (2018), Mate et al. (2020), and Heyns (2022) that macroeconomic stability is a key determinant of firm success. Hence, the increasing consumer demand for products and services in 2021 due to the growing GDP is reflected in the firm's increase in financial performance. The study found that financial performance is likely to increase with increased GDP levels due to increased demand, improved liquidity, and lower default risk.

5.2.5 Moderating effect of GDP growth rate on debt maturity–performance relationship

The study also confirmed that GDP growth rate moderates the relationship between debt maturity and firm performance, where the negative impact of debt maturity on profitability weakened during periods of strong GDP growth. In contrast, the adverse effect of debt maturity on firm performance intensified during economic recessions, which implies that macroeconomic conditions cushion the effect of leverage structures on firm outcomes. Each of the variables was also found to have a significant impact, implying that GDP growth rate is likely to influence the strength of the impact of debt maturity ratio on financial performance.

From the Trade-Off Theory perspective, strong GDP growth reduces the perceived risks associated with high leverage, while the cost of debt increases in a sluggish economy due to higher default risks and reduced access to affordable capital. Moreover, the moderating effect is consistent with findings by Suseno (2020) and Mutuku and Mwangi (2021), who established that macroeconomic growth conditions influence the direction and magnitude of debt–performance relationships. Therefore, the detrimental effect of debt is weakened during periods of high economic growth and amplified during periods of economic contraction or slow growth.

5.3 Conclusions

5.3.1 Short-term and long-term debt

The two types of debt were separately found to have an influence on financial performance. However, the influence was different in that it was positive for short-term debt and negative for long-term debt. The above was associated with costs associated with borrowing. In general, long-term debt is associated with higher interest rates and borrowing costs, which may have an impact on profitability. The study concludes that capital structure in terms of lower long-term debt is a more effective way of achieving enhanced financial performance.

5.3.2 Debt maturity and firm performance

The study establishes that over-reliance on debt financing was detrimental to the financial performance of firms listed on the NSE between 2019 and 2024, with the maturity structure of debt significantly affecting the financial performance of firms listed on the NSE. Firms with a higher proportion of long-term debt perform poorly regarding ROA. This outcome reinforces the Trade-Off Theory's assertion that excessive debt magnifies the risk of financial distress and reduces profitability when the cost of servicing debt outweighs its benefits. The economic uncertainty likely heightened the perceived risk of default, making leverage

significantly drag on profitability. Additionally, it supports the Pecking Order Theory's implication that profitable firms prefer internal financing to external borrowing, thus heavy debt financing can indicate cash flow challenges. Therefore, the inverse relationship between debt maturity and financial performance among NSE-listed firms means balancing short-term flexibility and long-term solvency is necessary for optimal debt management.

5.3.3 GDP growth and firm performance

Concerning the effect of GDP growth on firm performance, the research concludes that macroeconomic growth positively influences corporate profitability, where increased demand and liquidity facilitate higher sales and investment opportunities during periods of economic expansion. The increased profitability leads to improved ROA. Conversely, in times of slowed or negative GDP growth, firms struggle to maintain revenue streams, and profitability declines. Hence, this study highlights the connection between macroeconomics and microeconomic firm performance in Kenya's market context and challenges the assumptions of perfect markets in theories like the pure Modigliani-Miller proposition, reinforcing the critical need to integrate macroeconomic realities into corporate finance models.

5.3.4 Moderating role of GDP growth

The analysis of this relationship indicates that GDP growth rate moderates the debt maturity and a firm's performance by enhancing a firm's ability to handle debt-related obligations during periods of economic growth. This reduces the negative influence of leverage on the financial performance of an organization. Conversely, in economic downturns, the servicing of expensive debt financing burdens the firm's financial performance and reduces profitability. This is because the adverse effect of the debt ratio may have been magnified by lower GDP due to reduced consumer demand. It means that when consumer demand is low, the effect of debt in terms of interest and repayments becomes magnified due to reduced revenue. Consequently, this moderation highlights the necessity of adaptive financial strategies

that adjust to macroeconomic realities given their sensitivity to internal (debt ratio) and external (GDP) factors.

