

**THE EFFECT OF CAPITAL STRUCTURE ON THE PROFITABILITY OF NON-  
FINANCIAL FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE**

**DEBORAH JOY MORAA MOIRO**

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## DECLARATION

I, the undersigned, declare that this research project is my original work and has not been submitted to any other college, institution, or university for academic credit.

Signature: 

Date: 29<sup>th</sup> November 2022

**DEBORAH JOY MORAA MOIRO**

**D63/36270/2020**

This research project has been submitted for examination with my approval as the appointed supervisor.

Signature: 

Date: 29<sup>th</sup> November 2022

**DR. KENNEDY OKIRO**

**Senior Lecturer**

**Department of Finance and Accounting**

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## **DEDICATION**

To my parents Dennis and Abigael Moiro and siblings Beverly Moiro and Emmanuel Moiro who have always believed in me and gave me unwavering support throughout the duration of my studies and successful completion of this course.

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## **ABBREVIATIONS AND ACRONYMS**

<b>ANOVA</b>	Analysis of Variance
<b>CDSC</b>	Central Depository and Settlement Corporation
<b>CMA</b>	Capital Markets Authority
<b>EPS</b>	Earnings Per Share
<b>GP</b>	Gross Profit
<b>KPLC</b>	Kenya Power and Lighting Company
<b>LTAs</b>	Long-term Assets
<b>MFI</b> s	Micro Finance Institutions
<b>MM</b>	Modigliani and Miller
<b>NSE</b>	Nairobi Securities Exchange
<b>ROA</b>	Return on Asset
<b>ROCE</b>	Return on Capital Employed
<b>ROE</b>	Return on Equity
<b>SACCO</b>	Savings and Credit Co-operative Societies
<b>SME</b>	Small and Medium Enterprises
<b>SOFP</b>	Statement of Financial Position
<b>SPSS</b>	Statistical Package for Social Sciences

## **ABSTRACT**

Listed non-financial companies are essential to a nation's economic development and prosperity. The expansion of an area's economy will be constrained by the absence of a vibrant non-financial sector. Companies in the sector will profit more from having an optimum and advantageous capital structure, including cost savings. The study's goal was to investigate the relationship between publicly traded non-financial firms' capital structures and their financial performance.

The study's dependent variable was ROA, which is determined by dividing net income by total assets. Leverage was determined using the debt ratio. The natural log of all the assets was used to calculate size. Liquidity was assessed using the current asset to current liability ratio. Operating costs are compared to gross revenue to measure efficiency. The research concentrated on 40 non-financial companies listed on the NSE. Annual secondary data collection occurred for five years (January 2017 to December 2021). A descriptive design was used to analyze the study's factors. The analysis was carried out using SPSS software.

The profitability of the NSE listed non-financial firms was positively and statistically significantly impacted by firm size and liquidity, whereas the profitability was negatively and statistically significantly impacted by capital structure. The report exhorts listed non-financial enterprises to strive for the greatest possible capital structure, improve liquidity, and increase efficiency because these qualities have a major impact on profitability.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Capital structure is an essential factor in the financing structure of non-financial firms. An ideal capital structure must exist between debt and equity. If a firm succeeds with an ideal capital structure, it maximizes value and, hence improving financial performance. Debt structure could be categorized into two, long term debt or short term debt (Tirole, 2006). Long term debt could be repaid between one to five years whereas short-term debt could be repaid in less than one year. Equity is attained in the form of stocks.

The theories upon which the research is anchored include the pecking order theory, Modigliani and Miller, and trade-off theory. The trade-off theory posits that large companies with many assets ought to apply more of debt than equity so as to avoid illiquidity that can affect their business. Conversely, the pecking order theory posits that a company must first consider using internal funds before borrowing externally. According to the Modigliani and Miller theory, under circumstances of competitive, efficient and complete capital markets, firm performance is not reliant on its financing structure.

In Kenya, listed companies maintain optimal levels of capital to support business expansion strategies, investment prospects and meet regulatory requirements. The way capital structure and financial performance impact one another is contentious. A number of investigations conducted on the two have yielded varying and contradictory findings. Ross (1977) pointed out that the more a company selects debt as a financing option, the greater the possibility of a positive return from the company. Hadlock and James (2002) support Ross in their study on companies which are undervalued in that they also found that financing through debt and the profitability of a firm are directly proportionate. Nevertheless, as reported by Fama and French (2002), the correlation between capital structure and profitability is undefined owing to the lack of tax benefit of the debt due to agency problems.

### **1.1.1 Capital Structure**

The mix of debt, equity and other financial instruments is termed as capital structure. Kraus and Litzenberg (1973) concluded that in capital structure decision-making, management seeks to perform a cost benefit analysis in terms of tax incentives and costs associated with the risk of bankruptcy. Debt may take various forms including long term notes payables or bond issuance whereas equity may take the form of shares without preference, preferred stock and retained earnings. Debt financing presents both benefits and shortfalls on the development of firms and their investments, (O'brien & David, 2010). Given the findings of Fama and French (2002), the main benefit of financing with debt is the ability to deduct tax on interest and minimize free cash flow related issues. The main disadvantages associated with it include possible bankruptcy costs and conflict of interest between shareholders and bondholders.

Firms that use financial debt focus on exploiting the benefits and striving to minimize the costs related with its use. Investors who rely on debt financing to invest money expect interest gains on their investment. Therefore, debt finance is one way a company can use debt financing for its business without necessarily reducing its value (Mule & Mukras, 2015). Companies aim to balance between equity financing and shareholders' interests as high leverage dilutes the value of the company (Moghadam & Jafari, 2015).

### **1.1.2 Firm Profitability**

This is the capacity of a company to earn income from all of its current business lines. It measures how efficient and effective a company is in utilizing primary assets in the generation of revenue as well as yield maximum returns. Profitability also represents the general financial status of a company over a span of time, so it is used as a tool for comparison for similar companies in the same industry or those in different industries, Anjili (2014). A company's profitability is very important because it reveals its sustainability. It indicates whether the company is operating as a going concern or otherwise. This usually has a significant impact on investors' decisions about whether or not to invest in a particular company.

A company's performance in the industry is a good indicator of how good or bad the economy is doing. In addition, firm profitability shows how well a firm has achieved its

vision and mission with its core values. Because these roles are non-financial in nature, it is essential that they be expressed in monetary terms for ease of understanding by stakeholders as they are an important influential factor in investor decisions about where to spend their money for maximum profit (Maina & Omwenga, 2017). Mwangi (2012) states that research on profitability has been intensively investigated by various academics. When a company reports high profits, it indicates that management is highly effective and that the company's resources are being used properly (Naser & Mokhtar, 2004). ROA is a critical indicator of a company's profitability, Cook and Uchida (2003). This is mainly because it indicates how efficient a firm is in utilizing the assets it owns in the generation of profit. ROA, on average, indicates profit generated from each unit of the firm's assets.

### **1.1.3 Capital Structure and Profitability**

A wide and extended debate on the theoretical association of how a firm's capital structure affects its performance exists. For more than 50 years, researchers have set out to determine the place of capital structure primarily in corporate profitability, MM (1958). Shibanda and Damianus (2015) champion the Modigliani and Miller theorem by maintaining that the financial structure only asserts in perfect market situations and that financial structure decisions do not define a firm's stock prices. As such, according to trade-off theory, large firms with numerous assets should consider applying more debt to avert illiquidity. The pecking order theory asserts that if an internal source of funding is scarce or diminishing, it is better for a company to borrow to fund its investment than to issue additional equity. According to the Modigliani and Miller theory, under circumstances of competitive, efficient and complete capital markets, firm performance is not reliant on its financing structure. The debt ratio is favorable or optimal if the profit of the company is being maximized.

Previous researches suggested debt affects the cost of capital, which eventually affects the financial performance and stock prices of a firm, Myers (1977). In addition, countless scholars have conducted research on the application of debt by firms and conclude that capital structure decisions generally depend on the interpose between financial distress costs and interest tax shields, Titman & Wessles, (1998). Even though multiple theories

about capital structure exist, no single theory for the same exists, Terra (2011). Nonetheless, the part of capital structure in the profitability of non-financial institutions remains an inconclusive topic. Preceding research has focused greatly on capital structure of companies in developed nations whereas the situation in developing countries has not been concentrated on much. As such, this is the essence of this study of Kenyan companies, specifically, non-financial companies which are listed.

#### **1.1.4. Non-financial Firms Listed at the Nairobi Securities Exchange**

The development of the Kenyan economy depends, to a large extent, on the NSE primarily by urging individuals to invest and save. NSE is established under the Companies Act of Kenya (CAP 486) and includes all licensed stockbrokers. In 1988, the NSE was privatized when the Kenyan government sold 20% of its holdings. The Nairobi Securities Exchange market is structured in such a manner that transactions are settled through the CDSC. The Nairobi Securities Exchange is regulated by the CMA of Kenya which is also the main regulator of all companies listed by ensuring compliance (Olang, 2017).

