RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND PERFORMANCE OF LISTED FIRMS IN NAIROBI SECURITIES EXCHANGE

ERASTUS NGURE

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DECLARATION

This thesis is my original work and has not been presented for a degree or any other award in any other University.

Signature……………………………………   Date…………………………………

Erastus Ngure

BUS-3-0707-3/2015

This thesis has been submitted for examination with our approval as University's supervisors.

Signature……………………………………   Date ………………………………….

Mr. Fredrick Mutea

School of Business and Economics

Kenya Methodist University

Signature ……………………………………………   Date ……………………………

Dr Wilson Muema

School of Business and Economics

Kenya Methodist University

DEDICATION

To my wife Joyce and daughters Millicent and Melissa whom I denied lots of time while busy with my studies.

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ABSTRACT

The bear run experienced in 2016 has provided an opportunity for investors to venture into the securities market, a need exists for the individual organizations to assess their capital structures to assure entrant and existing shareholders of sustainable and economically viable financial returns. The study looked at the connection between capital structure and performance of companies quoted at the securities market in Kenya. To be specific, the study looked to determine the effect of internal financing, equity financing, short term, and long term debts on performance. Two theories informed the research namely trade-off and pecking order theories. A census survey was used where data was collected from all the listed firms that were operational from the year 2009 to 2016. Questionnaires were used to collect data. Descriptive statistics for each study variable were computed, summarized in tables and discussed. Multiple linear regressions were used to determine the significance of each variable to the firm's performance. The results revealed that there exists a significant relationship between equity financing, long term debt financing, internal financing and performance. It was established that the mean equity financing of the quoted firms was fluctuating within the eight years period of examination. Affordable long term debt assists a firm to access productive technologies that it would not have otherwise achieved using internal financing. Debt creates an incentive for the managers to work harder and encourage them to make use of the best investment opportunities.On the other hand, the study could not establish a significant relationship between short term debt financing and performance. It was also found that internal financing and mean for long term debt financing of the firms had increased consistently over the years. The study concludes that a firm that utilizes equity finance excels financially. In addition, affordable long term debt assists a firm to access productive technologies and hence improves its performance. Therefore, equity financing, internal financing and affordable long term debt were recommended as a source of financing. It was proposed that the analysis should be applied to non-listed companies to determine whether contrasting conclusions can be made when relating capital structure to the output of the business.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

GDP - Gross Domestic Product

NSE - Nairobi Securities Exchange

SME - Small and Medium Entreprises.

<center>**CHAPTER ONE**</center>

1.0 INTRODUCTION

This chapter provides a detailed introduction to the research topic. It defines what capital structure and performance is and delimits the contextual and conceptual scope within which the two variables are assessed in the study. The study's objective and hypothesis are presented at this stage with the assumptions and limitations likely to be encountered in the research process also documented.

1.1 Background of the Study

In general, the assets of a firm are financed by a combination of equity shares, preference shares, retained earnings, short-term debt, reserves, and long-term debt (Patra & Panda, 2006). The financing mix of a firm together comprise the capital structure of the firm. The financing mix may take the form of the unlevered firm, where it is financed wholly through equity. A firm can also be levered, by financing it through debt capital only, which is impractical since rarely will any provider of funds invest in a firm without owners. In most cases, the capital structure of the firm comprises a combination of both equity and debt, which depends on the consideration of certain proportions (Ishaya & Abduljeleel, 2014). Often, disputes arise when the strength of shareholders' equity is reduced due to debt providers. This makes the capital structure very essential in maximizing shareholders' wealth and ensuring the steady perfomance of a firm (Ishaya & Abduljeleel, 2014). The most appropriate capital structure lessens the cost of capital and returns are maximized. This further enhances the performance of a firm (Salazar, Soto, & Mosqueda, 2012). Therefore, the collapse of a firm might be due to the lack of an appropriate capital

structure to steers growth and promote its performance (Memba & Nyanumba, 2013).