5.4 Recommendations

5.4.1 Policy recommendations

The current study has shown that debt, especially long-term debt, would significantly negatively affect performance. In this regard, governments and regulators should monitor existing debt structures while ensuring that the interests and terms of repayments are tied to macroeconomic conditions. Similarly, given the substantial impact of GDP, the government needs to design approaches to support firms during periods of economic downturn. The above would ensure that when the consumer demand is low, firms can continue with their operations while meeting debt obligations.

5.4.2 Practical recommendations

The study recommends that companies avoid over-reliance on long-term debts, as found in this study. While debt is important for funding projects, the study recommends that companies only consider long-term borrowing when the projects are likely to generate adequate capital to cover the repayments and interest rates. When making borrowing decisions, it would be important for firms to simulate different scenarios, such as during an economic downturn and a revenue drop. The simulation would assist in evaluating the ability of firms to pay even under harsh microeconomic conditions.

5.4.3 Academic recommendations

The study seeks to extend current knowledge on the factors that influence the financial performance of listed firms. The study confirms that debt, especially long-term debt, could significantly negatively impact financial performance. The study extends this to

macroeconomic factors, indicating that the impact of debt structure depends on GDP and economic growth status.

5.5 Limitations of the Study

As the study's focus was exclusively on firms listed on the Nairobi Securities Exchange, it limits the generalisability of the findings to unlisted private companies, small and medium-sized enterprises (SMEs), and start-ups, which face different financing constraints and opportunities. Also, while the study captured the core variables of interest, the scope of variables used to analyse financial performance as a multifaceted concept is another limitation affecting this study. For instance, relying on Return on Assets (ROA) as the sole analyser for firm performance may not capture other important dimensions like market valuation, such as Tobin's Q or shareholder returns like Return on Equity. Similarly, using a single debt maturity ratio simplifies the complex reality of a firm's debt structure. Additionally, the study examined only the GDP growth rate as a macroeconomic moderator, even though other influential factors, such as inflation, exchange rate volatility, and interest rate trends, were excluded from the study. Lastly, omitting variables such as unobserved firm-level factors, including managerial competence, ownership structure, or innovation capacity, limits the analysis of their influence on firms' performance outcomes.

The specificity of the time period, 2019-2024, offers limited analysis of the cyclical effects and structural market shifts, especially given the COVID-19 pandemic's economic disruption observable in more extended market periods. Also, the findings cannot be applied beyond this period, which implies the need for future studies extending the period before 2019 to have a more enhanced understanding of the effects of debt maturity and GDO growth on the financial performance of listed firms. Finally, the assumption of linear relationships overlooks the potential non-linear or threshold effects between debt maturity and performance.

5.6 Suggestions for Further Research

Firstly, while the current study examined the direct influence of GDP on financial performance, it would be important for future studies to consider other factors at macroeconomic levels, such as inflation, government policies, interest rate volatility, and exchange rate fluctuations, on their moderating role on the relationship between debt and performance for an insightful model of corporate financial risk.

Also, a future study could conduct a comparative analysis across different sectors of the NSE, such as banking, manufacturing, or telecommunications, to establish the unique operating characteristics and sensitivities to economic cycles influencing the debt-performance relationship. This is because, in the current study, financial performance was considered in general without evaluating whether it differed significantly across different industries; hence, there is a need to examine sector-specific factors and their effects on debt maturity and GDP growth rate.

Lastly, the current study only examined companies listed on the NSE. In order to have a more enhanced understanding of financial performance for businesses in Kenya, it would be important for future studies to undertake random sampling for companies beyond those listed on the NSE. The generalizability of the findings will benefit from the inclusion of unlisted private firms and SMEs in Kenya and the replication of this study's model using alternative dependent variables, such as market-based measures (Tobin’s Q) or shareholder-focused metrics (ROE, Earnings Per Share) to provide a more comprehensive picture of how debt maturity and GDP growth affect different facets of firm value.