The NSE is made up of 63 listings divided into 13 sectors: Banking, Agricultural, Automobiles and Accessories, Insurance, Commercial and Services, Investment, Energy and Petroleum Investment Services, Construction and Allied, Manufacturing and Allied, Telecommunication and Technology, Exchange Traded Funds, and Real Estate Investment Trust. The non-financial companies make up 40 of the listed companies as shown Appendix I. The NSE is the ideal marketplace which offers foreign investors an opportunity to be exposed to the Kenyan economy, being a multi-listed company, the NSE expands beyond the Kenyan border and into the region thus offering investors a peak into the regional economy as well. This study's goal is to ascertain the effect capital structure has on financial performance. non-financial enterprises.

Financial firms have been excluded from this study because they are heavily regulated. The Nairobi Stock Exchange suspended the trading of the Athi River Mining stock on 8 May 2020 and the liquidation process began in September 2021. Therefore, 40 listed non-

financial firms shall be studied. Listed firms were selected for this study as they are a representative sample of all business sectors in a region, it is the ideal marketplace.

## **1.2 Research Problem**

The availability of funds works as an elixir of life to every company that holds fast to the rule of continual succession (Abdel, 2003). Poor financing choices can lead to the downfall of a business. The effect that capital structure has on profits is of significant importance to all companies. A research gap exists because previous studies did not focus solely on capital structure effects on profitability or non-financial enterprises listed at the NSE but intended to find the best proportion of equity and debt to be applied. It is this lack of focus on research on capital structure and rather capital structure mix decisions in non-financial companies that motivated my study. The research concentrated on these gaps. Furthermore, the study covers a more recent period when there are expected changes being a political year. Most studies on how capital structure affects financial performance have been conducted on publicly traded companies in industrialized countries.

The pecking order theory postulates that a company must first consider using internal funds before borrowing externally. On the contrary, the trade-off theory posits that large companies with numerous assets should apply more of debt than equity so as to avoid illiquidity that can affect their business. The Modigliani and Miller theory holds that the capital structure does not have a bearing on the company's value. Additionally, no single unified theory exists to elaborate the effect that debt financing has on a company's profitability.

According to various studies conducted historically, the effect of capital structure on a company's profitability can either be negative, positive or both. Considering the global research conducted in the past, scholars such as Baum et al. (2006) and Berger and Bonaccorsi (2006) concluded that the firm's capital structure has a beneficial effect on its profitability. In addition, other scholars such as Weill (2008) claim that capital structure has both positive and negative impacts on a company's profitability. Then again, Margaritas & Psillaki (2007) maintain that the capital structure and profitability have a negative relationship.



A negative correlation subsists between a firm's financial performance and its capital structure in that a lower equity capital ratio is related with better profitability (Simerly & Li, 2000). Given these contradicting conclusions, it becomes difficult for users and investors to determine whether the capital structure decision bears a positive impact on the profitability of a company. Certain local research, for instance, Lishenga (2003) sampled 30 Kenyan companies between 1998 and 2002 on the basis of investigating their debt maturity structures, the result was that companies with multiple development possibilities are less likely to select debt in determining their capital structure.

Whereas these research outcomes provide useful insights into capital structure, they do not show a clearly defined relationship between Kenya's listed non-financial companies' capital structure and profitability. Researchers have come up with different and contradictory results. Furthermore, previous empirical research conducted were before Covid-19 pandemic struck and none of these have focused specifically on profitability, more so for listed non-financial companies. None of the research was conducted in the post-covid era. Most of the studies done previously also did not include efficiency as a variable and determinant of profitability.

Considering the gaps shown by the aforementioned empirical research, this research posed the research question: “what is the effect of capital structure on profitability of listed non-financial companies in Kenya?” To answer this question, the study seeks to establish the relationship between capital structure and profitability by reviewing listed non-financial firms between 2017 and 2021. This study widens the viewpoint of existing information on capital structure especially in the post-covid pandemic era and particularly on non-financial companies.

### **1.3 Objective of the Study**

The objective of the research is to investigate the effect of capital structure on profitability of non-financial companies listed at the NSE.

### **1.4 Value of the Study**

The results of this research will be helpful to the staff and management of the listed non-financial companies by illuminating how debt levels affect financial performance. As a

regulatory authority, the CMA will find this research valuable as it can enhance the best regulation and enforcement of a variety of policies for non-financial firms which are listed in Kenya. Capital Market Authority will be empowered to issue new guidelines and regulations for debt financing of listed non-financial companies. The NSE as well as the Capital Market Authority, as regulators, may gauge and monitor capital structures of commercial banks in Kenya thus enabling them to better carry out their oversight role in regard to the firm's creditworthiness as depicted in the financial statements.

Various analysts and scientists such as securities analysts and financial analysts, as well as investors such as stockbrokers, will find the outcomes of this study useful as the correlation between capital structure and profitability can be of great help in investment studies and building portfolios. The findings from this research will be of importance to a variety of professionals, entrepreneurs, and other institutions as it will provide more insights into financing new investments and other activities or projects. This work will be very useful to academics, especially given that it broadens the understanding of capital structure and other aspects of performance. In addition, the facts and observations drawn from this study can be timely, if shared with emerging academicians in a variety of contexts.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The review of the literature includes theories that underlie this research. It also takes a look at the determinants of financial performance and analyses the different global and local studies conducted on the subject of the research. The chapter ends with a summary of the findings and a conceptual framework.

#### **2.2 Theoretical Review**

The theories underpinning the study are discussed herein.

##### **2.2.1 Trade Off Theory**

Kraus and Litzenberg (1973) developed this theory as they stressed on the importance of having an equilibrium between debt financing and equity financing since there are inefficiencies that come about as a result of disequilibrium between the two components. The trade-off theory postulates that there are advantages to debt as the financing option, for example, the tax shield on debt as well as disadvantages such as related costs. Essentially, costs related to financial distress are bankruptcy cost associated with debt, and non-bankruptcy costs, for instance, poor payment terms by creditors, internal conflicts among debtholders and employee turnover. Other costs of relying on debt for financing are the high interest rates and the dire repercussions if payments are late or defaulted. The benefit of utilizing debt is the tax exemption factor (Al-Tally, 2014). Hence, the theory encourages firms to conduct a cost-benefit analysis before deciding on the form of capital financing to undertake. As such, all the benefits and costs ought to be considered before any considerations are made.

Under the trade-off theory, opportunity cost decision of using debt for financing has several negative consequences to a company, against its benefits which comprise ease of its access. Although several scholars have stipulated that it is somewhat difficult to attain an optimum financing mix, the trade-off theory asserts that achieving the optimum financing is very likely. A firm encounters financial distress when it is not capable to meet certain pledges made to creditors. Utter failure to comply with creditors' financial

requirements renders the firm insolvent. A key makeup of the tradeoff theory is the direct or indirect bankruptcy costs of debt or the costs of financial distress. This theory emphasizes that a firm should only seek funds up to the level where any additional debt may negatively impact on shareholders by causing a share dilution (Abdu, 2016). Hence, the profits of debt only apply upon the level where the costs of employing debt begin to outweigh the gains.

This theory gives more preference to equity financing because the interest to equity is tax exempted. Besides, investors tend to shy away from firms with high debt to equity ratio, as they consider such firms' high risk. However, if investors decide to invest in firms with high debt-equity ratio, they require high interest rates to cushion them against the high risk. Thus, in accordance with the trade-off theory, companies can obtain additional debt up to the level where further tax is offset by marginal value of the tax shield on interest so that financial performance can be increased. Jahanzeb et al. (2013) suggests that large firms ought to rely mostly on debt to finance their goings-on to avoid the firms facing likely illiquidity risk which can have extreme consequences on a firm's operations.

Maina and Kondongo (2013) state that the additional use of leverage translates to a diminished marginal benefit of using more leverage such that companies that are on the lookout for optimal debt and equity levels will apply the trade-off to determine the amount of equity and debt required to raise funds. Different conclusions exist about trade-off theories from various scholars. Fama and French (2002), Titman and Wessels (1988) and Rajan and Zingales (1995) posit that profitable companies are less likely to go for debt. This contradicts the actual postulation of the trade-off theory that higher profit companies must borrow more to profit from the tax advantages of debt. In assessing the strengths and weaknesses of debt, Graham (2000) found that companies with extremely high profits and extremely little likelihood of being insolvent deliberately apply debt. The trade-off theory is relevant here because it posits that a balance must exist between tax-saving advantages of debt and dead-weight costs of bankruptcy. However, this theory has been criticized because of its predictive nature that a positive relationship sustists between earnings and leverage.

### **2.2.2 Pecking Order Theory**

Myers and Majluf (1984) composed the pecking order theory that postulates that companies prefer self-generated funds to externally drawn funds, furthermore that firms are better off borrowing rather than issuing new equity whenever the inside sources of finance are insufficient in financing capital expenditure. Companies may opt for debt financing over equity financing if they need some form of external funding. As a last resort, they will prefer equity over debt financing. This theory stresses on imperfect information since firm managers have inside information that relates to the future of the firm. Thus, the management works on ensuring that the shareholders' wealth is maximized (Rayan, 2010). Hence, the firm has the option of selecting that portfolio which will ensure that shareholders' returns are maximized. The theory stresses on the benefits of relying mostly on internal sources of financing, which comprises retained earnings. Besides, it states that larger firms are at an advantage over smaller firms when it comes to relying on external finances since they can easily access them (Al-Tally, 2014).