The above discussion implies the existence of a connection between capital structure and firm performance. A study by Nenu, Vintila & Gherghina (2018) emphasized the correlation between capital structure on one hand and the performance of the firm and the share price on the other hand. Various researchers have given divergent views concerning the relationship between components of capital structure and firm performance. Muigai (2016) stated that firms need to utilize shareholders' equity and less debt in their financing mix since debt is seen as a major contributor to financial distress. This study recommends the adoption of debt in the long term before debt in the short term after equity is exhausted. Conversly, Uwalomwa, and Uadiale (2012) posited that having long term debt in the financing mix leads to low performance in the firm. Besides, Njagi (2013) stated that the use of debt improves the shareholders' control by the creditor and payment of tax to the government for use of debt. On the other hand, debt capital increases agency costs between shareholders and creditors.

Memba and Job (2013) concluded that the capital structure of financing has a relationship with performance. Vătavu (2015) links the choice of financing to impacts on the share market price and the value of the company. Therefore, suitable considerations need to be carried out while making capital structure decisions to avoid firm financial distress (Memba & Nyanumba, 2013). There are various alternatives for choosing the appropriate capital structure, which requires a deeper understanding of the relationship between capital structure and firm performance, especially in public traded companies. Divergent views such as these have led to the

need for researchers to further investigate the relationship between the capital structure of a firm and its performance in different contexts.

Nevertheless, a debate exists on the best way to finance firm operations to promote optimal results. This has led to divergent views on whether capital structure impacts firm performance. In this context, increased and sustained profitably is the primary financial performance indicator that is relied upon to measure and compare the financial wellbeing of firms operating in a given industry as well as to compare the overall performance of different industries (Ongore & Kusa, 2013). Financial performance can be indicated using several tools, which are employed depending on the target stakeholders. In tracking the financial performance of a firm, each stakeholder's interests tend to be different; for example, whereas creditors are interested in the firm's liquidity, investors are keen on profitability. Considering the variant stakeholder expectations, financial performance measurement tools are divergent and examine such key areas as profitability, liquidity, gearing (financial risk), and efficiency (asset utilization) of the firm (Ongore & Kusa, 2013).

A global financial crisis was experienced in 2008 which led to the collapse of Lehman Brothers and there were tremendous effects on financial markets worldwide.There were questions about how financial and macroeconomic instability would affect the capital structures of firms.

Specifically, the performance of Kenyan publicly traded firms has attracted a lot of interest in the recent past. Most of these companies, especially those classified under the NSE 20 share Index, which is a measure of the 20 best-performing companies, have posted poor financial performance results. The financial problems in these firms, which are drawn from various industrial sectors led to the decline of market

turnover, from Ksh.15.11 billion in 2015 to Ksh.7.11 billion in December 2016, and market capitalization, from Ksh. 2.05 trillion in 2015 to Ksh.1.96 trillion in 2016 (Anyanzwa, 2017). While the decline experienced in 2016 has provided an opportunity for investors to venture into the Nairobi bourse, a need exists for the individual firms to assess their capital structures to assure entrant and existing shareholders of sustainable and economically viable financial returns.

In relation to capital structure and performance, divergent views such as these have led to the need for researchers to further investigate the relationship between the capital structure of a firm and its performance in different contexts. Nevertheless, this analysis aims to investigate the relationship between the capital structure and performance of the companies listed in the NSE.

1.2 Problem Statement

Capital structure has been put forth in finance literature as an important antecedent to improved financial performance (Memba & Job, 2013). A study by Margaritis and Psillaki (2010) demonstrates that concentrated ownership improves firm performance, while capital ownership results in increased debt in an enterprise's capital structure. Berger and Di Patti (2006) affirms this finding by observing that a lower equity ratio results in improved profitability for a firm. These studies provide sufficient evidence of the close relationship between capital structure and performance.