REFERENCES

Abdullah, H., & Tursoy, T. (2021). Capital structure and firm performance: evidence of Germany under IFRS adoption. *Review of Managerial Science,* 15(2), 379-398.

Abuamsha, M., & Shumali, S. (2022). Debt structure and its impact on financial performance: An empirical study on the Palestinian stock exchange. *Journal of International Studies,* 15(1), 123-145. https://doi.org/10.14254/2071-8330.2022/15-1/14

Abuamsha, R., & Shumali, A. (2022). Debt maturity and firm performance: Evidence from emerging markets. *Journal of Finance and Economics*, 10(3), 45–59.

Adachi-Sato, M., & Vithessonthi, C. (2019). Corporate debt maturity and future firm performance volatility. *International Review of Economics & Finance*, pp. 60, 216–237.

Aliyu, A. N. (2019). Analysis of Debt Financing on Corporate Financial Performance. *Lapai Journal of Economics,* 3(2), 119-132. https://doi.org/10.2022/lje.v3i2.54

Aluoch, M. O., Mwangi, C. I., Kaijage, E. S., & Ogutu, M. (2020). The relationship between board structure and performance of firms listed at the Nairobi securities exchange. *European Scientific Journal,* 16(19), 337-364.

AMUGADA, B. S., & Mwangi, L. W. (2025). Debt financing and profitability of listed manufacturing firms at the Nairobi securities exchange, Kenya: An empirical analysis. *Asian Journal of Economics, Finance and Management*, *7*(1), 169-182. https://doi.org/10.56557/ajefm/2025/v7i1262

Ateya, B. D. (2023). *Financial Structure and Market Performance of Non-financial Firms Listed at the Nairobi Securities Exchange* (Doctoral dissertation, Kca University).

Biørn, E. (2017). *Econometrics of panel data: Methods and applications*. Oxford University Press.

Casino-Martínez, A., López-Gracia, J., Mestre-Barberá, R., & Peiró-Giménez, A. (2019). An agency approach to debt maturity of unlisted and listed firms in the European setting. *European Management Journal,* 37(3), 339-352. https://doi.org/10.1016/j.emj.2018.07.003

Chandra, S., & Juliawati, C. (2020). Effects of long-term debt to total assets, short term debt to total assets, total asset turnover, and inventory turnover on profitability of manufacturing companies in consumer goods subsector listed on IDX. *Journal of Applied Business and Technology*, 1(3), 212-222. https://doi.org/10.2022/lje.v3i2.54

Chen, H., Xu, Y., & Yang, J. (2021). Systematic risk, debt maturity, and the term structure of credit spreads. *Journal of financial economics,* 139(3), 770-799.

Cheng, F., Chiao, C., Fang, Z., Wang, C., & Yao, S. (2020). Raising short-term debt for long-term investment and stock price crash risk: *Evidence from China. Finance Research Letters, 33*, 101200.

Cheng, X., Li, Y., & Wang, H. (2020). Short-term debt and corporate performance: Evidence from developing countries. *International Review of Economics & Finance,* 65, 123–135.

Chiang, C. S., Sembel, R., & Malau, M. (2024). The effect of financial performance and market return on stock return with GDP growth as a moderating variable. *International Journal of Business, Economics and Law*, *31*(1), 102-111.

Chirinko, R. S., & Singha, A. R. (2000). Testing static tradeoff against pecking order models of capital structure: a critical comment. *Journal of financial economics*, 58(3), 417-425.

Coe, R., Waring, M., Hedges, L. V., & Ashley, L. D. (Eds.). (2021). *Research methods and methodologies in education.* Sage.

Creel, J., Hubert, P., & Labondance, F. (2015). Financial stability and economic performance. *Economic Modelling,* 48, 25-40. https://doi.org/10.1016/j.econmod.2014.10.025

D'Amato, A. (2020). Capital structure, debt maturity, and financial crisis: empirical evidence from SMEs. *Small Business Economics,* 55(4), 919–941.

