IMPACT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF COMPANIES LISTED IN THE NAIROBI SECURITIES EXCHANGE

ZEDDY CHERONO

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NOVEMBER, 2022

DECLARATION

I, the undersigned, declare that this is my original work, and to the best of my knowledge has not been submitted for the award of any degree in any University.

Signed: _____ Date: 9|11|2022.

ZEDDY CHERONO

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This research project has been submitted for examination with my approval as the University Supervisor.

Signed: _____ Date: 9|11|2022

DR. MARTIN ODIPO, FCCA, CPAK

LECTURER, DEPARTMENT OF FINANCE AND ACCOUNTING

FACULTY OF BUSINESS AND MANAGEMENT SCIENCES

UNIVERSITY OF NAIROBI

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DEDICATION

This research is dedicated to my parents, Mrs. Leah Ngeny and my late father Mr. Kipkilach Ngeny Ruto. If we see far, it is because we stand on the shoulders of giants, thank you for having such wide shoulders that accommodated all of us. Special dedication to my children Kibet (Mikey), Kalya (Jay) and Kipkorir (Piko); you are the source of my inspiration.

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LIST OF ABBREVIATIONS

ANOVA   Analysis of Variance

CLRM   Classic Linear Regression Model

CS   Capital Structure

D&E   Debt and Equity

FP   Financial Performance

LTD   Long Term Debt

NSE   Nairobi Securities Exchange

RE   Retained Earnings

ROA   Return on Asset

ROE   Return on Equity

STD   Short Term Debt

TA   Total Assets

ABSTRACT

A suitable capital structure is a key choice for any business establishment. The choice is key not just for the reason of making the most of returns to different organizational areas, but similarly due to the bearing such a choice have on an establishment's capability to handle its competitive setting. Establishments struggle when structuring their finance since it is difficult to determine how it will affect performance, which is crucial for the establishment's worth and, therefore, its survival. The main aim of this research was to determine capital structure effect on financial performance of NSE listed firms. The independent variable for the research was capital structure measured using the ratio of total debt to total assets while the dependent variable was financial performance measured using ROA. The control variables were firm size and liquidity. The study was guided by relevance and irrelevance theory, agency cost theory and pecking order theory. Descriptive research design was utilized in this research. The 42 non-financial NSE listed firms as at December 2021 served as target population. The study collected secondary data for five years (2017-2021) on an annual basis from CMA and individual NSE listed firms annual reports. Descriptive, correlation as well as regression analysis were undertaken and outcomes offered in tables followed by pertinent interpretation and discussion. The research discovered a 0.6125 R square value implying that 61.25% of changes in NSE listed firms financial performance can be described by the three variables chosen for this research. The multivariate regression analysis further revealed that individually, capital structure has a negative effect on performance of NSE listed firms (β=-0.442, p=0.001). The control variable which was firm size displayed a positive and significant performance influence as shown by (β=0.624, p=0.000). Firm liquidity also exhibited a positive and significant effect on performance of NSE listed firms (β=0.184, p=0.029). the study recommends the need for practitioners among NSE listed firms to strike a balance between the benefits and costs associated with debt as high levels of debt negatively affects financial performance. The study also recommends that NSE listed firms should work at improving their asset base and their liquidity as they significantly affect their performance.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

One of a finance manager's main responsibilities is making financial decisions, which decide how a company will fund its activities. Determining the financial mix that will maximize the income of the firm and minimize costs is a very critical decision that involves balancing between internal and external sources of finance. A Finance Manager deals with the evaluation of the best financing mix as well as DE mixture for the establishment.

Capital structure (CS) of an establishment is concerned about how the establishment has funded its operations either through equity alone or through a blend of debt and equity. CS decision is the debt and equity (D&E) blend that an establishment utilizes for financing its undertakings (Damodaran, 2001). According to Pandey (1999), a company's capital structure is determined by the debt-to-equity ratio on the balance sheet.

CS is tightly linked to the capability of firm to meet the needs of different interested parties and this is why sound decisions on CS mix is crucial for firm's success. Belkaonui, (1999) note that CS represents the key entitlements to an establishment's assets that embroil various kinds of equities as well as obligations. Debt-equity ratio has a number of choices for instance; 100% equity financed, 100% debt financed and a blend of debt and finance to finance 100% of the operations (Dare & Sola 2010). In the three instances, the first choice is that of the ungeared establishment which avoids debt and the advantages of leverage. The second choice is that of wholly levered establishment not financed by way of equity. It only exists in theory but practically may be difficult to operate with 100% debt financing because investors need security

for their investment and equity capital provides that assurance that there funds are safe. This to some extent describes the term trading on equity, i.e. the equity component within the establishment's CS which facilitates debt providers to offer their limited resources to the establishment. The third choice is the most practical since it blends a proportion of D&E in the CS hence capitalizing on leverage benefits. Ideal blend of D&E has been the focus of consideration with regard to how it is determined and accounted (Saeed & Badar, 2013).

Modigliani and Miller (MM) (1958) were the original economists to discover the concept of CS as explained in their CS irrelevance theory. Firms finance their operations by using either common equity, preferred stock, RE and bonds or debentures. CS constitutes the right-hand side of the balance sheet (BS). CS can therefore be summarized as a blend of D&E capital. Under CS MM assumptions include homogeneous expectations, no taxes, perfect capital markets and no transaction costs.

CS decisions are relatively key for an establishment's successful operation. They attempt to describe a blend of securities as well as financing mechanisms employed by the establishments to fund their operations (Myers, 2001). The central goal of an establishment is to maximize its shareholders' wealth i.e. get the most out of its earnings per share (EPS) or net revenue (Jensen & Meckling, 1976). One approach of achieving this is to lower financing cost or to utilize a less costly but with greater advantage means to finance. Many establishments have a blend of D&E although the question that remains to be answered is what proportion of debt will maximize the returns on investment? Various finance sources bear dissimilar cost structures and therefore establishments should choose a mix that maximizes the wealth of

shareholders and bears less effect on the establishment's total costs. As stated by Myers (2001), there is no common paradigm regarding the choice of D&E, however pointed out that there are certain paradigms that seek to describe the blend of CS. Myers (2001) made reference to the trade-off model, which contends that businesses should seek debt levels that strike an equilibrium between the tax advantages of more debt and the costs of possible financial problems.

As stated by Khan (2012); and Amjed (2011), since various means of financing bear dissimilar rates of return, the same is the situation with the various kinds of debts instruments i.e. both long-term and short-term debts bear rate of return than an investor will consider as a result of variation of its duration as well as risk difference. This investigation will utilize various debt modes i.e. long-term and short-term debts to measure its bearing on the performance of establishment plus the bearing of total debt (TD) with various alternatives as variables to evaluate establishment performance. Past investigations have not utilized these two debt modes as single explanatory variables for the establishments registered on Nairobi Stock Exchange (NSE).

In the previous investigations Return on Assets (ROA) was revealed to be adversely impinged on by debt utilization (KebewarP, 2013). These outcomes where consistent with those of Salteh et al. (2012), who revealed that not just ROA is adversely impinged on by more debt utilization but similarly that EPS is inversely linked to debt utilization. Another investigation by Mohamad and Abdullah (2012) similarly ascertained that debt utilization reduces ROA and the outcomes were as per the pecking order theory (POT) that establishments have a preference of internal to external funding and therefore boost performance. Memon, Bhutto andAbbas (2012)

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verified the bearing of debt ratio on establishment performance (ROA) and ascertained performance is adversely impinged on by enhancing debt ratio.

Ferati and Ejupi (2012) analyzed the bearing of CS on the establishment performance and profitability in Macedonia with sample size of 150 establishments for a 10 year period and determined that debt bears an adverse effect on the ROE. This is because a debt ratio surges the expected rate of return (RRR) surges and therefore reduces profitability. The outcomes were according to Velnampy and Niresh (2012) who similarly ascertained that as the debt level surges, the establishment performance decreases. Conversely Salteh, et al. (2012) were according to the above investigations as they ascertained that debt ratio positively impinge on the ROE. Khan (2012) revealed an adverse link between debt utilization and ROE, however the bearing was unsubstantial.

In summary both the D&E bear dissimilar cost structures and therefore affect performance in different ways. Similar case is with the various kinds of debts. There are short-term and long-term debts and investors get dissimilar RRR and the lengthier period the greater the risk as well as the RRR by an investor

This study explored the level at which the debts impinges on the financial performance (FP) of firms listed on the NSE. Various kinds of debt have been differentiated i.e. long-term debt (LTD), short-term debt (STD), as well as total debt (TD) because they all bear dissimilar risk levels involved and eventually are different their returns. As Khan (2012) noted, the lengthier the period, the higher the risk that the security bears and therefore the higher the RRR by the investor.