However, the performance of the listed firms has been declining recently especially in 2016 where the market capitalization shrank to 513.1 billion compared to 658.8 billion the previous year. Most of these companies, especially those classified under the Nairobi Stock Exchange (NSE) 20 share Index, which is a measure of the 20

best-performing companies in the bourse (see Figure 1), have posted poor financial performance results. This has forced various listed firms to consider restructuring their capital structures to avoid delisting and potential collapse (NSE, 2016). While the bear run experienced in 2016 has provided an opportunity for investors to venture into the Nairobi bourse, a need exists for the individual firms to assess their financial structures to assure entrant and existing shareholders of sustainable and economically viable financial returns. Despite this, there are very little advances in documenting the importance of capital structure in improving performance. Existing studies have made profound efforts in documenting the importance of capital structure in fostering performance; however, they have focused either on specific industries (Njagi, 2013) or a particular financing approach (Mwangi, Makau, & Kosimbei, 2014). As a result, there is a lack of adequate empirical literature that can be relied upon by Kenyan firms in their restructuring efforts. Therefore, this study endeavors to bridge this void by conducting a study that cuts across firms quoted at the securities market.

1.3 General Objective

The objective of this study is to assess the relationship between capital structure and performance of listed firms at the NSE.

1.4 Specific Objectives

I. To determine the effect of internal financing on the performance of listed firms in Kenya.

II. To assess the effect of equity financing on the performance of listed firms in Kenya.

III.   To establish the effect of short term debt on the performance of listed firms in Kenya.

IV.   To evaluate the effect of long-term debt on the performance of listed firms in Kenya.

1.5 Research Hypothesis

H_0: There is a significant relationship between the internal financing and performance of listed firms in Kenya.

H_1: There is no significant relationship between the internal financing and performance of listed firms in Kenya.

H_0: There is a significant relationship between equity financing and performance of listed firms in Kenya.

H_2: There is no significant relationship between equity financing and performance of listed firms in Kenya.

H_0: There is a significant relationship between short term debt and the performance of listed firms in Kenya.

H_3: There is no significant relationship between short term debt and the performance of listed firms in Kenya.

H_0: There is a significant relationship between long term debt and the performance of listed firms in Kenya.

H_4: There is no significant relationship between long term debt and the performance of listed firms in Kenya.

1.6 Significance of the Study

The findings of this study will be of great importance to the management of the listed companies as it will discuss the most critical factors surrounding financial components and their impact on the performance of the listed companies. This will contribute to a greater understanding of approaches a firm can use to raise funds so as to increase its performance, and become a market leader. The findings of this study will also be of great importance to researchers as they will make significant contributions to existing knowledge and literature. Financial consultants and financial analysts will find the study helpful in their social and advisory services on methods to finance a firm, especially listed companies.

Most importantly, the results will contribute to the growth of the Kenyan economy. Numerous research has linked listing companies in the NSE to immense economic growth (Njiraini, 2006; Omoke, 2010; Owiti, 2012; Nyamakanga, 2013; Kipchumba, 2017; Njenga, 2016). Furthermore, public listed companies are very crucial for achieving numerous economic agendas in Kenya. For instance, by being listed in the NSE, companies facilitate NSE's role to mobilize domestic and international resources for investment in Kenya and make Kenya a central financial hub in Africa, that is based on the capital markets Master Plan in Vision 2030 (NSE, CO. profile). These contributions will also fast-track the attainment of other internal and external economic development agendas, including African Union's (AU) African Agenda 2063, United Nations (UN's) 17 Sustainable Development goals (SDG), and Kenya's Big Four Agenda. As the listed firms improve, so will the economy.

1.7 Scope of the Study

The present study was restricted to the relationship that exists between capital structure and performance of listed firms in Kenya. The analyzed data in this study pertains to the performance of all listed firms in the NSE for a period of 8 years between 2009 to 2016. The NSE is one of Africa's top exchange markets for Securities. It was established to spur Kenya's economic growth by providing local and international investors with an opportunity for investment and saving, while also acting as an avenue for accessing capital for both local and international firms. Since its establishment in 1954, NSE has listed about 67 firms (See Appendix III), including its self-listing in September 2014. This made it the second African Exchange to be listed, after the Johannesburg Stock Exchange. As of August 2016, the listed firms were categorized under 10 major industrial sectors, which included an additional 3 categories for debt securities NSE. In this study, these sectors were analyzed separately to provide suitable conclusions about the various companies trading in NSE. Data was collected from financial managers from each of the 51 listed companies that were in operation for the eight years of concern to the study.