Daniel, M. M. (2017). Short-Term Financing Decisions and Financial Performance of Non-Financial Firms Listed at Nairobi Securities Exchange, Kenya *(Doctoral dissertation, Doctoral Thesis, Doctor of Philosophy in Finance).*

El Fallahi, F., Ibenrissoul, A., & El Amri, A. (2023). Defining and measuring overall performance in emerging countries: A comprehensive financial perspective review. *Financial Markets, Institutions and Risks*, *7*(3), 81-93.

Evbayiro-Osagie, E. I., & Enadeghe, I. B. (2022). Capital structure and performance of non-financial firms in Sub-Sahara Africa. *International Journal of Finance Research*, *3*(1), 49-62.

Garmaise, M. J., & Natividad, G. (2021). Financial flexibility: At what cost? *Journal of financial and quantitative analysis,* 56(1), 249-282.

Hasan, A. (2021). Ethical considerations in the use of secondary data for built environment research. *In Secondary Research Methods in the Built Environment* (pp. 26-39). Routledge.

Hu, Y., Varas, F., & Ying, C. (2021). Debt maturity management. *Working paper.*

Jungherr, J., Meier, M., Reinelt, T., & Schott, I. (2022). Corporate debt maturity matters for monetary policy. *Econometrica*, 90(6), 2673-2712. https://doi.org/10.3982/ECTA19844

Kamau, C. G., & Murori, C. K. (2024). Pre-and Post-Covid Analysis of Earnings Management and Financial Distress among Nairobi Securities Exchange-Listed Firms. *South Sahara Multidisciplinary Journal*, *2*(1), 31-48.

Kanake, M. G., Kuria, J., Kimathi, C. M., & Kibera, M. (2023). *General contribution of finance in firm*. AJPO Journals USA LLC.

Karungu, R., Memba, F., & Muturi, W. (2020). Influence of financial contagion on the stock performance of firms listed in the Nairobi securities exchange. Accounting, 6(1), 1-16. http://dx.doi.org/10.5267/j.ac.2019.7.001

Kibet, B., & Simiyu, T. (2022). The impact of debt maturity on firm performance: Evidence from the Nairobi Securities Exchange. *Journal of Financial Economics,* 8(2), 125-142.

Kibet, J., & Simiyu, P. (2022). The impact of debt structure on firm profitability: A case of Kenyan listed firms. *East Africa Business Journal,* 8(2), 75-92.

Kipyego, S., Njoka, C., & Muniu, J. (2022). Relationship between public debt and financial development in Kenya. *International Journal of Finance and Accounting,* 7(4), 55-83.

Kirimi, P. N., Simiyu, J. M., & Murithi, D. (2017). *Effect of debt finance on the financial performance of savings and credit cooperative societies in Maara Sub-county,* Tharaka Nithi County, Kenya.

Koech, S. K. (2013). The effect of capital structure on profitability of financial firms listed at Nairobi Stock Exchange. *A Master Thesis*, Department of Business Administration, Kenyatta University, Kenya.

Kulas, J. T., Roji, R. G. P. P., & Smith, A. M. (2021). *IBM SPSS essentials: managing and analyzing social sciences data.* John Wiley & Sons.

Machiri, N. S., Oloko, M., Ngugi, J. K., & Odhiambo, R. (2023). Corporate technological capability as a driver to firm performance: A study on firms listed at the Nairobi securities exchange. *Economit Journal: Scientific Journal of Accountancy, Management and Finance*, *3*(3), 148-162.

Makanga, A. M. (2015). The effect of debt financing on the financial performance of companies listed at the Nairobi securities exchange *(Doctoral dissertation, University of Nairobi).*

Mamaro, L. P., & Legotlo, T. G. (2020). The impact of debt financing on financial performance: Evidence from Retail firms listed on Jse. *The Journal of Accounting and Management,* 10(3).

Mazhar, S. A., Anjum, R., Anwar, A. I., & Khan, A. A. (2021). Methods of data collection: A fundamental tool of research. *Journal of Integrated Community Health*, *10*(1), 6-10.