Due to the asymmetric information, there lacks an optimal ratio of debt to equity. Dividends from equity fund LTAs whereas the company's value is maximized by leverage. This theory goes on further to claim that companies are funding operations with a specific order of preference. Owing to information asymmetry between the different parties involved in the firm, especially between potential investors and the firm, the company prefers making use of retained earnings to debt. Furthermore, companies would rather have short-term debt than long-term debt. Using the retained earnings of a company to finance a business can solve the problem of information asymmetry without the use of new collateral (Myers & Majluf, 1984). This shows that the greater the asymmetry of information between employees and investors, the greater the cost of issuing shares. Therefore, companies that are severely affected by information asymmetry are advised to use leverage as a funding option to eliminate the sale of securities at very low prices.

The pecking order theory states that every company has its preferred way of financing its projects in a descending order from first employing retained earnings before considering if to use debt or equity. An internal source of funds attracts no interest and neither does it

cause any dilution of the shares valuation. Hence it is considered the safest mode financing. Thus, a firm will only consider debt financing when the benefits of using debt exceed the costs. It is worth noticing that the use of debt can communicate negative information such as the inability of a firm to make profit, which may end up causing the stock prices to fall (Chen et. al., 2015). However, in the likely event that a firm is obliged to rely on external financing, debt receives more preference than equity due to lower informational costs associated with debt.

Abdu (2016) suggests that due to the additional costs of high interest rates related to debt financing, and the exposure to bankruptcy, internal financing through retained earnings is more preferred. However, in the event that a firm is short of internal funds, they are allowed to borrow externally. Pertaining to this research, non-financial companies can apply the pecking order theory in that they can first utilize inside sources of funds, thereafter they can employ financial leverage gotten via borrowing and upon exhausting debt, they can resort to equity financing. The pecking order theory is relevant here because it attempts to explain the proportion of debt and equity which companies aim for, in this study, the focus is on whether this mix affects profitability. However, this theory has been criticized as not being practical in the real-world sense, new types of funding outside debt and equity cannot be incorporated.

### **2.2.3 Modigliani and Miller Theory**

In perfect markets where there are no transaction costs, taxes and bankruptcy, the value of a company which applies debt in its financing option is like the value of a firm which does not apply debt as a source of capital (Modigliani and Miller, 1958). The first proposition of the theory holds that the average cost of capital and the debt-to-equity ratio are not indicators of a firm's value. According to the second proposition, a company's leverage has little to no effect on the weighted cost of capital. The third proposition is of the view that a company's dividend policy has no bearing on its value (Abdul Jumal et. Al.,2013). Debt boosts a company's value since interest payments are tax deductible while equity costs are not. The Modigliani and Miller theorem is relevant to this study because it is the substance of all other studies based on capital structure. However, this

theory has been criticized for its lack of inclusion of taxes and ignoring the place of retained earnings.

## **2.3 Determinants of Profitability of Non-financial Firms**

The determinants of profitability are discussed herein.

### **2.3.1 Leverage**

Debt financing has both beneficial and unfavorable effects on a firm's profitability. The advantages of debt financing include the decrease in problems associated with free cash flows and the tax deductibility of interest charge. On the other hand, debt financing will bring about conflict of agency between the shareholders and debt holders and also the likely bankruptcy cost (Lambe, 2014). The potential of increasing a firm's efficiency and improving the ROE is enabled by the availability of borrowed funds thus enhancing operations. The application of debt in financing the firm's operations will improve the performance only if the ROI exceeds the cost of capital borrowed (Githaigo & Kabiru, 2015). Berger and Udell (2006) noted that sometimes making these funds available to these companies may be hampered by differing structures of institutions, lack of good loaning facilities and government regulations. These factors limit the funds available to listed companies.

Ebaid (2009) conducted research on Egyptian companies and found that long-term debt adversely affected their profitability. Abor (2005) found out that long term debt bears a positive effect on ROA. Mutai (2014) points out that failure to pay back debt by these companies paints a negative image of each company. Emerging challenges in debt management such as failure to pay back debt is a major cause of business failure. Omete (2017) argues that leverage has adverse effects on a company's financial position in that if it continues to borrow, and is prone to debt problems, it leads to poor corporate performance. Therefore, it is recommended that companies need to spend less debt to fund their projects.

### **2.3.2 Size of the Firm**

Firm sizes vary, wherein some are large, others are small and this attributes to financial performance. Berger and Udell (2006) claim that after checking for credit worthiness, financial institutions are ready to fund both big and small businesses. Large companies have other advantages over small companies for example, economies of scale, greater marketplace power, and competitiveness which are a guarantee of higher profits. For instance, large firms can produce in large quantities owing to the economies of scale that they enjoy over small firms. Rayan (2010) argues that the mass production provides large firms with a competitive advantage which in essence enables them to attain high profits. In addition to economies of scale, large firms are more penetrated thus ensuring their attainment of larger market shares than the smaller firms which is also another source of competitive advantage to the larger firms. Large firms are better placed when raising external funds because of their large size which is a testament to their capacity to finance the borrowed funds. Furthermore, large companies depend on internally raised finances very little, allowing them to generate more profit than the smaller firms (Alghusin, 2015). Thus, it is evident, based on the above statements that firm sizes influence profitability after the form of preference of capital structure mix.

A company's size and financial performance are in direct proportion, Liargovas and Skandalis (2008). However, Prasetyantoko and Parmono (2008) found that firm size affects profitability in some industries, but not all. The relationship between a company's size and performance is positively correlation (Gichura, 2011). Hagedoorn and Clodt (2003) noted that there is substantial proof in empirical research conducted earlier on (e.g., Liargovas and Skandalis, 2008) to support a positive association between company size and profitability. Big companies can also specialize in a variety of products and companies which increase profits. Bashir (2003) goes on to prove the ability of companies to maximize on the advantages which arise from economies of scale. Larger companies can lead to increased coordination requirements, thus making the managerial function more difficult hence creating inefficiencies in the organization and reduced profits (Jermanis, 2006). A negative relationship exists between profitability and



company size for U.K. based manufacturing companies which were listed between 1960 and 1974 (Whittington, 1980).

However, various scholars have shown that firm size does not significantly impact the profitability of the company. Very big organizations are challenging to manage due to their bulky nature which can make these companies inefficient and, as a result, worsen their profitability. Additionally, bureaucratic management appears as a common place issue in very large enterprises. This incapacitates the ease with which decisions are made within the firm. Large companies can have many levels of control, which is a great opportunity for agency issues to crop up within the management team.

### **2.3.3 Asset Quality**

A firm's asset structure can influence its capability to access external financing. Firm structure is applied when making reference to assets which are usually involved in the production process, the larger the size of the asset structure, the more possible it becomes to access external funds; large firms have this advantage over smaller firms when it comes to getting external funding. David and Olorunfemi (2010) argue that, unlike small firms, large firms are better equipped to access external funds due to their large asset structures. Firms with a lot of fixed assets are more likely to borrow at lower interest rates than companies without. Fixed assets/total assets is the ratio applied.

### **2.3.4 Liquidity**

A company's ability to finance the expansion of its assets and meet its debts as and when they are due is its liquidity. According to Gamlath & Rathirane (2013), liquidity shows how ready a firm is to settle both expected and unexpected demands for cash at any time. Hence the need for firms to always be liquid so as to maintain its operations and remain in existence as long as possible. Kamau (2009) argues that there is an opportunity cost to maintaining high liquidity and it is high in that it is a lost opportunity to retain high interest-bearing investments.

### **2.3.5 Efficiency**

Efficiency is the level of performance which defines a procedure which makes use of the lower most sum of contributions to generate output, (Berger & De Young, 2011). The

more efficient a firm is, the better the service value for customers and hence the higher the profits. The growth of a firm and earnings flow is a measure of efficiency. Firms are expected to be more profitable when total assets increase, when good earnings improve working capital.

## **2.4 Empirical Review**

Most empirical studies have dealt with capital structure issues in general, that is, optimal debt and equity proportions.

### **2.4.1 Global Studies**

Ebaid (2009) conducted a study to illustrate how the choice of debt or equity to fund a company affects the profitability of SMEs in Egypt. ROE, ROA and GP margin were the ratios applied in the determination of financial performance. The debt ratio was applied in the measurement of debt or equity decisions. Analysis performed showed that decisions about debt or equity have little effect on a firm's profitability. Kebewar (2012) studied capital structure's effects on the gross profit of approximately 2000 firms not listed in the services sector in the European Stock Exchange between 2001 and 2008 and discovered that the application of debt by these firms didn't affect their financial performance. These results agree with those of a research conducted by Baum et al. (2006) while studying industrial corporations in America. The same results were obtained after using companies of different sizes.