1.8 Limitations of the Study

Most listed companies considered some information confidential and hence, they were concerned about revealing it. The researcher could not verify the accuracy of the financial reports given by respondents. It is not uncommon for firms to provide doctored financial reports that make them look favorable to potential investors. There is no way to deal with this limitation in this study as none of the companies had been reported for this crime. The data was used based on the assumption that they were accurate.

1.9 Assumption of the study

Data obtained through questionnaires was valid since the data collection instrument developed was reliable and appropriate for the study. The researcher operated with the assumption that the financial statements found on the company websites were accurate. Moreover, the study also adopted a working assumption that the financial crisis that was witnessed in 2008 did not spill over to the period under study since this would significantly affect the equity-debt ratio.

CHAPTER TWO

2.0   LITERATURE REVIEW

2.1 Introduction

This chapter detailed relevant literature on the relationship that exists in the Nairobi Securities Exchange between capital structure and performance of the listed companies. This concentrated on theoretical analysis, empirical examination, and conceptual context.

2.2 Theoretical Review

In this section, relevant theories were reviewed in order to establish the theoretical framework of this study.

2.2.1 Capital Structure and Firm Performance

Capital structure entails the method through which a firm chooses to finance its assets and operations. Firms can choose to finance their operations and assets through shareholder's equity, debt financing, or a combination of both (Orangi, 2017). An appropriate mix of debt and equity financing enhances the performance of a firm. This mix is referred to as the optimal capital structure and is meant to reduce the cost of capital thus, maximizing the value of the firm through the best combination of shareholder's equity and debt. Mwangi, Makaun & Kosimbei (2014) argued that the optimal capital structure is determined by variables/components such as the overall size of the firm, projected growth, the profitability margin, the liquidity level, and the level of tangible assets of a firm. These components of the capital structure of a firm have varied influences on firm performance.

The performance of a firm is determined by the firm's profitability and especially return on equity, return on total capitation, and sales profit margins. These measures depend upon the historical accounting data patterns generating them. Samuel (2016) claimed that the performance of a firm also depends on the market perception of a firm's competitiveness, expected returns, and riskiness of the current investments of a firm. Perception is particularly applied by lenders and investors in the stock market. The debt share of assets and shareholders' equity is also used as a measure of a firm's performance as well as debt repayment history (Hagel, Brown & Davison, 2010).

According to Mwangi, Makaun and Kosimbei (2014), firm performance hinges on the capital structure. Firms that rely more on internal financing to finance their assets and operations have higher control over the decisions of the firms thus, they can respond promptly to a new investment portfolio than a firm whose main source of financing is external debts. This promotes a firm's performance. Capital structure determines the financing mix chosen by a firm, a factor that influences the cost of financing. An optimal capital structure allows a firm to choose the financing mix between equity and debt that maximizes the firm's value. This determines the firm's performance in the long run.

2.2.2 Pecking Order Theory

The pecking order theory was developed by (Myers & Majluf, 1984). The theory proposes that a firm has a particular order in making a financing decision. Therefore, information asymmetry contributes to the increased cost of financing. According to this model, firms rank their alternatives for finance sources. Precisely, they rank internal financing first and use it till exhausted, before they turn to debt and equity

as the last alternative. Internal financing is preferred due to its nature of no flotation cost and expenses on disclosures (Kishore, 2009). This implies that businesses access external funds once the internal funding is considered inadequate to facilitate the financing of a project. Equity issues experience asymmetric information problems compared to debt (Meier & Tarhan, 2007). However, the adverse selection is always available in external financing but in different measures; this leads managers in selecting debt first before equity.

This theory makes a number of assumptions, which denote its insufficiency. Firstly, it assumes that there exists information asymmetry, which entails the fact that managers practice insider trading since they possess more information about the future of the organization. Additionally, the managers perform in the best interest of existing shareholders (Sheikh & Wang, 2011). Consequently, potential investors are disadvantaged. Furthermore, the theory does not consider the fact that most firms keep some cash for caution in anticipation of the financial crisis (Kishore, 2009). Additionally, not all firms make an adequate profit to be used as an internal form of finance, an assumption that is one of the major indicators of the principle's weakness (Upneja & Dalbor, 2001). The theory also does not work if all the shares are allocated to existing shareholders since they are in the strong form of an efficient market hypothesis (Abosede, 2012).