Muchiri, M. J., Muturi, W. M., & Ngumi, P. M. (2016). Relationship between Financial Structure and Financial Performance of Firms Listed at East Africa Securities Exchanges. *Journal of Emerging Issues in Economics, Finance & Banking*, 5(1).

Mugisha, H. E. N. R. Y. (2021). Capital Structure and Financial Performance of Small and Medium Scale Enterprises in Buganda Region, Uganda *(Doctoral dissertation, Thesis, Kenyatta University, Kenya).*

Mukumbi, M. C., Eugine, K. W., & Jinghong, S. (2020). Effect of capital structure on the financial performance of non-financial firms quoted at the Nairobi Securities Exchange. *International Journal of Science and Business*, 4(4), 165-179.

Mutua, L. M., & Atheru, G. K. (2020). Capital structure and financial performance of companies listed under manufacturing and allied sector at Nairobi Securities Exchange in Kenya. *Journal of Finance and Accounting,* 4(1), 24–38.

Mutuku, J., & Mwangi, M. (2020). The moderating effect of GDP growth on the relationship between debt maturity and financial performance of listed firms in Kenya. *African Journal of Business Management,* 14(6), 201-215.

Mwenda, W. G. (2018). The effect of debt financing on the financial performance of listed companies at the Nairobi Securities Exchange (*Doctoral dissertation, University of Nairobi).*

Mwiti, M. E., & Gitagia, F. (2023). Long term debts and financial performance of manufacturing firms listed at Nairobi Securities Exchange, Kenya. *International Academic Journal of Economics and Finance*, *3*(10), 267-278.

Nairobi Security Exchange (NSE), (2022). Nairobi Securities Exchange Limited (NSE.ke) *Annual report.*

Ndegwa, K. K. (2017). The Effect of Macroeconomic Factors on the Financial Performance of the Real Estate Sector in Kenya *(Doctoral dissertation, University of Nairobi*).

Ndiritu, G., Iraya, C., Okiro, K., & Nyandemo, S. (2024). Effect of interest rate spread on performance of commercial banks in Kenya. *European Journal of Business and Management Research*, *9*(3), 86-90. https://doi.org/10.24018/ejbmr.2024.9.3.2286

Ngungu, E. M. (2020). The Effect of Debt Management on the Performance of Firms Listed on the Nairobi Securities Exchange (*Doctoral dissertation, University of Nairobi*).

Njuguna, H. (2025, June 05). Standard Group 2024 Net Loss Eases to KSh 1.1Bn, Revenue Decline Continues. The Kenyan Wall Street. https://kenyanwallstreet.com/standard-group-2024-net-loss-eases-to-ksh-1-1bn-as-revenue-decline-continues

Nyamu, F. (2016). The effect of macroeconomic factors on the financial performance of insurance firms in Kenya (*Doctoral dissertation, University of Nairobi*).

Nyongesa, L. N., & Atandi, F. G. (2024). Navigating Economic Transformations: Accounting for Paradigm Shifts in Post Covid-19 in Listed Companies in NSE, Kenya. *International Journal of Latest Technology in Engineering, Management & Applied Science*, *13*(4), 161-171.

Oanda, E. (2021). *Effect of Capital Structure on Financial Performance of Non-financial Firms Listed at the Nairobi Securities Exchange* (Doctoral dissertation, University of Nairobi).

Ogada, A., Achoki, G., & Njuguna, A. (2016). The moderating effect of economic growth on the financial performance of merged institutions.

Ojeme, J. O., Tanko, A., & Otame, L. (2021). An Assessment of Hidden Charges on Bank Credit as Source of Short-Term Finance for Firm's Sustainability. *IIARD International Journal of Banking and Finance Research,* 1(7), 26-72.

Omollo, B. A., Muturi, W. M., & Wanjare, J. (2018). Effect of debt financing options on the financial performance of firms listed at the Nairobi Securities Exchange, Kenya. *Research Journal of Finance and Accounting,* 9(10), 150-164.