1.1.1 Capital Structure

An establishment's CS is the blend of its financial obligations. Owing to the importance uncertainty of financial capital, fund providers can put forth control over establishments (Harris & Raviv, 1991). D&E constitute the two primary categories of liabilities, with debt and equity holders characterizing the two kinds of firm's investors. They are both related to different benefits, risks as well as control levels. It is the manner in which the establishment's assets are financed by way of certain blend of debt, equity or hybrid securities. An establishment's CS is then its liabilities' structure, a blend of an establishment's LTD, STD and common/preferred equity. CS is the manner in which an establishment funds its entire operations as well as growth by with various finance sources. Debt can be through issuance of bond or long-term notes payable, whereas equity is categorized as RE or common/preferred stock.

1.1.2 Financial Performance

As stated by Berger and Patti (2002) an establishment's FP in the shareholder's perspectives, is determined by how well-off after some period of time compared to beginning of the period and may be measure by ratios resulting from accounts; particularly the income statement, or by share prices information. These ratios indicate of whether the establishment is realizing the shareholders goals of making the most out of their wealth, and may well be utilized to match an establishment's ratios with other establishments to ascertain performance trends over time. Appropriate performance measure must explain all the bearings of investments on owner's wealth. Hence an establishment's performance measurement must indicate the wealth of the owner because of investment over a particular period of time.

Brealy and Myers (2003) noted that in order to maximize the firm's return on invested capital, FP emphasizes information on management performance, financial strength and weaknesses, corporate efficiency, and credit value of the company.

Profitability is an indicator of a company`s ability to bear risks and increase their capital base. It is an indication of any company`s competitiveness and measure the quality of management. Profitability of a firm is measured by the ROE (Saona, 2011).

1.1.3 Capital Structure and Financial Performance

Hutchinson (1995) contended that capital structure had a positive bearing on establishment's ROE if the capacity of establishment's assets to generate earnings surpasses the average interest cost of debt to the establishment. Petersen and Rajan (1994) while exploring leveraged buyouts similarly ascertained positive link between debt and profitability of industries.

Though, certain investigations have revealed that debt has an adverse bearing on the profitability of establishment. For instance Fama and French (1998) contend that excessive debt utilization breed agency problems amongst owners and creditors which could bring about an adverse link between profitability and leverage. Majumdar and Chhibber (1999) conducted a different investigation in India and discovered that leverage has a negative impact on performance. In addition, Gleason et al. (2000) was consistent with an adverse bearing of leverage on the establishment profitability. An investigation Poland by Hammes (1998) ascertained an adverse link between debt and establishment's profitability

An investigation by Mesquita and Lara (2003) ascertained that the link between rates of return and debt points out an adverse link for long-term financing. However, they

highlighted a positive correlation for equity and STD. Abor (2007) explored debt policy and performance of South African and Ghanaian Medium Sized Enterprises and established an adverse and substantial bearing of STD on gross profit margin. This revealed that surging the amount of STD would bring about decrease in the establishments' profitability.

An empirical study by Abdulla and Tursoy (2021) on the non-financial firms in Germany highlighted a positive correlation between the Capital Structure and Financial performance of firms. They discovered that the lower cost of debt and tax shield resulted to positive relationship.

1.1.4 Nairobi Securities Exchange

NSE, was formed in 1954 as stockbrokers' voluntary establishment, is currently among the dynamic capital markets in East Africa offering trading facilities to both foreign and local investors. The management of the NSE is situated at 55 Westlands Road Nairobi. As a capital market establishment, the NSE is key for economic development as it marshals domestic savings hence resulting in the reorganization of financial resources from inactive to active proxies. Long-term investments are made liquid, because securities transfer between owners is enabled. The NSE has similarly allowed establishments to involve local involvement in their equity, hence allowing the public to have ownership of shares. Establishments can similarly generate additional funding for development as well as expansion. A new issuer releases a brochure to raise money that includes all pertinent information about its activities and future prospects as well as the price of the issuance. NSE boosts foreign capital inflows in a same manner.

1.2 Research Problem

As stated by Roy and Minfang (2000) an establishment's CS refers to its financial obligations' blend. For a long time it has been a key issue in the perspective of strategic management as it is related to an establishment's capacity to meet different stakeholders' needs. D&E are the two major classes of funding, and represents two kinds of firm investors. They are both linked to different benefits, risk, as well as control levels. Though debt holders put forth lesser control, they receive a fixed rate of return as well as safeguarded by contractual commitments regarding their investment. Equity holders constitute the residual claimants, with the greatest risk as well as control over choices. A suitable CS is a key choice for any business establishment. The choice is key not just for the reason of making the most of returns to different organizational areas, but similarly due to the bearing such a choice have on an establishment's capability to handle its competitive setting. The work of Modigliani and Miller (1958 and 1963) has led to extensive research in corporate finance to ascertain the impact of a choice to use CS on performance. Establishments struggle when structuring their finance since it is difficult to determine how it will affect performance, which is crucial for the establishment's worth and, therefore, its survival.

Leaders have several opportunities to carry out their discretion regarding CS choices. As stated by Dimitris, and Psillaki (2008) the CS engaged may well not be aimed at maximizing establishment's value but for safeguarding the interest of manager particularly in establishments where corporate decisions are undertaken by managers as well as stocks of the establishment closely held. Even in situations that stocks are not closely held, stockholders are usually many and an average stockholder holds a small amount of the establishment's stock. This results in the feeling of such a

stockholder to not have as much of interest in the scrutinizing administrators who if not monitored would pursue interests not in line with those of stockholders.

In recent years, the cost of capital has increased dramatically on the Kenyan debt market. This is due to inflation, which led the monetary policy committee to raise interest rates in the banking industry, which are passed on to credit consumers. Due to the cost of finance, businesses' financial performance suffered and real estate prices rose. The subjects of CS and FP have been studied. Ruto (2011) looked at how the CS modification affected stock prices for companies that were NSE-registered. In his 2010 study, Lokong examined the relationship between CS and the success of Kenyan microfinance institutions. The relationship between CS and FP of SMEs in Nairobi was determined by Muia, 2008. Lastly, Kitony (2007) verified the link between CS and agency costs. The outcomes revealed that a substantial bearing exists between CS and establishment's performance after controlling for establishment's particular aspects for instance size, leverage, non-duality and growth. There is limited investigation pertaining to the bearing of CS on FP of establishments registered at the NSE. This investigation therefore seeks to fill in this gap by scrutinizing the bearing of CS on FP of establishments registered at the NSE.

This investigation aimed to ascertain whether a relationship between the CS and ROE of these establishments, as well as the relationship between the macroeconomic aspects of interest and inflation rates with the CS and performance, exists given the unique characteristics of these economies. Leaders of the establishments registered at the NSE are asked to explain how they combine the various financing sources for their establishments in light of these economies' particularities. Evaluation of how the

return on borrowed funds relative to ROA financed was similarly be undertaken to ascertain, whether the ROA necessitated the debt.

1.3 Research Objective

The aim of this investigation was to examine the bearing of capital structure on financial performance of firms listed at the NSE.

1.3. 1 Specific objectives

i. To determine the effect of capital structure on financial performance of firms listed at the NSE

ii. To establish the effect of firm size on financial performance of firms listed at the NSE

iii. To assess the effect of liquidity on financial performance of firms listed at the NSE

1.4 Value of the Study

In the previous investigations undertaken on CS have focused attention on the industrialized nations as well as on the link between establishment's growth and its value. The outcomes of this investigation will augment material regarding the CS of establishments in the emerging economies for instance Kenya and the manner in which they impinge on owners' goal of their wealth maximization. The outcomes will similarly give the needed material to financial establishments, consultants as well as capitalists that would help them to schedule funding of their ventures. The outcomes will also offer the needed material for the monitoring agencies partaking promotion of investment like the Capital Markets Authority to allow them analyze and utilize the

financial resources pertinent to establishments. It will similarly lay a foundation for

future investigation in CS concepts, focusing attention on emerging economies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The section looks at hypothetical literature review, empirical literature review and summary of the review. Among the key factors that could impinge on the establishment's performance is CS. Establishments are eager to get the best out of their performance and reduce their financing cost through maintenance of a suitable or optimal CS. Firer et al, (2008) indicated that CS may have substantial bearing on the establishment's value as well as its cost of capital. Unsound CS choices may possibly result in a surge in cost of capital hence decreasing the Net Present Value (NPV) of the establishment's investment project resulting projects being unviable. Effective CS decisions will surge the NPV resulting in bankability of the investments.