Nevertheless, previous studies carried out byNwude, Itiri, Agbadua, and Udeh (2016) have been in support of this theory. Fama and French (2002) found larger firms to demonstrate pecking order behavior than the small ones. Thus, the pecking order theory forms bases for discussing the variables that are financing through equity, short term, and long term debts.

This theory relates to this study in various ways. Firstly, it facilitates an understanding of the capital structure of different companies listed in the NSE by comparing their debt-equity ratio. Furthermore, it enables an analysis of the company's worth.

2.2.3 Trade-Off Theory

Myers (1984) developed this theory, and it is derived from tax and agency cost-based models. Modigliani and Miller (1963); DeAngelo and Masulis, (1980); Jensen and Meckling (1976) indicate that businesses can have an optimal capital structure by offsetting the debt and debt cost benefits. The trade-off theory thus refers to the idea that a business determines the amount of debt funding and equity financing to use by weighing the costs and benefits. It states that each funding option has its advantages and shortcomings. For instance, financing with debt leads to numerous benefits related to a tax of debt. However, debt financing has costs like the costs of financial distress, bankruptcy costs, and agency costs.

This theory is useful for this study for two reasons. It allows one to understand the rationale behind an individual firm's financing mix. More importantly, it suggests that there could be a favorable relationship between the choice of finance and firm performance. Moreover, this trade-off theory implies that firms have target leverage, which presents optimal outcomes for the firm. Over time, businesses adjust their leverage toward the target to achieve maximum results.

2.3 Empirical Review

Many empirical studies studied the relationship between various types of financial structures to effects the success of companies.

2.3.1 Equity and Performance

Mulama (2014) conducted a study of the retained earnings factors in NSE-listed companies. The data were gathered from 41 trading firms between 2009-2012, and multiple regression models were used. The data from the analysis also showed that there was negligible or no association between retained earnings and dividend payout and a substantial connection to the tangibility of properties. Furthermore, the analysis found a strong or negative association between retained earnings and leverages.

Akbarpour and Aghabeygzadeh (2011) reviewed literature on whether a relationship exists between the financial structure and the success of companies listed in the Tehran Stock Exchange. Data collected by using library research and rahaverdnovin software were from the 101 listed firms. Multiple regression analysis was used, and the results indicated that a significant relationship existed between financial structure and asset returns. Nevertheless, on financial structure and profitability, no meaningful connection was found. Additionally, Arulvel and Ajanthan (2013) studied capital structure and financial performance and found out that debt ratio and debt to equity ratio were negatively correlated with net profit, gross profit, and return on equity. This was in line with a report by Pratheepkanth (2011) on listed companies at the Sri Lankan Colombo stock exchange.

Takeh and Navaprabha (2015) conducted a study on the capital structure and its effect on financial performance over 5 years from 2007 to 2012. The results of the multiple regression analysis gave the impression that the financial performance effect on the capital structure is important. The findings of the correlation study

depicted a negative link between capital structure and financial performance. Thus, there is a need for the firms to inject more funding from internal rather than borrowing, as the benefits of borrowing are less than the cost of internal financing.

Nwude, Itiri, Agbadua and Udeh (2016) studied the effect of the debt system on the financial performance of listed companies in Nigeria. We used information on financial statements and analyzed them using the concept of regression. The results indicated that there is a significant negative relationship between a firm's debt structure and efficiency when calculated using the return on assets. This research reinforced the pecking order principle. An increase in the cost of funding a company externally is therefore due to moral hazard and adverse selection. Therefore, a firm needs to consider the payback derived from debt against financial distress.

Samuel (2016) did a study on the impact of capital structure on Kenyan commercial banks' financial performance. Secondary data was used and multiple linear regression adopted. The outcome revealed that debt, preference shares, and retained earnings are positively related to financial performance while ordinary shares are negatively related. The researcher, therefore, recommended that firms should maintain a low number of ordinary shares to avoid financial distress. The study did not consider other factors like advertising, inflation, or even government policies.