Omukaga, K. O. (2017). Effect of capital structure on the financial performance of firms in the commercial and service sector in the Nairobi securities exchange for the period 2012-2016 (Doctoral dissertation, United States International University-Africa).

Onchong'a, E. A., Muturi, W., & Atambo, W. (2016). Effects of debt financing on business firms' financial performance. *International journal of social sciences and information technology,* 2(5), 723-737.

Park, Y. S., Konge, L., & Artino Jr, A. R. (2020). The positivism paradigm of research. *Academic medicine*, *95*(5), 690-694.

Pervan, M., Pervan, I., & Ćurak, M. (2019). Determinants of firm profitability in the Croatian manufacturing industry: evidence from dynamic panel analysis. *Economic research-Ekonomska istraživanja,* 32(1), 968-981.

Purwohandoko, P., & Iriani, S. S. (2021). Effect of gross domestic product, liquidity, size, growth, capital adequacy ratio, and inflation on financial performance. *Equilibrium: Jurnal Ekonomi-Manajemen-Akuntansi*, 17(1), 46-53.

Pyoko, O. M., & Muchiri, R. (2024). Free cash flow and short-term debt of firms listed at the Nairobi securities exchange Kenya. *Asian Journal of Economics, Business and Accounting*, *24*(2), 64-69. https://doi.org/10.9734/ajeba/2024/v24i21220

Roni, S. M., & Djajadikerta, H. G. (2021). *Data analysis with SPSS for survey-based research*. Singapore: Springer.

Rosana, D. M., Muturi, W. M., & Oluoch, O. (2024). Long-term debt annual changes and security returns of companies listed in the Nairobi Securities Exchange. *International Academic Journal of Economics and Finance,* 4(1), 161-178.

Samwel, K. A. (2021). Relationship Between Public Debt and Financial Development in Kenya (*Doctoral dissertation, Kenyatta University*).

Saungweme, T., & Odhiambo, N. M. (2021). Inflation and economic growth in Kenya: An empirical examination. *Advances in Decision Sciences,* 25(3), 1-25.

Shikumo, D. H., Oluoch, O., & Wepukhulu, J. M. (2020). Effect of Long-Term Debt on the Financial Growth of Non-Financial Firms Listed at the Nairobi Securities Exchange. arXiv preprint arXiv:2010.12596. https://doi.org/10.9790/5933-1105020109

Sileyew, K. J. (2019). *Research design and methodology* (Vol. 7). Cyberspace.

Suseno, M. A. (2020). Financial performance, macroeconomic factors and Company characteristics in consumer goods company in Indonesia. International Journal of Economics, Business and Accounting Research (IJEBAR), 4(03).

Swaraj, A. (2019). Exploratory research: Purpose and process. *Parisheelan Journal,* 15(2), 665-670.

Swedberg, R. (2020). *Exploratory research. The production of knowledge: Enhancing progress in social science,* 2(1), 17-41.

Tudose, M. B., Rusu, V. D., & Avasilcai, S. (2022). Financial performance–determinants and interdependencies between measurement indicators. *Business, Management and Economics Engineering*, *20*(1), 119-138.

Ullah, S., Khan, S., Hussain, S., Alam, M., & Haroon, M. (2021). political connections, family ownership, and firm performance: An emerging economy. *International Journal of the Economics of Business*, *28*(3), 471-487.

Umstead, L. K., & Mayton, H. (2018). Using correlational and causal-comparative research designs in Practice: Exploring relations among client variables. In *Making research relevant* (pp. 95-108). Routledge.

Wambua, M. (2019). Capital structure and financial performance of firms listed at the Securities Exchange. African Journal of Business Management, 13(7), 220–230.

Willy, O. C. O. (2012). Macroeconomic fluctuations affect the financial performance of listed manufacturing firms in Kenya. *International journal of social sciences,* 21(1), 26–40.

Wu, J. Y., Opare, S., Bhuiyan, M. B. U., & Habib, A. (2022). Determinants and consequences of debt maturity structure: A systematic review of the international literature. *International Review of Financial Analysis,* 84, 102423.