Booth et al. (2001) asserted that the debt ratio in developing nations appeared to be impacted in the same manner by variables such as tangibility of assets, risk, taxes, size, profitability and market to book ratio which were also substantial in developed nations. Though they indicated that the long-term debt ratios of developing nations are much lower than those of developed nations. Jaramillo and Shiantarelli (2002) conducted a study of companies in Ecuador on the time frame for acquiring debt by focusing on how long-term debt affects business performance. The findings were that acquisition of debt for longer period will more likely yield higher profits than over a short-term period.

Ojo (2012) researched the correlation between listed firms' financial performance and capital structure in the Nigerian Stock Exchange. The capital structure of companies listed on the Nigerian Stock Exchange exhibited an inverse association with their performance, which led to the research finding a negative correlation between the two variables. However, the aim of the research was on capital structure, not debt financing. Akbarian (2013) investigated the debt financing risk and ROA of companies listed at the Tehran Stock Exchange to check if there was a correlation between these two variables. Since the focal point of the research was on the risk association with debt lending, the findings provided an inverse relationship between the study variables. However, this research focused on the risk of leverage, not necessarily debt financing.

Dube (2013) researched debt lending's impact on profitability of Zimbabwean agricultural businesses. The results show that the choice of debt as a funding option has a positive effect on a company's financial performance. Therefore, that agricultural firms should apply debt in moderation to fund their activities in order to avoid paying very high interest rates and all debt related issues. However, this study focused on agricultural companies, not listed non-financial firms.

Raza (2013) studied the effect of leverage on companies listed at the Karachi Stock Exchange between 2004-2009. It was realized that long term debt was more costly thus resulting in reduced profitability. Matemilola, Bany-Ariffin and Azman-Saini (2013) studied the effect of leverage and managerial abilities' effects on shareholders. It was discovered that leverage and return to shareholders are positively correlated. Managerial skills were also found to have a positive correlation with shareholders' returns.

Al-tally (2014) studied the impact of debt and equity on the profitability of a listed Saudi Arabian companies to find out whether there was a correlation between the two variables. It was discovered that, in the long run, without a recession, lower leverage would result in higher yields and profits for equities as well as assets. In addition, he found that a given normal condition predominates. Saudi Arabian companies can enhance their profitability by balancing out liabilities with debt levels. However, this study focused specifically on profitability in the Saudi Arabian market.

Nwaolisa and Chijindu (2016) investigated the correlation between capital structure and market value of industrial companies on the Nigerian Stock Exchange. They discovered that financial leverage has a negative impact on financial performance as measured by EPS and return on equity. The enterprises discussed in this paper, though, operate in Nigeria under a market environment distinct from that of Kenya. Enekwe, Agu, and Eziedo (2014) investigated the effect of financial leverage on the profitability of Nigerian pharmaceutical companies. It was determined that the debt to equity ratio and profitability are negatively correlated. Additionally, the debt to equity ratio, debt ratio and interest coverage ratio had no bearing on the financial success of pharmaceutical enterprises in Nigeria.

#### **2.4.2 Local Studies**

Magara (2012) analyzed the variables affecting the financial performance of the NSE-listed companies and discovered factors such as company leverage, assets tangibility, size and growth rate. Muchugia (2013) investigated how debt financing affects firm profitability of commercial banks. Short-term debt is directly proportional to profitability because short-term debt is cheaper. Conversely, long-term debt bears a negative association with profitability. In conclusion, it was recommended to opt for short term borrowings notwithstanding altering the company's capital structure to a worse position. Omesa et. al. (2013) looked up 25 companies listed at the NSE from 2012 to 2015 and examined the correlation between financial performance and capital structure. The results indicated that long-term debt as well as total assets were linearly related. Maghanga and Kalio (2012) researched the impact of leverage on the financial performance of the KPLC. The research discovered that leverage has a great effect on the financial performance, that optimal debt financing is imperative in guaranteeing that firms achieve boosted profitability. It was recommended that firms should seek to reduce some operational expenses by pursuing relatively less costly sources of funding so as to increase financial performance.

Chepkemoi (2013) carried out research on 150 SMEs in Kisumu County on the effect of capital structure on profitability. After applying multiple regression, profitability and

capital structure were realized to be negatively related. In contrast, sales growth and profitability are in a positive correlation positively related. The focus was on SMEs and not listed non-financial firms. Langat et al., (2014) researched the effect of debt financing on construction companies in Kenya and established that the profitability measured by ROA and ROE has a 5% correlation with total debt and 1% with long term debt. Nevertheless, both models showed a 5% negative correlation between financial performance and short term debt hence the conclusion that short term loans to construction companies are unprofitable. The focal point of the study was on construction companies and not non-financial firms.

Gweyi and Karanja (2014) investigated how leverage affected SACCO's profitability in Kenya. According to this study, SACCOs in Kenya have a higher cost of capital compared to profits generated as they rely primarily on debt rather than equity for financing. In addition, the study concludes that it is management that defines the performance of SACCO primarily through decision making. However, the focus of the investigation was on SACCO, not on non-financial firms. Mwangi, Makau & Kosimbei (2014) researched the effect of the financial structure on ROA of companies listed at the NSE market from 2004 to 2014. According to the study, companies that prefer long-term lending were top performers compared to companies that used short-term lending to raise funds. The study also found that additional factors, such as good corporate governance, have a strong effect on a firm's financial performance. The setting of the study was on all non-financial enterprises listed on the NSE.

Wabwile et. Al. (2014) researched the effect of financial leverage on profitability variance of tier I listed commercial banks at the NSE. It was realized that a negative relationship subsists between the debt asset ratio and ROCE and ROA, and a positive relationship exists between EPS and debt asset ratio although the correlation was inconsequential. It was also realized that an insignificant negative correlation exists between the price book value and ratio. Maina & Ishmail (2014) conducted research on a sample of 20 NSE-listed firms and compared their capital structure and profitability between 2002 and 2011. Regression analysis found that debt and equity are important components influencing financial performance and that the capital structure and

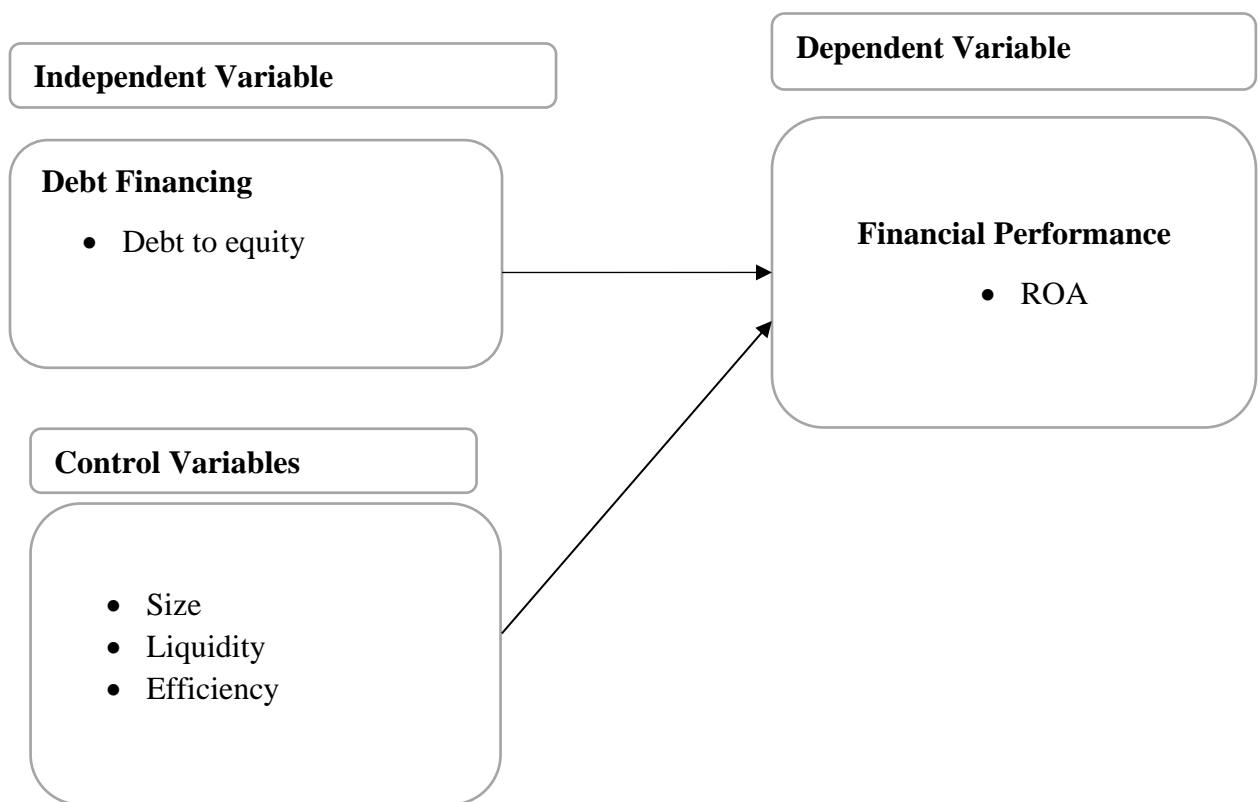
profitability are inversely proportional. This is taken to imply that increased debt financing will reduce the company's financial performance. Companies listed on the NSE are inclined to apply short term debt more often than long term debt. The research was however, based on all the listed firms at the NSE market.