2.2 Theoretical Framework

Theoretical review tries to validate some of the concepts attributed by researchers which are relevant capital structure. The following theories were discussed with the aim of highlighting the relevance of each theory to the study;

2.2.1 Irrelevant and Relevant Theory

Modigliani and Miller (MM), 1958 demonstrates that with particular major assumptions that CS does not impinge on establishment's value. Capital market is presumed to be flawless as per Modigliani and Miller, whereby individuals within as well as outside allowed to freely access information devoid of transaction, bankruptcy and taxation costs; D&E decision become immaterial and internal and external finances may be wholly replaced. This paradigm puts forward that the establishment's value ought not to be subject to its CS. Additionally it contends that an establishment

ought to bear similar market value as well as Weighted Average Cost of Capital (WACC) at every CS amount as the establishment's value ought to be hinged on the yield and risks associated with its undertaking rather than the manner in which it funds those undertakings. This paradigm establishes another form of CS under irrelevance theory. It puts forward that CS decisions of establishments (with personal and corporate taxes) are immaterial (Miller 1977).

If these major assumptions are lowered, CS can turn to be immaterial to the establishment's value. Hence, research endeavors have been contributed to lowering the model assumptions and defining the outcomes. This paradigm was put under criticism stating that, practically there is nonexistence of flawless market. Endeavors to lower these assumptions chiefly the one that points out that there are neither bankruptcy nor taxation costs brought about the static trade off concept.

2.2.2 Agency Cost Theory

This paradigm is pertaining to the link between the principal (stockholders) and the agent of the principal (establishment's leaders). The paradigm proposed that an establishment be regarded as a link of conventions (inaccurately stated) between holders of resources. This link comes about every time one or more persons, termed as principals, employ one or more other persons, termed as agents, to undertake certain service and similarly give agents power to make decisions.

This paradigm was first established by Berle and Means (1932), who put forward that because of endless equity ownership dilution by large establishments, ownership and controlling turn to be more disjointed. This state of affairs provide professional leaders with the prospective to seek their interest rather than that of owners.

As stated by Jensen and Meckling (1976) for an ideal level of debt in CS by decreasing the agency costs due to the deviating interest of leaders with owners and holders of debt. They propose that either leaders' ownership in the establishment ought to be enhanced to align the leaders' interest with that of stockholders or debt utilization ought to be encouraged to regulate leaders' drive for extreme more consumptions. These authors establish agency problem related to free-cash flow (FCF). They proposed that problems linked to FCF may be in some way managed by enhancing the leader's stake in the establishment or by enhancing debt in the CS, hence reducing the available free cash to leaders.

Hence, establishments that are majorly by debt funded give leaders less power of decision making than those that are equity funded, and therefore debt may well be utilized as a way of control, in which financiers and owners turn to be the principal parties in the structure of corporate governance.

2.2.3 Pecking Order Theory

This paradigm of CS as established by Donaldson (1961) is one of the key leading corporate leverage concepts. It differs from the concept of establishments having a distinctive blend of D&E funding, which reduces capital costs. The paradigm proposes that when an establishment is seeking means to fund its long-term investments, it possesses a clear set of choices regarding the sources of funding it utilized. It puts forward that an establishment's primary choice ought to be the use of funds within (i.e. RE), then debt and lastly external equity. The paradigm contends that the more profitable the establishments turn to be, the lesser they seek debt as they would have adequate internal funding to carry out their investments. Additionally, it puts forward that when the funds within are insufficient that an establishment out to

seek funds outside and most preferably credit from bank or corporate bonds. The last option would be obtain funds through issuance of new equity capital.

This paradigm seeks to describe the costs of disproportionate information which put forward that precedence of funding of establishments is from (internal funding to equity) as per the idea of minimum effort, or of smallest amount of resistance, choosing to use equity as a last resort in financing. Therefore, funds within are utilized first, and after its exhaustion, there is issuance of debt, and when that is no longer attainable, there is issuance of equity. Conversely, POT describes the bearing of uneven information on the different securities' mispricing, which states that there is an unclear focus on debt ratio (Myers & Majluf, 1984). They argue that investors usually recognize that executives are better knowledgeable of the establishment's price sensitive material. The perception of investors is such that leaders give out risky instruments when their prices are overstated. This perception result in the underpricing of newly issued equity. Occasionally this low pricing turn out to be so intense that it brings about significant loss to the current owners. To circumvent the information unevenness problems establishments normally meet their funding requirements through the use of RE as their key funding source, then debt and lastly external equity funding as a fallback.

2.3 Determinants of Financial Performance

A firm performance can be affected by a number of factors that can be found inside or outside the company. Firm-specific internal variables that can be changed internally; they are leverage, liquidity and asset base among others. External factors that affect a company's performance include; inflation, GDP, political stability as well as interest rates.

2.3.1 Capital Structure

Debt capital is the money borrowed by the company from individuals and institutions. This includes long term bonds and has extended repayment terms and the company borrowing has to pay interest on term periodically. The principle amount is payable at the time of maturity. Short term commercial instruments have lesser repayment period and the firms use it to raise capital for their immediate needs. A company needs a mixture of the two financial tools to finance its operations. Essentially, debt financing is anticipated to have an effect on a company's liquidity amounts, which in turn affects the degree of financial performance (Khalaf, 2013).

2.3.2 Firm Size

A company's earnings from economies of scale are inversely correlated with its size. Due to significant economies of scale, firm operational activities have a higher efficiency the larger it is. Large organizations, irrespective of its size, risk losing control of both their operational and strategic activities, which would reduce their efficiency (Burca & Batrinca, 2015). Large companies can spread their portfolios more and have more market power. They are the ones exposed to organization waste too especially when their expansion occurs rapidly. Amount of invested cash flow greatly depends on the size of the firm. When determining a company's size, as per Almajali et al (2012) it is crucial to take its workforce, property holdings, and sales volume into account.

2.3.3 Firm Liquidity

There is a correlation linking the financial performance of a firm to its liquidity (Cheluget, Gekara, Orwan & Keraro's, 2014). They also discovered that liquidity management has a significant impact on performance. Increases in cost efficiency

were significantly influenced by indices of liquidity and solvency; when these indications are taken into consideration, enterprises with higher bought input costs similar to capital have a lower likelihood of becoming efficient (Arif, 2012).

2.4 Empirical Review

Zeitun and Tian (2007) undertook an investigation to verify the bearing of CS on corporate performance using a sample of 167 establishments in Jordan from the period 1989 to 2003. They established a substantially adverse link between CS and corporate performance with respect to variables for instance ROA, ROE, profitability, Tobin's Q (This is calculated by dividing a company's market value by the cost of replacing its assets. A fundamental expression of the link between market valuation and intrinsic value is the Q ratio.) was utilized to evaluate performance whereas size, leverage, growth and tangibility were substitutes for CS.   Using the Tobin`s Q, what also came out of the study is that the short term debt to total assests level has the desirable effect on the market performance.

Puwanenthiren (2011) undertook a research on CS and FP of particular establishments in Colombo Stock Exchange in Sri Lanka for the period 2005 to 2009. CS was substituted by debt whereas performance was substituted by gross/net profit, ROI, ROA and capital utilized. The outcomes established an adverse link between the CS and FP.

Khalaf (2013) investigated 45 manufacturing establishments registered on the Amman Stock Exchange between the periods 2005 to 2009. The investigation adopted a multiple regression analysis on performance metrics for instance ROA and Profit Margin as well as STD to TA, LTD to TA and Total debt to Equity (TDE) as CS variables. The outcomes point out that there exists an adverse and substantial link

between STD to TA and LTD to TA, and ROA and profit margin; whereas TDE has a positive link with ROA and an adverse link with profit margin. STD to TA is substantial through ROA whereas LTD to TA is substantial through profit margin. The investigation establishes that CS is statistically unsubstantial in impinging on establishment's performance. It proposes that leaders of manufacturing establishments ought to use caution in deciding on the debt level to employ in their CS as it adversely impinges on their performance.