Ye, H., Ji, J., & Zou, Y. (2023, September). A Critical Review of the Effects of Stock Returns and Market Timing on Capital Structure. In 3rd International Conference on Economic Development and Business Culture (ICEDBC 2023) (pp. 503-513). Atlantis Press.Central Bank of Kenya. (2024). *Annual report 2024.* CBK.

Younsi, M., & Nafla, A. (2019). Financial stability, monetary policy, and economic growth: Panel data evidence from developed and developing countries. *Journal of the Knowledge Economy,* 10(1), 238-260. https://doi.org/10.1007/s13132-017-0453-5

Zhang, R., Noronha, C., & Guan, J. (2023). *CSR Reporting and the Belt and Road Initiative: Implementation by Chinese Multinational Enterprises*. Routledge.

Žukauskas, P., Vveinhardt, J., & Andriukaitienė, R. (2018). *Exploratory research. Management culture and corporate social responsibility,* 189.

APPENDICES

Appendix I: Data Collection Tool

		2019	2020	2021	2022	2023	2024
Financial Performance	**Income**						
	Assets						
Long-term Debt	**Long-term Liabilities**						
	Assets						
Short-term Debt	**Short-term Liabilities**						
	Assets						
GDP Growth Rate							

Appendix II: Target Population

Listed Companies in NSE.

Symbol	Listing
EGAD	Eaagads limited
KUKZ	Kakuzi Limited
KAPC	Kapchorua Tea Company Limited
LIMIT	Limuru Tea Company Limited
SASN	Sasini Tea and Cofee
WTK	Williamson Tea Kenya Limited
REA	Rea Vipingo Plantations Ltd
G&G	Car & General Kenya
MASH	Marshalls East Africa
FIRE	Sammer Africa Limited
XPRS	Express Kenya Limited
HBER	Hutchings Biermer Limited
KQ	Kenya Airways
NMG	Nation Media Group
SCAN	Scangroup
SGL	Standard Group Limited
TPSE	TPS Serena
ARM	ARM Cement Limited
BAMB	Bamburi Cement Limited
CABL	East Africa Cables Limited
PORT	East Africa Portland Cement Company
KENG	Kengen
KENO	KenolKobil
KPLC	Kenya Power and Lighting Company
TOTL	Total Kenya Limited
UMME	Umeme
BRIT	British-American Investment Company
CIC	CIC Insurance Group
CFCI	Liberty Kenya Holdings Limited (formerly CFC Insurance)
JUB	Jubilee Holdings Limited

KNRE	Kenya Reinsurance Corporation
PAFR	Sanlam Kenya Plc (formally Pan African Insurance Holdings)
ICDC	Centum Investment Company
OCH	Olympia Capital Holdings
TCL	TransCentury Investments
NSE	Nairobi Security Exchange
BAUM	A Baumann and Company
BOC	BOC Kenya Limited
BAT	British American Tobacco Limited
CARB	Carbacid Investments Limited
EABL	East African Breweries
EVRD	Eveready East Africa
ORCH	Kenya Orchards Limited
UNGA	Unga Group
SCOM	Safaricom
ADSS	Atlas Development & Support Services
HAFR	Home Africa
FTGH	Flame Tree Group Holdings Ltd
KVL	Kurwitu Ventures
SFI	Stanlib Fahari I-REIT
ABSA	Absa Kenya
SBIC	Stanbic Holdings
IMH	I & M Holding
DTK	Diamond Trust Bank
HFCK	HF Group Limited
KCB	KCB Group
NBK	National Bank of Kenya
NCBA	NCBA Group
SCBK	Standard Chartered
EQTY	Equity Group
COOP	Cooperative Bank
BKG	Bank of Kigali

Appendix III: Data collection letter from BPS

Thika Road, Ruaraka
P.O. Box 56808-00200 Nairobi Kenya
Pilot Line: +254 20 8070408/9

Tel: +254 20 3537842
Fax: +254 20 8561077
Mobile: +254 734 888022, 710 888022
Email: kca@kca.ac.ke
Website: www.kca.ac.ke

BOARD OF POSTGRADUATE STUDIES

KCAU/BPS/2025 *Date: Monday, September 29, 2025*

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION (NACOSTI)
P.O BOX 30623-00100
NAIROBI

Dear Sir/Madam,

RE: PETER W. WAINAINA- REG NO. 19/06610

It is my distinct pleasure to introduce Peter W. Wainaina, a student at our institution pursuing Master of Science in Commerce- Finance and Investments degree in the School of Business.