Shibanda and Damianus (2015) investigated the correlation between ROA and the capital structure of enterprises listed on the NSE market. It was realized that a strong correlation existed between ROA and long-term debt. However, the study was based on all firms listed on the NSE market. Chesang and Ayuma (2016) investigated how the capital structure affects the productivity of agricultural companies listed on the NSE. The research found that a positive correlation exists between the two. However, this study referred to agricultural companies. Muchiri, Muturi and Ngumi (2016) examined the correlation between ROA and the financing structure of microfinance institutions listed at the securities exchanges in East Africa. The findings were positive as they concluded that the capital structure had a positive impact on the deposit-taking MFIs. However, the focus of the investigation was MFI and the overall capital structure.

## **2.6 Conceptual Framework**

This framework illustrates how the dependent variable relates to the independent variable. Size, asset structure and liquidity are control variables. The listed non-financial companies' performance is examined for five years. The figure below depicts the correlation between capital structure and profitability of non-financial listed enterprises. Control variables include asset structure, liquidity, size of firm and efficiency.

**Figure 2.1: Conceptual Model**



## **2.6 Summary of Literature Review**

Theories have attempted to explain the idea of capital structure. The Modigliani and Miller theory, trade-off theory and pecking order theory have all been utilized in the study. Some key determinants of profitability are also explained in this section. The empirical review section has provided a detailed review of preceding literature on different factors that have influenced the profitability of listed firms. The factors discussed include leverage, the size, asset structure, liquidity, and efficiency.

International studies on the influence of capital structure on listed companies' financial performance showed both positive and negative impacts.

An overview of local research on this topic shows that a negative correlation subsists between financial performance and capital structure. The findings on the researches reveal contradictory outcome based on the model and the markets of analysis used. Very little research exists on non-financial firms in Kenya. Therefore, there are conflicting theories regarding the nature and effects of capital structure on performance from both the theoretical and several empirical studies and this research anticipates adding more knowledge in the area. This chapter has outlined the theoretical and factual background of the research.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This section examines the research design, the population being studied, the sampling frame, the sample size, and the data analysis used to examine the impact of capital structure on listed nonfinancial companies' financial performance. These considerations will lay the groundwork for determining the methods and means of data collection when investigating if the usage of debt by listed non-financial companies as a source of funding affects financial performance. The research methodology is the general principle or philosophy which guides on how a study will be conducted (Dawson, 2009).

#### **3.2 Research Design**

A research design acts as a structure that monitors the collection and analysis of data (Thomas, 2010). It makes it possible to combine all the elements investigated in a way that answers the research questions of a particular study as well as reducing the ambiguity of the question under study. The research design acts as a guide to aid on data collection, data analysis, and data interpretation (Kothari, 2004). Cooper and Schindler (2006) posit that to recognize predictive relationships by applying correlations or further advanced statistical methods is the goal of correlational research.

The cross-sectional descriptive research design will be applied in this research. The application of this technique assists in narrowing down an extensive study into one which is simple and researchable. The descriptive cross-sectional research design is settled on as the possibility of manipulating the variables of the study is very little. The study investigated how listed non-financial enterprises in Kenya fare financially and how

capital structure affects that. This research design is significant in evaluation of the pertinence of technical models and theories in the real world (Kothari, 2004). Hence, it was applied in this study to find the connection that exists between debt financing and profitability of listed non-financial companies. Secondary data which involved deriving certain information from the annual financial statements of the enterprises was used in gathering the information for use.

### **3.3 Population**

According to Blume and Stambaugh (2013), a population consists of all elements in the study. It is the total set of elements from which a scholar attains interpretations (Thomas, 2010). It is assumed that all individuals in the population share the same characteristics. The target population consists of listed firms at the NSE. The target group is non-financial companies listed at the NSE. The population of this research comprises all the 40 non-financial enterprises listed at the NSE. A list of these companies is provided in the appendices section.

The census sampling method was applied in the research since all 26 companies which constitute the listed non-financial firms are comprising of the sample. A census methodology is a system where all the elements of the population participate in the research. The benefit of the census technique is that it enhances the degree of accuracy and dependability (Mugenda & Mugenda, 2003). Where the sample is small it is essential to take up the whole population to establish the needs of an organization (Dennis, 1989). As a result, as of December 31, 2021, the five-year period (2017-2021) will be applied to 40 non-financial companies.

### **3.5 Data Collection**

Data collection enables accessibility of information which guarantees detailed and accurate analysis and conclusions. Data collection methods are the systematic techniques applied by researchers to gather and collect data for use in the research (Mule & Mukras, 2015). Secondary data derived from the listed non-financial corporations' annual financial statements that have been published at the NSE will be used. These annual financial statements used are such as the statement of comprehensive income and SOFP as well as the notes to financial statements for between 2017 and 2021. Panel data will be used for

the research. This information shall be obtained from books, previous studies, published reports of companies listed at the NSE and the private sector, media, newsletters, and journals.

### **3.6 Data Analysis**

The purpose of the data analysis in this research is to examine the impact of capital structure on the profitability of listed non-financial enterprises at NSE. The data obtained from the annual financial statements is analyzed by SPSS software. The multiple linear regression model will be assessed to demonstrate the correlation between capital structure and profitability. The following analytical model was applied.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

**Y** is = Financial Performance (the dependent variable) determined by ROA (net income/total assets)

$\beta_1, \beta_2, \beta_3$  and,  $\beta_4$  regression equation coefficients.

$X_1$  leverage measured by debt ratio

$X_2$  size of firm measured by the natural log of total assets

$X_3$  liquidity calculated by the ratio of current assets to current liabilities

$X_4$  efficiency measured by was measured using operating costs divided by total income.

$\beta_1$  (I=0,1,2,3) are the co-efficient

$\varepsilon$  is the error term

### **3.7 Diagnostic Tests**

The degree and type of correlation between the predictor and response variables of the linear regression model will be assessed using a variety of diagnostic tests, including the multicollinearity, normality, and autocorrelation tests.

#### **3.7.1 Multicollinearity**

To ensure that the data is impartial and that one variable is not related to another, a test for multicollinearity must be conducted. Multicollinearity is a case where the independent variables are highly related, Kothari (2004). This has the effect of distorting the regression coefficients causing them to destabilize and become difficult to explain hence

resulting in false significance tests. Multicollinearity is tested by Variance Inflation Factors (VIFs) and Correlation Coefficients. If VIFs are less than 5 and the coefficient of correlation between variables is less than 0.8, multicollinearity does not exist, Gujarati (2004).

### **3.7.2 Normality**

Normality tries to find out if the variables are not skewed. Skewedness means that the data is skewed towards one side of the center more than on the other. This research applied Shapiro-Wilk and Kolmogorov-Smirnov tests of normality to assess if the data is normally distributed.

### **3.7.3 Autocorrelation**

Autocorrelation implies that a relationship exists between the error terms. The test will be conducted using the Durbin-Watson. This autocorrelation test represents a test statistic within a range of 0-4. If value is close to 2, there's no autocorrelation (Khan, 2012).

### **3.8 Test of Significance**

Using a t-test with a 5% threshold of significance, the statistical significance of each independent variable defining financial performance was examined. To assess the regression model's overall significance, the F-test was used.

## CHAPTER FOUR

### DATA ANALYSIS, RESULTS AND DISCUSSION

#### 4.1 Introduction

The goal of this chapter was to evaluate the information gathered to ascertain how capital structure affects the ROA of listed non-financial firms. As may be seen in the sections below, the findings were presented in tables using regression analysis, correlation, and descriptive statistics.

#### 4.2 Descriptive Analysis

In this study, the maximum, minimum, mean, and standard deviation are reported. The results for the selected studied variables are shown in Table 4.1 below. All the non-financial enterprises listed at the NSE had their variables evaluated over a five-year period using SPSS (2017 to 2021). The values of the research variables are captured in the following table.

**Table 4.1 Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std Deviation
ROA	200	-135.038	47.7340	1.2108	19.3876
Leverage	200	.045	1.30	.0894	.237
Size of firm	200	3.654	9.4257	6.2528	2.0938
Liquidity	200	.1805	25.7074	2.6215	.2615
Efficiency	200	.01	3.9279	.3309	.03093
Valid N (listwise)	200				

**Source: Research Findings (2022)**

#### 4.3 Diagnostic Tests

Diagnostic tests were applied to assess the model assumptions and check if there was any data exhibiting big and adverse effect on the analysis. The research applied normality tests, multicollinearity tests, and autocorrelation tests.

### 4.3.1 Multicollinearity

Collinearity statistics was applied to check if the independent variables were sufficiently correlated to determine a significant causal relationship. The results are demonstrated in Table 4.2.