Abdul (2010) investigated the performance of 36 engineering institutions in Pakistan that were listed on the Karachi Stock Exchange (KSE) between 2003 and 2009 using pooled ordinary least square regression. The results revealed a significant negative relationship between the establishment's performance as measured by ROA, gross profit margin, and Tobin's Q and capital structure as measured by STD to TA and total debt to TA. The link between financial gearing and establishment's performance evaluated by ROE is adverse however substantial. Asset size bears no substantial link with the FP evaluated by ROA and gross profit margin however there is an adverse and substantial link with Tobin's Q. establishments in the Pakistan's engineering industry are largely subject to STD however debts are involved with solid agreements which impinges on the establishment's performance.

Though works on CS concepts and experiential evidence on the determining factors CS is plentiful in incidents of industrialized nations, though except a small number of investigations, the issue of whether CS of large establishments impinge on their performance is still greatly uncultivated in unindustrialized nations.

One such investigation analyzing the postulate that CS is among the key determining factors of establishment's performance describes that the tax advantage linked to debt

funding result in establishments lead taking excessive credit. As such, they usually overlook the bankruptcy costs due to diminishing returns associated with too much debt Hence, establishments seeking to maximize profit when move away from a suitable CS their bankruptcy or funding costs prevail over the tax benefits associated with the a balance between D&E. Zeitun and Tian (2007) establishes that CS has a substantial and adverse bearing on establishment's performance and overlooking bankruptcy costs would result in establishments having too much borrowing and hold huge debt in their CS Though, some investigation establish varied outcomes on the bearing of CS on performance of establishment (Ebaid, 2007).

Magara (2012) undertook an investigation on CS and its determining factors at the NSE. The investigation aimed to explore the key determining factors of CS as well as the extent of leverage of the establishment. It was ascertained that, there existed a positive substantial link between the establishment's size, growth rate and tangibility for the period 2007-2011. The investigation never considered macro- economic aspects for instance interest and inflation rates.

Mwangi (2010) carried out a research on CS of establishments registered at the NSE and similarly sought to verify the link between CS and FP. Material was sourced through structured questionnaires. The investigation pointed out the existence of a strong positive link between leverage and ROE, liquidity, as well as ROI.

2.5 Conceptual Framework

A conceptual framework is a collection of ideas or parameters that the researcher will operationalize to accomplish predetermined goals (OSO & Onen 2007). It illustrates what you expect to find through the research. Conceptual framework should be constructed before data is collected. It is a visual description of an expected correlation between independent and dependent variables. An analysis of the financial performance and capital structure of Kenyan companies listed on the Nairobi Stock Exchange is given using a conceptual framework derived from the literature research (NSE). Two main variables were examined in the research. The independent variable is capital structure, while the dependent variable, financial performance, is measured by the ROA. The control variable is firm size and firm liquidity.

Independent variable   **Dependent variable**

| **Capital Structure** |
| • Total debt to total assets |

→ **Financial performance**

Net income/ total assets

| **Control Variables** |
| **Firm size** |
| • Natural log of total assets |
| **Firm liquidity** |
| • Current assets to current liabilities |
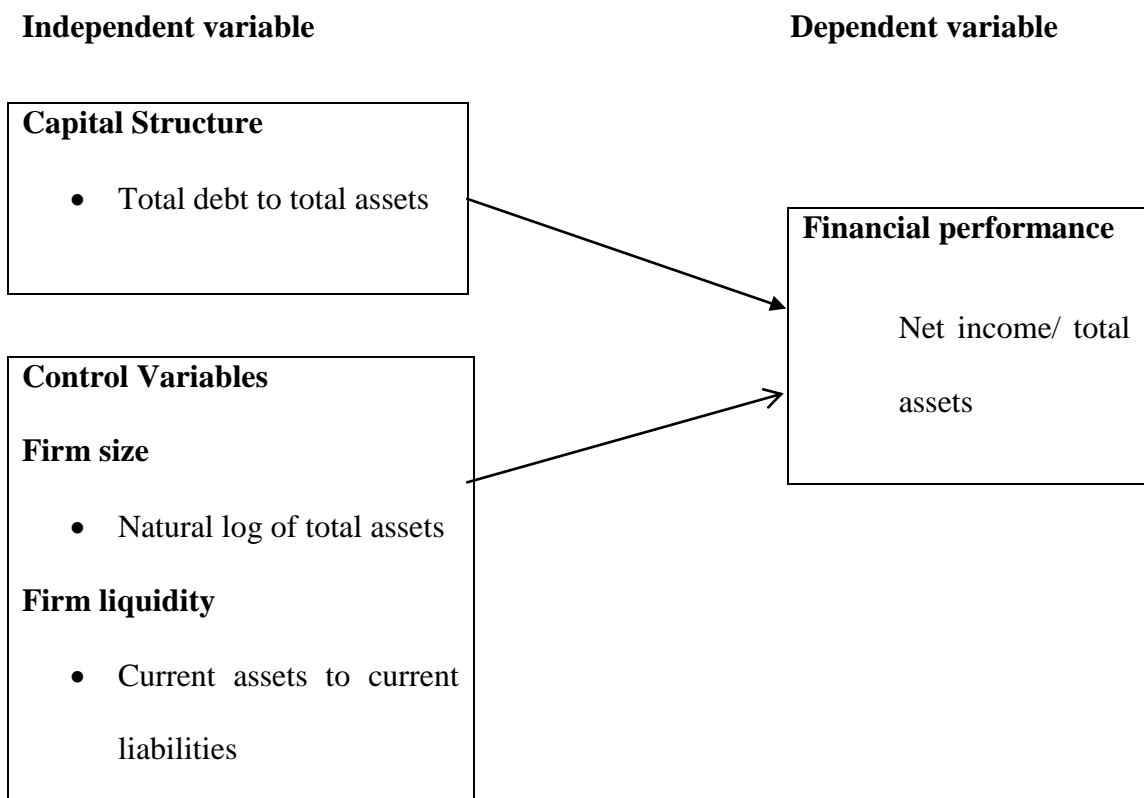
Figure 2.1: Conceptual Model

Source: Researcher (2022)

2.6 Summary of Literature Review

Compared to the tradeoff theory the POT contents that pecking order actions are employed when establishments choose to circumvent costs associated poor selection as well as issues of agency cost i.e. establishments from the onset have a preference of choosing internal source of RE; and choose debt to equity if it chooses to utilize external funds. Myers and Majluf (1984) similarly assert that equity issuance entailing external investors, hence when an establishment issues new stocks investors may well be certain that the establishment's value is overstated and its leaders may well exploit this uneven information as they understand well the risk level of the establishment compared to the stockholders.

Therefore, as stated by the POT the main distress of an establishment is raising capital by way of RE whereas tradeoff between establishment's bankruptcy cost as well as debt's tax shield is a less important concern. For that reason, profitable establishments are expected to utilize RE and utilize less amount of debt compared to establishments that are less profitable. It indicates that organization's performance as well as debt are likely to be adversely linked.

This hypothesis is similarly consistent with several investigations, to them debt funding benefits are below its adverse effects, hence establishments will continuously have a preference of funding investments using internal sources. Kester (1986); Rajan and Zingales (1995); Jensen and Meckling (1976); Fama and French (2002) and (Eriotis, et al. 1997). Also, Gleason, Mathur and Mathur (2000); Harirs and Raviv (1991) and Krishnan and Moyer (1977) established a substantial and adverse bearing of CS on performance.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methods that were used to determine whether and how capital structure affects the performance of NSE listed firms. There was a strong focus on research methodology, data collection, and statistical analysis.

3.2 Research Design

A descriptive approach was used for this investigation. Examining the relationship that exists between capital structure and performance was the focus of this descriptive study's main objective. Given that the researcher was primarily interested in the phenomenon's fundamental characteristics, this approach was appropriate (Khan, 2008). It was also effective for defining the phenomena' interconnections. This design also represented the variables precisely and legitimately, yielding sufficient data to answer the research objectives (Cooper & Schindler, 2014).

3.3 Population

As at December 31st, 2021, there were 61 companies quoted at the NSE. Of the 61 listed companies, 42 were non-financial companies and 19 financial companies (commercial banks and insurance companies). This study's population consisted of the 47 non-financial companies quoted at the NSE. Financial firms were excluded from the study since the Kenyan Central Bank, the Kenyan Capital Markets Authority and other regulators heavily regulate them. Therefore, their financing structure is highly regulated and their liquidity measures are different to those of non-financial entities. Given the small number of firms in the research frame, the study undertook a census of the listed 42 non-financial firms.