Peter is conducting research on the topic ***"Debt maturity, GDP, growth rate, and financial performance of listed firms at the Nairobi securities exchange."*** His study has been reviewed and approved by the University's Ethics Review Committee, Approval No. KCAUSERC/SOB0292. The Approval period is from 8th September, 2025 – 8th September, 2026.

Any assistance accorded to him is highly appreciated.

Yours faithfully,

DR. JACKSON NDOLO
DIRECTOR, BOARD OF POST GRADUATE STUDIES

Appendix IV: KCAUSERC Ethics Certificate

KCA UNIVERSITY

Thika Road, Ruaraka
P.O. Box 56808-00200 Nairobi Kenya
Pilot Line: +254 20 8070408/9

Tel: +254 20 3537842
Fax: +254 20 8561077
Mobile: +254 734 888022, 710 888022
Email: kca@kca.ac.ke
Website: www.kca.ac.ke

KCA UNIVERSITY SCIENTIFIC & ETHICS REVIEW COMMITTEE

REF: KCAU/SERC/SOB0292 Date: 8TH SEPTEMBER, 2025

TO: PETER W. WAINAINA (19/06610)

Dear Sir/Madam,

RE: DEBT MATURITY, GDP GROWTH RATE, AND FINANCIAL PERFORMANCE OF LISTED FIRMS AT THE NAIROBI SECURITIES EXCHANGE

This is to inform you that the KCA University Scientific Ethics Review Committee (KCAUSERC) has reviewed and approved your research proposal. Your application approval number is ***KCAUSERC/SOB0292.*** The approval period is ***8th September, 2025 – 8th September, 2026.***
This approval is subject to compliance with the following requirements.

i. Only approved documents, including informed consents, study instruments, and MTAs, will be used.
ii. All changes, including (amendments, deviations, and violations), are submitted for review and approval by ***KCAUSERC.***
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events, whether related or unrelated to the study, must be reported to **KCAU*SERC*** within 72 hours of notification.
iv. Any changes, anticipated or otherwise, that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to ***KCAUSERC*** within 72 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days before expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to ***KCAUSERC.***

Before commencing your study, you will be expected to obtain a research license from the National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Scientific and Ethics KCA UNIVERSITY Review Committee

Yours sincerely,

Dr. Caroline Ntara,
Chairperson,
KCA University Scientific & Ethics Review Committee.

Advancing Knowledge, Driving Change

Appendix V: NACOSTI LICENSE

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 638589

Date of Issue: 22/October/2025

RESEARCH LICENSE

This is to Certify that Mr.. Peter Wamwiri of KCA 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: DEBT MATURITY, GDP GROWTH RATE, AND FINANCIAL PERFORMANCE OF LISTED FIRMS AT THE NAIROBI SECURITIES EXCHANGE for the period ending : 22/October/2026.

License No: NACOSTI/P/25/4181178

638589

Applicant Identification Number

Ag. Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was the established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to.
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
    i. Endanger national security
    ii. Adversely affect the lives of Kenyans
    iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
    iv. Result in exploitation of intellectual property rights of communities in Kenya
    v. Adversely affect the environment
    vi. Adversely affect the rights of communities
    vii. Endanger public safety and national cohesion
    viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. Neither the license nor any rights thereunder are transferable.
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and
Innovation(NACOSTI),
Off Waiyaki Way, Upper Kabete,
P. O. Box 30623 - 00100 Nairobi, KENYA
Telephone: 020 4007000, 0713788787, 0735404245
E-mail: dg@nacosti.go.ke
Website: www.nacosti.go.ke