**Table 4.2 Collinearity Statistics**

	Collinearity Statistics	
	Tolerance	VIF
Leverage	.916	1.0918
Size of firm	.616	1.6231
Liquidity	.953	1.0490
Efficiency	.930	1.0748

**Source: Research Findings (2022)**

Leverage had a VIF value of 1.09176, size 1.62314, liquidity 1.04903 and efficiency 1.07477. The variance inflation factor values for all the variables were less than 5 inferring that multicollinearity symptoms did not exist.

### 4.3.2 Normality Test

Shapiro-Wilk and Kolmogorov-Smirnov tests were used to determine the normality of each variable. Table 4.3 presents the results.

**Table 4.3: Normality Test Results**

	Tests of Normality					
	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig
ROA	.086	200	.200*	.950	200	.102
Leverage	.103	200	.200*	.853	200	.242
Size	.189	200	-.300*	.870	200	.324
Liquidity	.089	200	.200*	.966	200	.074
Efficiency	.218	200	.423	.727	200	.542

**Source: Research Findings (2022)**

The null hypothesis was rejected when the results of the Shapiro-Wilk and Kolmogorov-Smirnova tests were 0 values higher than 0.05, indicating that the data points were normally distributed. The data were sufficient to perform parametric tests such the analysis of variance, regression, and Pearson's correlation.

### 4.3.3 Autocorrelation

When compared to its lagged value across time, autocorrelation gauges how similar a given time series is. The Wooldridge test was used to determine the test's measurement. Table 4.4 lists the findings.

**Table 4.4: Autocorrelation Results**

Summary of the Model	
Model	Durbin-Watson
I	1.629 <sup>a</sup>
Predictors: (constant) leverage, size, liquidity, efficiency	

**Sourcing: Research Findings (2022)**

From the results of Table 4.6, a statistic of 1.629 inferred that the residual variable was not significantly correlated as they were as per the acceptable range of 1.5 to 2.5.

### 4.4 Correlation Analysis

Correlation analysis was applied to examine the relationship between the variables. To investigate the correlation between profitability and other variables i.e. leverage, liquidity, size and efficiency, the Pearson correlation was used.

**Table 4.5: Correlation Analysis**

	ROA	Leverage	Size	Liquidity	Efficiency
ROA	1				
Leverage	-.00555**	1			
Size	.142415	-.04418	1		
Liquidity	.197315	.101739	.11206	1	
Efficiency	.14088	-.04276	.059169	.168914	1
**. Correlation is significant at the 0.01 level (2-tailed).					
b. Listwise N=200					

**Source: Research Findings (2022)**

Table 4.5 indicates that leverage has a negative correlation with ROA. The results also show that size and efficiency have negative correlation with leverage.

#### 4.5 Regression Analysis

The variables used to model performance were leverage, size, liquidity, and efficiency. A 5% level of significance was chosen for the investigation. The outcomes of the regression were contrasted with the crucial value from the F-table. Below is a display of the outcomes.

**Table 4.6: Model summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.197 <sup>a</sup>	.293	.034	.1033864
Predictors: (Constant), leverage, size, liquidity, efficiency				

**Source: Research Findings (2022)**

The response variable's relationship to changes in the predictor variables is shown by the R square. The capital structure, liquidity, size, and efficiency of non-financial enterprises account for 29.3% of the variability in their profitability, according to R Square, which was 0.294. It is possible to ascribe 70.7% of the profitability fluctuation to variables outside the model. Furthermore, the independent variables demonstrated a strong link with profitability, as shown by a 0.197 correlation coefficient (R).

**Table 4.7: Analysis of Variance**

Model		Sum of Squares	Df	Mean square	F	Sig.
1	Regression	.910	4	.228	21.293	.000
	Residual	2.191	205	.011		
	Total	3.102	209			
a. Dependent variable: ROA						
b. Predictors: (Constant), leverage, size, liquidity, efficiency						

**Source: Research Findings (2022)**



The significant level is set at 0.000, which is below  $p=0.05$  which suggests that the assessment of the leverage, liquidity, size, and effectiveness by the model of listed non-financial enterprises was fair.

The relationship between the variables was displayed via the R-square. The p-value of the sig. column demonstrated the importance of the correlation between the independent and dependent variables. A p-value less than 0.05 is shown by the confidence interval of 95%. A p-value greater than 0.05 thus denotes the absence of a correlation between the predictor and response variables. Below is a list of the outcomes:

**Table 4.8: Model Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std Error	Beta		
1	(Constant)	-.133	.078		-4.704	.000
	Leverage	-.258	.029	-.527	-8.780	.000
	Size	.032	.008	.239	3.996	.000
	Liquidity	.002	.004	.036	.598	.551
	Efficiency	.019	.015	.214	3.897	.000
a. Dependent Variable: ROA						

**Source: Research Findings (2022)**

Liquidity is the only component that did not result in statistically significant positive results (high t-value, 0.05). A p value  $> 0.05$  indicates that the liquidity produced a moderately positive finding.

The resulting equation was formed:

$$Y = -0.133 - 0.258X_1 + 0.032X_2 + 0.002X_3 + 0.019X_4$$

Where:

Y = Profitability

$X_1$  = Leverage

$X_2$  = Size

$X_3$  = Liquidity

$X_4$  = Efficiency

According to the model's constant = -0.133, performance would be equal to 0.133 if the variables (leverage, size, liquidity, and efficiency) were all equal to 0. While liquidity was negligible, an increase in leverage led in a 0.258 fall in performance, while improvements in size or efficiency produced profits of 0.032 and 0.019, respectively.

#### **4.6 Discussion of Research Findings**

The study examined the profitability of non-financial businesses listed at the NSE in relation to capital structure. Leverage was the independent variable, the control variables included size, liquidity, and efficiency whereas the response variable was profitability. Leverage and profitability as measured by ROA have a significant inverse relationship, according to the Pearson correlation coefficient. Size had a slight but substantial impact on the financial performance of listed non-financial enterprises. The research also showed a favorable, though not statistically significant, association between liquidity and efficiency.

According to the results, 29.3% of changes in the dependent variable were due to other factors rather than the model, which would account for 70.7% of performance variances. Leverage, size, liquidity, and efficiency were the predictor variables that explained 29.3% of changes in return on assets. The model was significant at a 95% confidence level with an F-value of 21.293. This suggests that a sufficient model adequately captured the relationships between the variables. Therefore, we can conclude that a negative correlation exists between external long term borrowing and ROIs because ROE declines as debt ratios rise (an inverse connection).

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

An outline of the study's findings, including its conclusions, facts, and limitations, is presented in this chapter. Additionally, it contains policy proposals that will enable policymakers support the demand for listed non-financial enterprises to produce results that are more transparent. Future research topics are also included in the study's findings.

#### **5.2 Summary of Findings**

The goal of the research was to demonstrate how the capital structure affects the profitability of non-financial enterprises listed at the NSE. A descriptive cross-section design was applied to examine variables like leverage, size, liquidity, and efficiency. The data analysis employed SPSS. From their annual reports, 40 non-financial companies' annual data was gathered during a five-year period. According to the Pearson correlation coefficient, the capital structure and profitability have a very strong inverse relationship. Profitability and liquidity have a positive but small relationship. According to the research, there is a small but favorable association between corporate efficiency and the success of listed non-financial firms.

According to 0.293 R square, variations in capital structure, liquidity, size, and efficiency are responsible for 29.3% of the variation in the profitability of these firms. Variables outside the model are responsible for 70.7% of the variation in profitability. The findings demonstrated that the chosen predictor variables were considerably correlated with the financial outcomes of non-financial enterprises ( $R = 0.197$ ). The model that contained information on the impacts of the four independent variables on profitability was optimal, as demonstrated by the F value being determined as 5% above the critical value and the p value being 0.000. If the variables (leverage, size, liquidity, and efficiency) were all set to zero, the regression findings show that profitability would be -0.133. However, a unit increment in size or efficiency led to 0.032 and 0.019 improvements in profitability, respectively, whereas a unit increase in leverage produced a 0.258 loss in performance, although liquidity was inconsequential.

### **5.3 Conclusion**

The capital structure has a substantial impact on the profitability of non-financial enterprises listed at the NSE. According to the findings, a rise in that variable by one unit has a significant negative effect on the profitability of non-financial companies. Size has a strong positive correlation with financial performance. The research also revealed a statistically substantial relationship between efficiency and profitability, indicating that the researched firms' profitability is highly impacted by efficiency. Furthermore, liquidity has a favorable but limited financial effect, which means that profitability is not strongly predicted by it. The results show that the chosen parameters, including leverage, size, liquidity, and efficiency, have a significant effect on a firm's success. The p value of the ANOVA indicates that these factors have a substantial impact on the financial performance of non-financial enterprises. It is evident that other non-model elements are responsible for 70.7% of the variation in the profitability of non-financial enterprises because the selected variables only explain 29.3% of the variance in profitability.

This research agrees with Doan (2020) investigation into the relationship between capital structure and financial performance in Vietnam. A sample of 102 non-financial enterprises was taken, with the target population being the enterprises listed on the Ho Chi Minh Stock Exchange. The research's time frame was from 2008 to 2018. ROA was used to calculate profitability. Additionally, the ratios of total debt to assets, including long-term and short-term debt were used to calculate leverage. The three main control variables were business size, economic growth, and inflation rate. According to the study's findings, profitability and capital structure are related. The findings showed that profitability decreases as debt levels rise.