3.4 Data Collection

The study relied exclusively on secondary data. As secondary data collection template was developed as per the study variables. The data was collected for a 5 year period (2017 to 2021) on an annual basis. The 5 year period was chosen as it provides the latest information and it was considered adequate for robust regression analysis. The source of the data was CMA reports and individual NSE listed firms annual reports.

3.5 Data Analysis

Stata 16 was used to do an analysis on the data collected. Charts and tables were used to quantitatively display the results. Together, the gathered descriptive statistics and the standard deviation served as the basis for measurements of central tendency and dispersion for each variable. Both correlation and regression played a role in the construction of inferential statistics. A panel regression linearly determined the relation between the dependent as well as independent variables.

3.5.1 Analytical Model

The panel regression model below was applied:

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

Where: Y_{it} was performance which was return on assets (net income divided by total assets) on an annual basis for listed firm i at time t.

β_0 is y regression intercept.

$\beta_1, \beta_2, \beta_3, \beta_4$ are the regression slope coefficients

X_{1it} was capital structure measuring using total debt to total assets of firm i at time t

X_{2it} was firm size measured as log total assets of firm i at time t

X_{3it} was liquidity measured as liquid assets to total assets of firm i at time t

ε = error term

3.5.2 Diagnostic Tests

The diagnostic tests performed are outlined in Table 3.1

Table 3.1: Diagnostic Tests

Assumption	Description	Test	Interpretation	Treatment
Normality	To verify normal distribution, the test is conducted	Kolmogorov-Smirnov test	If p values are above 0.05, the variables are normally distributed	application of square roots or logs to non-normality
Multicollinearity	The phenomenon known as multicollinearity occurs when there is a connection between many variables, which then leads to the standard errors distorting the regression analysis.	VIF Test	Multicollinearity exist where the VIF > 10	Eliminate highly correlated variables.
Heteroscedasticity	to determine whether the model's or the errors' variance is different for each observation	Breusch–Pagan test	Heteroscedasticity exist where the p-value p<0.05)	Use Natural log of variables
Autocorrelation	To determine the value of a single variable by considering other variables that are connected to it.	Durbin-Watson test.	If p-values are lower than 0.05, autocorrelation is present.	Hildreth-Lu Procedure
Stationarity test	In order to evaluate whether or not a time series variable has a unit root and whether or not it is stationary	Levin-Liu test	If p values are below 0.05, unit roots exist.	Use Natural log of variables
Hausman specification test	In order to distinguish between fixed-effects and random-effects models and to choose the most appropriate one	Hausman test	Use fixed effects model if p value is less than 0.05 and random effects if otherwise	Use natural log of variables

3.5.3 Tests of Significance

The relevance of the overall model as well as the variable was determined via the use of parametric tests. To determine whether the model was useful, F-test in the analysis of variance (ANOVA) was used, but to determine if any given variable was statistically significant, t-test was used.

CHAPTER FOUR: DATA ANALYSIS RESULTS AND FINDINGS

4.1 Introduction

This chapter offers descriptive statistics and the results and interpretations of various tests namely; test of normality, Multicollinearity, heteroskedasticity tests, autocorrelation and stationarity test. The chapter also presents the results of Pearson correlation and regression analysis.

4.2 Descriptive Statistics

This section presents the descriptive findings from the collected data. The descriptive results include mean and standard deviation for every research variables. The analyzed data was obtained from individual NSE listed firms annual reports for duration of 5 years (2017 to 2021). The number of observations is 210 (42*5) as 42 NSE listed firms provided complete data for the 5 year period. The results are as shown in Table 4.1

Table 4.1: Descriptive Results

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	210	-1.7648	.7202	.000503	.1773521
Capital structure	210	.0246	1.4193	.483801	.2488244
Firm size	210	7.6941	11.6166	9.763046	.9035578
Liquidity	210	.0230	61.1700	3.040300	6.8405872
Valid N (listwise)	210				

Source: Field data (2022)

4.3 Diagnostic Tests

As rationalised in chapter three, the researcher conducted diagnostic tests to ensure that the assumptions of Classic Linear Regression Model (CLRM) are not violated and to attain the appropriate models for probing in the significance that the CLRM

hypotheses are infringed. As a result, pre-approximation and post-approximation assessments of the regression model were performed prior to processing. The multicollinearity test and unit root test were the pre-approximation tests used in these situations, whereas the normalcy test, test for heteroskedasticity, and test for autocorrelation were the post-estimation tests. These analyses were performed by the study to avoid having factual regression results.

4.3.1 Normality Test

The normality of data can be tested using a variety of methods. The most commonly utilized approaches include the Shapiro–Wilk test, Kolmogorov–Smirnov test, skewness, kurtosis, histogram, P–P Plot, box plot, Q–Q Plot, mean and standard deviation. The most extensively used normality tests are the Kolmogorov–Smirnov test and the Shapiro–Wilk test. The Shapiro–Wilk test is better for small sample sizes (n <50 samples), while it can also be used on more extensive samples selections, whereas the Kolmogorov–Smirnov test is better for n>50 samples. As a result, the study used the Kolmogorov–Smirnov test as the numerical method of determining normality. For both of the above tests, the null hypothesis says that the data are obtained from a normal distribution population. When P-value is below 0.05, null hypothesis is rejected and the data are said to be not normally distributed.

Table 4.2: Test for Normality

	Kolmogorov-Smirnov	P-value
ROA	0.799	0.078
Capital structure	0.891	0.099
Firm size	0.927	0.122
Liquidity	0.896	0.101

Source: Research Findings (2022)

Evident in Table 4.2 results, all the study variables have a p value above 0.05 and therefore were normally distributed.

4.3.2 Multicollinearity Test

Multicollinearity transpires when the independent variables in a regression model are significantly linked. Multicollinearity was assessed using the VIF and tolerance indices. When the VIF value is above ten and the tolerance score is less than 0.2, multicollinearity is present, and the assumption is broken. The VIF values are less than 10, indicating no problem with multicollinearity.

Table 4.3: Multicollinearity

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Capital structure	0.314	3.185
Firm size	0.510	1.961
Liquidity	0.297	3.367

Source: Research Findings (2022)

4.3.3 Heteroskedasticity Test

The residual variance from the model must be constant and unrelated to the independent variable in linear regression models calculated using the Ordinary Least Squares (OLS) method(s). Homoskedasticity refers to constant variance, whereas heteroscedasticity refers to non-constant variance. The research utilized the Breusch-Pagan/Cook-Weisberg test to check if the variation was heteroskedastic. The null hypothesis implies constant variance, indicating that the data is homoscedastic. The outcomes are presented in Table 4.4.

Table 4.4: Heteroskedasticity Results

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity		
chi2(1)	=	0.8428
Prob > chi2	=	0.6237

Source: Research Findings (2022)

As evident in Table 4.4 null hypothesis was not rejected since the p-value was 0.6237, which was statistically significant (p>0.05). As a result, the dataset had homoskedastic variances. Since the P-values of Breusch-Pagan's test for homogeneity of variances above 0.05. The test thus confirmed homogeneity of variance. The data can therefore be used to conduct panel regression analysis.

4.3.4 Autocorrelation Test

Serial correlation, also known as autocorrelation, makes the standard errors of coefficients appear to be less than in linear panel data models, resulting in higher R-squared and erroneous hypothesis testing Autocorrelation was verified via Durbin-Watson test. If the Durbin-Watson test results in a value of 2, the error terms of regression variables are uncorrelated (i.e. between 1 and 3). The nearer the figure to 2 is; the better. The outcomes are presented in Table 4.5.

Table 4.5: Test of Autocorrelation

Durbin Watson Statistic
2.127

Source: Research Findings (2022)

The Durbin-Watson statistic was 2.127, according to the findings in Table 4.5. The fact that the Durbin-Watson statistic was near to 2 demonstrates that the error terms of regression variables are uncorrelated.

4.3.5 Stationarity Test

The research variables were subjected to a panel data unit-root test to establish if the data was stationary. The unit root test was Levin-Lin Chu unit root test. At a standard statistical significance level of 5%, the test was compared to their corresponding p-values. In this test, the null hypothesis is that every panel has a unit root, and the alternative hypothesis is that at least one panel is stationary. The Levin-Lin Chu unit root test outcomes are listed in Table 4.6.