### **5.4 Recommendations**

The findings of the study show that profitability is negatively impacted by capital structure. The non-financial enterprises listed at the NSE shall weigh the financial benefits and costs of bankruptcy related to loan origination as part of policy reforms. Debt levels must be controlled since they affect profitability when they are high. By doing this, it will be possible to maximize shareholder value. In the study, it was discovered that profitability and liquidity had a positive connection. The recommendation

is to conduct a thorough inquiry into the liquidity of listed non-financial companies to make sure they are functioning at adequate levels of liquidity, which will boost profitability as justified by the fact that liquidity is crucial since it affects how a firm conducts business.

Due to increased efficiency, the listed non-financial enterprises did significantly better. It is recommended that non-financial companies implement best practice people management techniques to ensure that capable and committed workers are attracted and retained since this would help to increase profitability. It is vital to pay close attention to talent management strategies like staff planning, recruitment, learning, and development, as well as employee compensation and benefits.

### **5.5 Limitations of the Study**

Some of the purported factors that affect the profitability of listed non-financial enterprises were observed by the study. The four explanatory factors were the study's main emphasis. However, other elements, some of which are internal, play a significant role in determining a company's profitability. These elements include corporate governance, the currency rate, economic growth, the trade balance, and unemployment. Research was conducted using quantitative secondary data. Additionally, the analysis ignored qualitative information that would have shed light on other factors influencing the connection between capital structure and profitability. Focus groups, interviews, and open surveys are examples of qualitative techniques that may help in providing greater information.

The research looked at a 5-year span (2017 to 2021). Whether the effects will endure longer is unknown. It is also unclear whether the same outcomes can be anticipated into 2022. A multivariate linear regression model was applied to analyze the data. Because of the flaws in the model, such as incorrect inferences from a change in variable profitability, the researcher is unable to accurately extrapolate the results. Inconsistent findings may be obtained when new data are incorporated into the model.

### **5.6 Suggestions for Further Research**

To ascertain how the capital structure affected the profitability of non-financial enterprises listed on the NSE, the research used secondary data. This research could be

supplemented by the same research using primary data obtained through surveys and interviews with representatives from each of the 40 mentioned non-financial firms. More research is needed on variables including growth prospects, political stability, industrial practices, years in business, because the research did not fully address all of the factors that impact the profitability of listed non-financial enterprises. and other macroeconomic variables. To aid in decision-making, policymakers can use a tool that appraises the impact of various variables on profitability.

Only listed non-financial companies were included in the analysis. The paper makes recommendations for additional research of other companies doing business in Kenya. Future research must take into account the impact of capital structure on traits other than profitability, such as operational effectiveness, dividend distributions, and enterprise value. The last five years were chosen as the study's time period. Future research may continue for a significant amount of time, perhaps twenty or thirty years, and could support or contradict the conclusions of this research. The benefit of a longer research period is that it enables the researcher to observe how business cycles, such as recessions and booms, affect the data. A multiple linear regression model was used in this investigation, which has its own disadvantages, including the potential for erroneous and deceptive findings as a result of variations in variable profitability. Future research should employ alternate models, like the Vector Error Correction Model, to examine the numerous paths to financial success.

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## APPENDICES

### Appendix I: List of Non-financial Firms at the NSE

1. Williamson Tea Kenya Limited
2. Eagads Limited
3. Kakuzi
4. Kapchorua Tea Company Limited
5. Limuru Tea Company Limited
6. Rea Vipingo Plantations Limited
7. Sasini Limited
8. Express Limited
9. Kenya Airways Limited
10. Nation Media Group
11. TPS Eastern Africa (Serena) Limited
12. Standard Group Limited
13. Uchumi Supermarkets Limited
14. Longhorn Publishers Limited
15. Scan Group Limited
16. Sameer Africa PLC
17. Deacons (East Africa) PLC
18. Nairobi Business Ventures Limited
19. Crown Paints Kenya Limited
20. E.A. Cables Limited
21. E.A. Portland Cement Limited
22. Bamburi Cement Limited
23. Car & General (K) Limited
24. KenGen Limited
25. Kenya Power & Lighting Company

26. Total Kenya Limited
27. Umeme Limited
28. Unga Group PLC
29. East Africa Breweries Ltd
30. Mumias Sugar Company Ltd
31. Eveready East Africa Ltd
32. B.O.C Kenya Ltd
33. British American Tobacco Kenya Ltd
34. Carbacid Investments Ltd
35. Kenya Orchards Ltd
36. Flame Tree Group
37. Safaricom PLC
38. Stanlib Fahari I-Reit
39. New Gold Issuer (RP) Ltd

## Appendix II: Data Capture Form

<b>Firm</b>	<b>Year</b>	<b>ROA</b>	<b>Leverage</b>	<b>Size</b>	<b>Liquidity</b>	<b>Operating Efficiency</b>
Eaagads	2017	4.94	-	5.97	1282.95%	0.2977
	2018	-	-	5.96	877.44%	0.3643
	2019	0.01	-	5.97	698.25%	0.2229
	2020	(4.94)	-	5.98	221.41%	0.7688
	2021	0.43	-	6.05	558.01%	0.333
Williamson	2017	(2.84)	-	6.92	347.21%	0.0485
	2018	4.50	-	6.98	298.55%	0.0341
	2019	(1.76)	-	6.92	403.62%	0.151
	2020	(0.67)	-	6.90	391.48%	0.1316
	2021	0.02	-	6.91	399.37%	0.0424
Kakuzi	2017	7.75	-	6.76	390.21%	0.2117
	2018	5.15	-	6.77	594.14%	0.299
	2019	8.25	-	6.81	1100.31%	0.1839
	2020	2.13	-	7.63	1122.28%	0.2359
	2021	5.68	-	6.84	1067.62%	0.2003
Kapchorua	2017	3.34	-	6.31	346.28%	0.0099
	2018	4.00	-	6.40	291.97%	0.0109
	2019	-	-	6.31	451.25%	0.0609
	2020	(1.14)	-	6.29	483.97%	0.0181
	2021	(0.34)	-	6.32	468.77%	0.0127

Limuru	2017	(12.05)	-	5.42	355.68%	0.0508
	2018	1.38	-	5.43	350.21%	0.0446
	2019	(2.50)	-	5.37	837.47%	0.0529
	2020	(3.44)	-	5.36	691.64%	0.0598
	2021	(6.81)	-	5.32	1170.05%	0.0725
Rea Vipingo	2017	21.96	-	6.66	1419.89%	0.4385
	2018	38.72	0.55	6.71	760.62%	0.4591
	2019	2.68	1.47	6.73	848.60%	0.4795
	2020	3.17	3.38	6.77	902.03%	0.4702
	2021	2.65	3.36	6.74	539.89%	0.4082
Sasini	2017	1.27	0.89	7.12	424.07%	0.2257
	2018	1.26	-	6.89	1309.20%	0
	2019	(2.50)	1.34	6.96	882.90%	0
	2020	(0.02)	-	7.16	573.65%	0.2634
	2021	1.91	-	7.18	638.18%	0.1947
Express	2017	(22.81)	(27.56)	5.56	59.74%	1.1293
	2018	(21.08)	(191.47)	5.51	61.87%	1.0868
	2019	(2.59)	871.57	5.67	149.68%	0.767
	2020	(1.98)	43.05	6.13	153.44%	0.8456
	2021	(5.37)	48.15	6.10	130.76%	0.3534
Kenya Airways	2017	1.33	241.92	5.19	24.71%	0.1896
	2018	0.88	(89.38)	5.18	29.05%	0.1743
	2019	2.01	332.75	5.30	48.55%	0.1696

	2020	1.41	20.76	5.23	31.84%	0.1804
	2021	(4.37)	7.32	5.19	31.72%	0.1337
Nation Media	2017	9.98	-	6.83	200.23%	3.9279
	2018	7.86	-	6.95	200.11%	0.4034
	2019	4.88	-	6.86	210.27%	0.4434
	2020	(0.06)	-	6.96	220.52%	0.6541
	2021	4.52	-	6.98	211.24%	0.6106
TPS Eastern Africa	2017	1.60	41.68	7.24	107.88%	0.4055
	2018	1.38	18.36	7.25	43.38%	0.1081
	2019	0.23	38.99	7.25	66.49%	0.6993
	2020	(0.06)	66.11	7.24	66.57%	0.512
	2021	(0.82)	80.37	7.24	80.48%	0.3934
Standard Group Ltd	2017	(4.02)	19.33	6.65	84.73%	0.6689
	2018	6.09	27.54	6.67	8.77%	0.5956
	2019	(8.95)	28.54	6.62	59.69%	0.7242
	2020	(10.71)	-	6.61	50.72%	1.1242
	2021	0.50	-	6.64	45.99%	0.981
Uchumi Supermarkets Ltd	2017	(38.45)	(58.29)	6.64	8.27%	0.8166
	2018	-	-	-	-	-
	2019	-	-	-	-	-
	2020	-	-	-	-	-
	2021	-	-	-	-	-
Longhorn Publishers Ltd	2017	7.77	35.33	6.27	137.00%	0.214

	2018	10.50	49.03	6.38	120.90%	0.2283
	2019	9.48	33.13	6.37	118.87%	0.237
	2020	(5.43)	48.28	6.39	-	0.1309
	2021	7.69	-	6.46	61.04%	0.0162
Scan Group Ltd	2017	1.89	-	7.06	369.46%	0.129
	2018	2.84	-	7.10	302.35%	0.9215
	2019	0.60	-	7.07	437.95%	0.9048
	2020	(35.79)	-	6.85	572.24%	0.9423
	2021	2.10	-	6.86	525.87%	0.9189
Sameer Africa PLC	2017	1.89	1.69	6.52	154.85%	0.1187
	2018	(9.12)	1.29	6.41	90.42%	0.1927
	2019	(17.80)	658.68	6.18	86.60%	0.2283
	2020	(17.77)	617.69	6.02	147.94%	0.1002
	2021	29.35	148.46	6.05	118.85%	0.2074
Deacons (East Africa) PLC	2017	(38.99)	51.02	6.25	92.16%	0.6374
	2018	-	-	-	-	-
	2019	-	-	-	-	-
	2020	-	-	-	-	-
	2021	-	-	-	-	-
Nairobi Business Ventures Ltd	2017	(19.76)	144.20	5.16	299.02%	0.3009
	2018	(87.60)	(237.42)	4.93	164.72%	0.4735
	2019	(52.02)	(177.29)	4.79	150.84%	0.4199
	2020	(135.04)	70.44	4.47	20.35%	-

	2021	18.52	-	5.25	184.26%	0.2706
Athi River Mining	2017	(2.80)	-	7.69	59.75%	0
	2018	-	-	-	-	-
	2019	-	-	-	-	-
	2020	-	-	-	-	-
	2021	-	-	-	-	-
Crown Paints Kenya Ltd	2017	2.98	10.43	6.81	-	0.2185
	2018	2.96	14.09	6.78	83.36%	0.2121
	2019	6.32	17.05	6.74	91.17%	0.214
	2020	15.62	12.02	6.74	108.90%	0.2346
	2021	15.23	4.04	6.87	137.03%	0.1873
E.A. Cables Ltd	2017	(3.23)	10.43	6.72	126.21%	0.137
	2018	(2.53)	-	6.82	2.58%	0.1775
	2019	8.93	-	6.80	71.76%	0.2707
	2020	(3.28)	140.80	6.77	72.08%	0.1413
	2021	(1.06)	160.56	6.75	56.00%	0.1344
E.A. Portland Cement Ltd	2017	(4.63)	32.59	4.44	251.12%	0.0378
	2018	(10.14)	14.58	7.57	23.51%	0.6211
	2019	(5.55)	25.71	7.56	26.08%	0.6307
	2020	(8.90)	40.20	7.55	-	0.751
	2021	(9.14)	40.20	7.54	17.99%	0.3215
Bamburi Cement Ltd	2017	6.09	17.54	7.47	62.58%	0.0639
	2018	1.55	6.04	7.70	129.82%	0.056

	2019	2.28	6.40	7.69	137.71%	0.0824
	2020	5.51	-	7.48	248.79%	0.0771
	2021	5.35	-	7.49	207.53%	0.0638
Car & General (K) Ltd	2017	4.46	378.50	6.50	127.46%	1.4781
	2018	3.18	11.85	7.01	99.03%	1.2109
	2019	0.10	13.13	7.06	87.31%	2.1405
	2020	(1.43)	21.77	7.08	86.55%	1.6327
	2021	0.39	16.89	7.16	93.45%	0.9172
KenGen Ltd	2017	3.63	69.82	8.58	147.51%	0.1348
	2018	3.02	63.80	8.58	150.44%	0.0369
	2019	3.81	66.05	8.60	131.38%	0.0329
	2020	11.30	65.00	8.62	199.57%	0.0972
	2021	10.19	64.08	8.63	214.85%	0.0906
Kenya Power & Lighting Company	2017	4.12	175.38	8.52	77.76%	0.1547
	2018	3.59	159.89	8.52	47.28%	0.1866
	2019	1.62	164.71	8.52	38.39%	0.1879
	2020	5.25	172.97	8.51	36.29%	0.201
	2021	5.14	159.24	8.52	42.75%	0.1637
Total Kenya Ltd	2017	10.87	24.13	7.58	173.56%	0.0395
	2018	9.17	-	7.59	176.97%	0.0424
	2019	12.74	3.07	7.57	215.29%	0.0429
	2020	9.29	-	7.63	205.16%	0.0635
	2021	8.49	-	7.67	201.83%	0.0592



Umeme Ltd	2017	4.78	74.63	9.37	60.27%	0.1095
	2018	10.40	44.35	9.37	44.26%	0.116
	2019	3.66	51.40	9.41	72.77%	0.103
	2020	8.01	42.51	9.43	54.45%	0.1083
	2021	8.52	18.57	9.40	51.26%	0.1005
Unga Group PLC	2017	3.06	2.40	6.82	163.92%	0.0626
	2018	12.76	14.54	7.00	214.18%	0.0599
	2019	6.75	13.25	7.03	195.59%	0.0484
	2020	2.49	9.73	7.08	157.68%	0.0326
	2021	6.13	8.74	7.00	225.94%	0.0268
East Africa Breweries Ltd	2017	41.99	133.92	7.35	66.81%	0.2508
	2018	(28.81)	2.94	5.76	253.25%	0.5598
	2019	(43.03)	11.54	5.40	150.19%	0.4826
	2020	13.85	185.44	7.89	37.05%	0.8565
	2021	2.99	162.14	7.94	27.50%	0.7769
Mumias Sugar Company Ltd	2017	(39.56)	830.97	7.38	10.93%	1.1139
	2018	(64.26)	(33.41)	7.20	2.90%	1.3947
	2019	-	-	-	-	-
	2020	-	-	-	-	-
	2021	-	-	-	-	-
Eveready East Africa Ltd	2017	32.90	0.82	5.89	268.76%	0.6368
	2018	(36.78)	2.94	5.65	101.90%	0.5598
	2019	(32.95)	11.54	5.51	150.19%	0.4826

	2020	(24.83)	32.77	5.30	103.96%	0.4875
	2021	(24.48)	543.75	5.20	76.44%	0.5846
B.O.C Kenya Ltd	2017	4.85	-	6.30	200.60%	0.3465
	2018	4.09	-	6.29	214.84%	0.2857
	2019	3.73	-	6.27	202.01%	0.2832
	2020	5.26	-	6.31	275.78%	0.2558
	2021	0.78	-	6.29	334.39%	0.2201
British Americal Tobacco Kenya Ltd	2017	30.11	1.58	7.25	131.80%	0.0496
	2018	33.16	13.12	7.25	166.57%	0.0451
	2019	30.04	1.53	7.27	134.11%	0.0541
	2020	34.96	0.41	7.34	428.54%	0.0396
	2021	38.85	0.13	7.38	256.37%	0.0474
Carbacid Investments Ltd	2017	14.70	-	6.27	2565.69%	1.4112
	2018	19.37	-	6.29	2570.74%	0.3111
	2019	18.14	-	6.32	1154.70%	0.2798
	2020	-	-	6.56	576.30%	0.2736
	2021	1.81	-	6.17	498.46%	0.2913
KOL	2017	6.99	365.09	5.03	171.32%	0.0576
	2018	11.33	232.10	5.06	211.26%	0.0491
	2019	4.64	172.49	5.13	238.11%	0.0696
	2020	(1.03)	281.00	5.03	192.88%	0.1313
	2021	2.47	237.28	5.10	207.03%	0.0589
Flame Tree Group	2017	5.93	8.86	6.23	133.60%	0.1383

	2018	5.83	4.35	6.26	114.36%	0.1188
	2019	7.27	26.95	6.36	121.25%	0.1248
	2020	12.33	19.49	6.40	110.99%	0.1653
	2021	9.14	18.10	6.46	104.80%	0.1466
Safaricom PLC	2017	43.53	15.39	8.21	464.22%	0.3135
	2018	47.34	35.13	8.22	63.08%	0.3012
	2019	47.31	31.10	8.28	107.47%	0.2862
	2020	47.73	5.66	8.33	83.54%	0.2913
	2021	41.72	10.93	8.36	70.35%	0.3098
Stanlib Fahari I-Reit	2017	3.73	-	6.58	1359.39%	0.8568
	2018	8.62	-	6.59	374.41%	0.7196
	2019	9.12	-	6.59	353.23%	0.6376
	2020	8.36	-	6.59	359.07%	0.7072
	2021	7.16	-	6.57	260.60%	0.864
New Gold Issuer (RP) Ltd	2017	-	-	-	-	-
	2018	0.42	-	8.39	100.32%	0.175
	2019	0.38	-	8.40	100.29%	0.1319
	2020	0.15	9.13	8.42	100.18%	0.1279
	2021	0.15	7.67	8.32	100.26%	0.1637