Table 4.6: Levin-Lin Chu unit-root test

Levin-Lin Chu unit-root test			
Variable	**Statistic**	**p value**	**Comment**
ROA	7.3126	0.0000	Stationary
Capital structure	9.3031	0.0000	Stationary
Firm size	7.9132	0.0000	Stationary
Liquidity	7.9447	0.0000	Stationary

Source: Research Findings (2022)

As demonstrated in Table 4.6, this test concludes that the data is stationary at a 5% level of statistical significance since the p-values all fall below 0.05.

4.3.6 Hausman Test

When using panel data, it is necessary to determine whether a fixed effect or random effect model is more desirable. For the purpose of choosing the best panel regression model, the Hausman specification test was used. In essence, a Hausman specification test determines if the unique errors have a relationship to the regressors, with the null hypothesis being that they do not (random effect is preferred). Fixed effects were utilized if the P-value was significant (below 0.05), while random effects were used otherwise. The results of the Hausman test are shown in Table 4.7.

Table 4.7: Hausman Test Results

chi2(3)	P-Value
29.81	0.0000

Null Hypothesis: The appropriate model is Fixed Effects

Source: Research Findings (2022)

4.4 Correlation Results

To determine the degree and direction of link between each predictor variable and the response variable, correlation analysis was carried out. The correlation findings in Table 4.8 display correlation nature between the research variables in relation to magnitude and direction.

Table 4.8: Correlation Results

		ROA	Financial leverage	Firm size	Liquidity
ROA	Pearson Correlation	1			
	Sig. (2-tailed)				
Financial leverage	Pearson Correlation	-.612**	1		
	Sig. (2-tailed)	.000			
Firm size	Pearson Correlation	.586**	-.196**	1	
	Sig. (2-tailed)	.000	.004		
Liquidity	Pearson Correlation	.492**	-.179**	.044	1
	Sig. (2-tailed)	.000	.009	.522	

**. Correlation is significant at the 0.01 level (2-tailed).
b. Listwise N=210

Source: Research Findings (2022)

The correlation results disclose that capital structure and ROA have a negative as well as significant correlation (r=-0.612) at 5% significance level. The relationship between firm size and ROA was positive and significant (r=0.586) at 5 % significance level. The outcomes also reveal that firm liquidity (r=0.492) had positive as well as significant relation with ROA as depicted by p values below 0.05.

4.5 Regression Results

To determine the extent to which ROA is described by the chosen variables, regression analysis was used. In Table 4.9, the regression's findings were displayed. From the conclusions as epitomized by the adjusted R^2, the studied independent variables explained variations of 0.6125 in ROA among NSE listed firms. This suggests that other not researched factors account for 38.75% of the variability in ROA among NSE listed firms, while the five variables account for 61.25% of those variations.

The data had a 0.000 significance level, according to Table 4.9's ANOVA results, which suggests that the model is the best choice for drawing conclusions about the variables.

Table 4.9: Regression Results

ROA	Coef.	std.err	z	P>|z|	[95% conf.interval]	
Capital structure	-0.442	0.025	-3.21	0.001	-0.032	-0.131
Firm size	0.624	0.023	4.31	0.000	0.446	0.492
Liquidity	0.184	0.015	2.18	0.029	0.003	0.061
_cons	0.566	0.035	4.98	0.000	0.523	0.030
R squared =0.6125						
Wald chi2(3)=34.27						
Prob>chi2=0.000						

Source: Research Findings (2022)

The coefficient of regression model was as below;

$Y = 0.566 - 0.442X_1 + 0.624X_2 + 0.184X_3$

Where:

Y = ROA X_1 = Capital structure; X_2= Firm size X_3= Liquidity

4.6 Discussion of Research Findings

The objective of this research was to establish the effect of capital structure on performance of NSE listed firms. The research applied a descriptive design whereas population was the 42 NSE listed non-financial firms. Complete data was obtained from all the 42 NSE non-financial listed firms and which were considered adequate for regression analysis. The research applied secondary data which was gotten from CMA and individual NSE listed firms' annual statements. The independent variable was capital structure measured as the ratio of total debt to total assets while the control variables were firm size and liquidity. Both descriptive as well as inferential statistics were applied in analyzing the data. This section discusses the findings.

Multivariate regression outcomes revealed that the R square was 0.6125 implying that 61.25% of changes in performance of NSE listed firms are due to the three variables alterations selected for this study. This means that variables not considered explain 38.75% of changes in performance. The overall model was also statistically significant as the p value was 0.000 that is below the 0.05 significance level. This implies that the overall model had the required goodness of fit.

The multivariate regression analysis further revealed that individually, capital structure has a negative effect on performance of NSE listed firms (β=-0.442, p=0.001). The control variable which was firm size displayed a positive and significant performance influence as shown by (β=0.624, p=0.000). Firm liquidity also exhibited a positive and significant effect on performance of NSE listed firms (β=0.184, p=0.029).

These conclusions concur with those of Abdul (2010) who investigated the performance of 36 engineering institutions in Pakistan that were listed on the Karachi

Stock Exchange (KSE) between 2003 and 2009 using pooled ordinary least square regression. The results revealed a significant negative relationship between the establishment's performance as measured by ROA, gross profit margin, and Tobin's Q and capital structure as measured by STD to TA and total debt to TA. The link between financial gearing and establishment's performance evaluated by ROE is adverse however substantial.

The research findings also concur with Puwanenthiren (2011) who undertook a research on CS and FP of particular establishments in Colombo Stock Exchange in Sri Lanka for the period 2005 to 2009. CS was substituted by debt whereas performance was substituted by gross/net profit, ROI, ROA and capital utilized. The outcomes established an adverse link between the CS and FP. These findings are also supported by Zeitun and Tian (2007) who establishes that CS has a substantial and adverse bearing on establishment's performance and overlooking bankruptcy costs would result in establishments having too much borrowing and hold huge debt in their CS.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The key aim of the research was determining how capital structure influences the performance of NSE listed firms. This section includes a summary of the findings from the previous chapter as well as the conclusions and limitations of the study. Additionally, it makes recommendations for potential policy measures. The chapter provides recommendations for further research.

5.2 Summary of Findings

The objective of this research was to establish the effect of capital structure on performance of NSE listed firms. The research applied a descriptive design whereas population was the 42 NSE listed firms. Complete data was obtained from all the 42 NSE listed firms and which were considered adequate for regression. The research applied secondary data which was gotten from CMA and individual NSE LISTED firms annual statements. The independent variable was capital structure measured as the ratio of total debt to total assets while the control variables were firm size and liquidity. Both descriptive as well as inferential statistics were applied in analyzing the data.

The correlation results disclose that capital structure and ROA have a negative as well as significant correlation. The relationship between firm size and performance of NSE listed firms was positive and significant. The outcomes also reveal that firm liquidity had positive as well as significant relation with performance of NSE listed non-financial firms.

Multivariate regression outcomes revealed that the R square was 0.6125 implying that 61.25% of changes in performance of NSE listed firms are due to the three variables alterations selected for this study. This means that variables not considered explain 38.75% of changes in performance. The overall model was also statistically significant as the p value was 0.000 that is below the 0.05 significance level. This implies that the overall model had the required goodness of fit.

The multivariate regression analysis further revealed that individually, capital structure has a negative effect on performance of NSE listed firms (β=-0.442, p=0.001). The control variable which was firm size displayed a positive and significant performance influence as shown by (β=0.624, p=0.000). Firm liquidity also exhibited a positive and significant effect on performance of NSE listed firms (β=0.184, p=0.029).

5.3 Conclusions

The research intention of the research was establishing correlation between capital structure and Kenyan NSE listed firms' performance. The findings designated that capital structure had a negative and significant effect on performance of NSE listed firms. This may imply that NSE listed firms with high debt have low levels of performance. Debt management is therefore necessarily to achieve the targeted performance.

The research outcomes further depicted that NSE listed firms' size had a positive as well as significant influence on ROA which might mean that an increase in asset base of an NSE listed firm leads to enhanced ROA. This can be explained by the fact that bigger NSE listed firms are likely to have developed structures to monitor the internal operations of a firm leading to better ROA. Bigger NSE listed firms are also likely to

have better governance structure which can also explain the high ROA associated with firm size.

Additionally, the outcomes discovered that liquidity has a significant positive effect on performance. This infers that firms with low current assets level compared to their current liabilities end up having a lower ROA. This can be explained by the inability of illiquid firms of taking investment opportunities advantage whenever they arise leading to poor performance.

5.4 Recommendations for Policy and Practice

The study's results indicate that capital structure significantly and negatively affected ROA. Hence, the study recommends that NSE listed firm administrators endeavor to lower the level of debt in their books. This can be accomplished by developing policies and guidelines stating the percentage of debt that can be allowed in a NSE listed firm as a proportion of total assets.

The study revealed that firm size possesses a significant positive effect on ROA of listed non-financial firms. The study recommends the need for listed non-financial firms to enhance their asset base by allocating more funds in investing activities as this will lead to a higher ROA in the long run. Policy makers ought to develop policies on how listed non-financial firms can enhance their asset base in the most effective way.

From the study findings, liquidity was found to enhance performance of listed firms, this research recommending that listed firms should keep adequate liquidity levels to sustain their obligations when they fall due whereas simultaneously time enjoying short term investment chances which may arise. The policy makers ought to set a

limit of the liquidity level that listed firms should have as too much liquidity is also disadvantageous as it comes with opportunity costs.

5.5 Limitations of the Study

The focus was on various factors which are thought to influence performance of Kenyan NSE listed firms. The study specifically examined three explanatory factors. Though, in certainty, there is presence of other variables probable to influence performance of firms including internal like corporate governance attributes and organization culture whereas others are beyond the control of the firm like interest rates as well as political stability.

In this study, a five-year period from 2017 to 2021 was selected. There is no proof that comparable results will remain the same across a longer time frame. Moreover, it is impossible to predict if the same outcomes would persist until 2021. Given that additional time contains instances of big economic transitions like recessions and booms, it is more dependable.

The quality of the data was the main restriction for this study. It is impossible to conclusively conclude that the study's findings accurately reflect the current reality. It has been presumed that the data utilized in the study are accurate. Due to the current conditions, there has also been a great deal of incoherence in the data measurement. The study made use of secondary data rather than primary data. Due to the limited availability of data, only some of the growth drivers have been considered.

The data analysis was performed using regression models. Because of the limitations associated with using the model, like inaccurate or erroneous findings resulting from a change in the variable value, the researchers would not be able to generalize the

conclusions precisely. A regression model cannot be performed using the prior model after data is added to it.

5.6 Suggestions for Further Research

It has been suggested that several areas for advanced future research to be done on the basis of the tangible information gathered and the clarifying comprehension established in this research. First, other aspects influence firm performance apart from capital structure. More research can be conducted to determine and evaluate them. Additionally, other factors moderate, intervene, or mediate the relationship between capital structure and firm performance. Further research can be done to identify and analyze them.

The current research scope was restricted to five years; more research can be done past five years to determine whether the results might persist. Thus, inherent future studies may use a wider time span, that can either support or criticize the current research conclusions. The scope of the study was additionally constrained in terms of context where NSE listed firms were examined. Further studies can be extended to other financial firms to establish if they complement or contradict the current study findings. Researchers in the East African region, the rest of Africa, and other global jurisdictions can too perform the research in these jurisdictions to ascertain if the current research conclusions would persist.

The research only used secondary data; alternate research may use primary data sources such in-depth questionnaires and structured interviews given to practitioners and stakeholders. These can then affirm or criticize the results of the current research. This study used multiple linear regression and correlation analysis; future research

could use other analytic techniques such factor analysis, cluster analysis, granger causality, discriminant analysis, and descriptive statistics, among others.

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APPENDICES

Appendix I: Research Data

Firm ID	Year	ROA	Capital structure	Firm size	Liquidity
1	2017	0.0274	0.5125	10.6704	0.1500
1	2018	-0.0001	0.4556	10.7481	0.1540
1	2019	0.0536	0.6756	10.7555	0.2130
1	2020	0.0098	0.7448	10.6072	0.1810
1	2021	0.0536	0.7232	10.5128	0.2130
2	2017	-0.1178	0.2742	10.7004	0.9970
2	2018	-0.1178	0.3254	10.5685	1.6430
2	2019	-0.0144	0.2887	10.6622	1.3430
2	2020	-0.1168	0.2953	10.6433	0.9440
2	2021	0.0250	0.2754	10.6736	1.3160
3	2017	-0.0419	0.6428	10.0131	1.1960
3	2018	0.0843	0.6662	10.0270	1.0560
3	2019	0.0635	0.6639	9.9937	1.0960
3	2020	0.1020	0.6526	9.9513	4.5110
3	2021	0.1020	0.6372	9.8789	6.2960
4	2017	0.0091	0.1158	9.5594	1.1070
4	2018	0.0213	0.1323	9.5288	4.2480
4	2019	0.0842	0.1656	9.5126	11.1200
4	2020	0.0571	0.1472	9.4437	7.0850
4	2021	0.0842	0.1270	9.3833	1.6430
5	2017	-0.0820	0.7007	9.8088	0.7570
5	2018	-0.1303	0.6912	9.7441	0.5430
5	2019	-0.1564	0.7020	9.6970	0.3920
5	2020	0.0213	0.6503	9.6258	1.2400
5	2021	0.0842	0.5377	9.5091	1.1980
6	2017	-0.0687	0.7331	9.8875	0.3770
6	2018	-0.1260	0.6613	9.9179	0.2960
6	2019	-0.1490	0.5954	9.9635	0.3260
6	2020	0.0571	0.6081	9.9370	1.2400
6	2021	0.0842	0.5497	9.8731	1.1980
7	2017	-0.2126	0.3826	10.4771	0.0560
7	2018	0.1207	0.3554	10.4847	0.0350
7	2019	-0.2479	0.4025	10.4038	0.0230
7	2020	-0.1490	0.5734	10.2364	1.2400
7	2021	0.0571	0.5605	10.2477	1.1980
8	2017	0.0213	0.2890	8.9280	1.4150
8	2018	0.0266	0.5506	9.0746	1.2950

Firm ID	Year	ROA	Capital structure	Firm size	Liquidity
8	2019	-0.0296	0.4309	9.2195	1.3260
8	2020	0.1042	0.7651	9.0085	4.1440
8	2021	0.0977	0.5803	9.0134	3.3450
9	2017	0.0902	0.2478	9.7994	0.9510
9	2018	0.0621	0.2405	9.7445	1.7360
9	2019	0.0630	0.3577	9.5207	1.2370
9	2020	0.0293	0.2284	9.6263	0.7050
9	2021	0.0273	0.2211	9.6103	2.2710
10	2017	0.0254	0.5144	11.6166	1.8380
10	2018	0.0159	0.5296	11.6050	1.3510
10	2019	0.0057	0.5866	11.5747	1.9850
10	2020	-0.1535	0.6934	11.4383	1.4900
10	2021	-0.0578	0.6071	11.3157	1.2770
11	2017	0.0254	0.5346	10.4220	1.6430
11	2018	-0.0148	0.5924	10.4238	0.8800
11	2019	0.7202	0.5076	10.2800	1.0580
11	2020	-0.0046	0.6935	10.4187	1.1370
11	2021	0.0621	0.7629	10.4890	1.2400
12	2017	0.0630	0.7952	11.5736	1.1980
12	2018	-0.1528	0.7848	11.5135	0.3110
12	2019	-0.0988	0.6970	11.4801	0.2980
12	2020	0.0865	0.6677	11.3842	0.2510
12	2021	0.0420	0.6829	11.2884	0.2690
13	2017	0.1039	1.3073	11.2048	0.7050
13	2018	0.1207	1.2291	11.2322	2.2710
13	2019	-0.2479	1.0328	11.3002	1.8380
13	2020	-0.1490	0.8101	11.2122	2.0950
13	2021	0.1207	0.7456	11.1288	2.3650
14	2017	-0.0135	0.1556	11.2487	0.1790
14	2018	-0.0988	0.1738	11.2419	1.0420
14	2019	0.0865	0.3356	11.2358	1.0610
14	2020	-0.1528	0.3222	11.1690	1.1590
14	2021	-0.0988	0.3771	11.1501	1.0330
15	2017	0.0865	0.3930	9.5127	1.2710
15	2018	-0.0475	0.4443	9.5573	0.0850
15	2019	0.0359	0.3845	9.6142	0.0900
15	2020	-0.0586	0.3275	9.6263	0.0890
15	2021	-0.0988	0.2696	9.6045	2.0950
16	2017	0.0865	0.1425	10.1604	2.3650
16	2018	-0.0071	0.1037	10.2658	0.3720
16	2019	0.0972	0.0904	10.2453	0.3000

Firm ID	Year	ROA	Capital structure	Firm size	Liquidity
16	2020	-0.2502	0.1881	10.2140	0.1490
16	2021	0.0250	0.2950	9.9969	1.5330
17	2017	-0.0419	0.5820	9.6893	1.5050
17	2018	0.0843	0.5287	9.6839	1.2650
17	2019	0.0731	0.5689	9.6790	2.2480
17	2020	0.0693	0.4618	9.6529	2.5340
17	2021	0.0096	0.5065	9.6594	3.4260
18	2017	0.0843	0.4366	10.6199	1.6430
18	2018	0.0292	0.4653	10.5985	1.0360
18	2019	-0.0510	0.4858	10.5743	0.8910
18	2020	-0.1076	0.4953	10.5524	0.7580
18	2021	-0.0104	0.6154	10.6419	2.0950
19	2017	0.0060	1.0060	10.3128	2.3650
19	2018	0.0507	0.7975	10.3167	4.7700
19	2019	0.0552	0.9662	10.3167	5.7560
19	2020	-0.0104	0.3658	10.3788	2.0950
19	2021	0.0060	0.4455	10.4173	2.3650
20	2017	-0.1508	1.4193	9.7392	61.1700
20	2018	-0.0908	0.8674	9.8471	37.3220
20	2019	-0.0753	0.5202	9.8779	13.3060
20	2020	-0.0549	0.4751	9.7861	3.2410
20	2021	-0.0104	0.4664	10.0515	2.0950
21	2017	0.0060	0.3808	10.0038	2.3650
21	2018	0.1785	0.3826	9.9781	10.6230
21	2019	0.0432	0.3937	9.9445	8.2110
21	2020	0.0739	0.4708	9.9489	7.3310
21	2021	-0.0104	0.2786	10.0939	2.0950
22	2017	0.0060	0.2851	10.1254	2.3650
22	2018	0.0171	0.2948	10.1437	1.1430
22	2019	-0.1139	0.2659	10.1172	1.0970
22	2020	0.0332	0.2797	10.0986	1.1260
22	2021	-0.0104	0.2771	9.3880	4.1440
23	2017	0.0060	0.2403	9.3871	3.3450
23	2018	-0.0044	0.2615	9.4057	6.9070
23	2019	0.0472	0.2405	9.4018	6.6660
23	2020	0.0046	0.2165	9.4605	6.3980
23	2021	-0.0001	0.8202	10.8639	1.6430
24	2017	0.0556	0.8878	10.8306	1.1960
24	2018	0.0072	0.8005	10.8657	1.2030
24	2019	0.0038	0.8552	10.8384	1.2160
24	2020	0.0274	0.8684	10.8013	0.4680

Firm ID	Year	ROA	Capital structure	Firm size	Liquidity
24	2021	-0.0001	0.0783	9.0051	0.4500
25	2017	0.0536	0.0910	8.9215	0.4420
25	2018	0.0098	0.1478	8.6734	0.3410
25	2019	0.0250	0.1914	8.6891	0.2830
25	2020	-0.0419	0.2388	10.0180	4.1440
25	2021	0.0843	0.2651	9.9624	3.3450
26	2017	0.0246	0.2212	9.9909	0.9460
26	2018	0.3097	0.2289	9.9724	0.8390
26	2019	0.1489	0.2535	9.9714	0.4260
26	2020	-0.0579	0.3028	9.3476	0.3150
26	2021	0.2164	0.2939	9.3713	0.2480
27	2017	0.0087	0.2801	9.3374	1.7140
27	2018	-0.0104	0.2843	9.3254	1.8530
27	2019	0.0060	0.3822	9.3577	2.0440
27	2020	0.0282	0.2833	8.4583	2.3800
27	2021	0.0060	0.2710	8.4905	1.6430
28	2017	-0.0029	0.2674	8.5366	0.0560
28	2018	-0.0294	0.2358	8.5697	0.0380
28	2019	0.0556	0.2410	8.5753	0.0760
28	2020	-0.0383	1.1388	8.6141	0.1640
28	2021	-0.0104	0.9389	8.6193	4.1440
29	2017	0.0060	0.7282	8.6853	3.3450
29	2018	0.0278	0.6733	8.7194	3.9900
29	2019	0.0202	0.5869	8.7217	4.4930
29	2020	0.0124	0.4759	10.2827	5.5600
29	2021	0.0282	0.4368	10.2700	1.6430
30	2017	-0.0187	0.3876	10.2391	1.1160
30	2018	0.0031	0.3467	10.2425	1.1290
30	2019	-0.0152	0.3458	10.2478	1.1120
30	2020	0.0250	0.3484	10.1786	1.0860
30	2021	-0.0419	0.3469	10.1699	1.0770
31	2017	0.0843	0.3099	10.1358	0.0570
31	2018	0.0635	0.3569	10.1633	15.5880
31	2019	0.1020	0.3686	10.1453	19.4670
31	2020	-0.0104	0.6834	8.1975	4.1440
31	2021	0.0060	0.6793	8.2315	3.3450
32	2017	0.0975	0.5936	8.0883	2.6410
32	2018	0.0955	0.7626	7.9403	2.5640
32	2019	0.0878	0.7537	7.6941	2.6800
32	2020	0.0837	1.0875	9.6911	2.7520
32	2021	0.0498	1.0535	9.6344	2.7740

Firm ID	Year	ROA	Capital structure	Firm size	Liquidity
33	2017	-0.0104	1.0108	9.6268	4.1440
33	2018	0.0060	0.9063	9.6104	3.3450
33	2019	0.0060	0.8892	9.5264	0.5660
33	2020	-1.7648	0.5301	8.1875	0.3450
33	2021	-1.2855	0.5264	8.7480	0.4720
34	2017	0.0282	0.5370	8.8210	1.6430
34	2018	0.0712	0.4524	8.7519	1.1910
34	2019	0.2803	0.4029	8.1494	1.3020
34	2020	0.0217	0.0457	9.3639	1.6320
34	2021	0.0113	0.0748	9.3440	0.8200
35	2017	0.0336	0.0748	9.3229	0.6250
35	2018	0.0184	0.0843	9.2666	0.7980
35	2019	0.0239	0.3640	9.1004	0.7620
35	2020	0.0208	0.5597	10.2906	0.9480
35	2021	0.0001	0.5245	10.3072	4.1440
36	2017	0.0060	0.5261	10.3114	3.3450
36	2018	0.0668	0.5548	10.3013	11.7340
36	2019	0.0324	0.0246	10.2701	8.7720
36	2020	0.0065	0.7179	10.4682	9.3380
36	2021	0.0278	0.7097	10.3503	1.6430
37	2017	0.0202	0.6361	10.4122	1.0350
37	2018	0.0083	0.5670	10.4759	1.0470
37	2019	0.0082	0.4912	9.3092	1.1020
37	2020	0.0132	0.4925	9.3111	1.1880
37	2021	0.0060	0.4482	8.8784	1.6430
38	2017	0.0211	0.4229	8.9165	2.5450
38	2018	0.0060	0.4367	8.8757	1.6430
38	2019	-0.0217	0.4861	9.3983	22.4360
38	2020	0.0201	0.3917	9.4355	59.5840
38	2021	0.0060	0.2804	9.3327	1.6430
39	2017	-0.0022	0.5297	8.7813	2.4930
39	2018	0.0267	0.4680	8.3074	1.3820
39	2019	0.0045	0.4500	8.3560	1.0360
39	2020	0.0033	0.4420	8.3943	0.9760
39	2021	0.0060	0.3410	8.4223	1.6430
40	2017	0.0113	0.2830	8.4542	1.0970
40	2018	0.0336	0.4000	8.3074	0.9510
40	2019	0.0184	0.3180	8.3560	1.2050
40	2020	0.0239	0.3990	8.3943	1.4750
40	2021	0.0208	0.4000	8.4223	1.5040
41	2017	0.0001	0.3350	8.4542	0.7970

Firm ID	Year	ROA	Capital structure	Firm size	Liquidity
41	2018	0.0034	0.3260	8.3308	0.3160
41	2019	0.0096	0.3380	8.3832	0.6470
41	2020	0.0278	0.3760	8.3873	4.1440
41	2021	0.0202	0.3370	8.4092	3.3450
42	2017	0.1042	0.4600	8.4388	4.9970
42	2018	0.0977	0.6790	8.0748	9.3100
42	2019	0.0902	0.4140	8.1230	5.1330
42	2020	0.0621	0.7370	8.2037	1.2460
42	2021	0.0630	0.5460	8.2595	2.0700