2.3.2 Short-term debt and performance

In a review study conducted by Githaiga and Kabiru (2015) about debt financing and financial performance of 50 SMEs in Eldoret Kenya, stratified sampling was used to get secondary data. Regression results disclosed that short term debt and long term debt have a negative effect on financial performance. It was noted by the

researcher that SMEs are disadvantaged over the large firms since they can't raise funds in the capital market. The researcher thus recommended the firms to diversify their ways of raising funds so as to improve their sustainability.

Muchiri, Muturi and Ngumi (2016) have studied the relationship between the financial structure and performance of listed companies at East Africa Securities Exchanges. They followed the explanatory research design and collected secondary panel data for 61 companies, spanning from 2006-2014. The results from correlation and regression analysis indicated that current liabilities, non-current liabilities, internal equity, and external equity had an insignificant negative relationship with financial performance. Additionally, economic growth had a moderately significant impact. The study, therefore, recommended that before making financing decisions managers need to study and understand the business cycles.

2.3.3 Long-term debt and performance

A study on the impact of the debt on Pakistan's competitiveness for the non-financial sector was carried out by (Habib, Khan & Wazir, 2016). The regression model was used to analyze annual reports data. Firm size, growth opportunities, and sales growth were used as control variables. The results showed that a negative significant relationship exists between debt and return on assets. Increasing debt proportion in the financial structure would reduce the profitability of a firm. It is therefore important for a firm to consider internal financing to debt financing. However, this study presented the situation during the global financial crises. Firms are also advocated to utilize both internal and external financing and make the most use of the merits of debt financing. There is also a need for developing the capital market

so as to improve access to long-term capital which is good for the long-run profitability of the firm (Prempeh, Asare & Sekyere, 2016).

Chemutai, Ayuma, and Kibet (2016) assessed the effect of the capital structure on Kenya's share price performance of listed commercial banks. The data were analyzed using descriptive statistics, variance analysis, and correlation. The results showed a relationship exists between equity, bond, debt, retained earnings, and share price performance. Retained earnings improve firm liquidity and it is cheaper compared to other sources of finance. Bonds and debts are also important in signaling firm performance as payment of it would portray the ability to pay for the firm (Chemutai, Ayuma & Kibet, 2016). The study recommended that commercial debt should be cheaper so as to lower the cost of operation for a firm.

Kajirwa (2015) studied the effect of debt on firm performance and used 11 commercial banks that were listed in NSE and longitudinal research design to collect data. Correlation and regression model was adopted in the analysis. Analyzed data revealed that debt affects the return on assets negatively but not statistically significant. The researcher recommended that firms should diversify their ways of sourcing for funds that are cheaper and central banks to lower the interest rates on loans offered to commercial banks.

Siro (2013) conducted a study on the impact of capital structure on the financial performance of companies listed on the NSE. The debt ratio was used as a measure of the capital structure while the return on equity was used as a measure of the financial outcome. That research was carried out during the electioneering period, which is characterized by political tension. Secondary data was used. Regression analysis results revealed that interest in long term debts was found to exceed the

returns of the investment. It facilitated the increase in firms' risk and lowered their performance. The researcher recommended that listed firms need to finance their firms using equity rather than long term debt.

Soumadi and Hayajneh (n.d.) studied the relationship between capital structure and corporate performance of publicly listed firms in Jordan. The research used multiple minimal square regression models (OLS) and attempted to establish a correlation between corporate capital structure and corporate performance over a period of five years. The results showed that the capital structure was negatively and statistically correlated with the firm's output in the study. Another finding from the analysis was that there was no significant difference in how they operate between highly leveraged financial firms and low financial leveraged firms in the effect of financial leverage. The research also came to the conclusion that the relationship between a company's capital structure and success in both high growth firms and low growth firms was negative.

The literature reviewed reveals that a relationship exists between various forms of financing structures and performance. These findings justify this study's hypotheses by indicating that this association exists in different contexts. The goal of this study is to explore this relationship in the Kenyan context, through analysis of publicly listed firms.

2.4 Conceptual Framework

The conceptual framework indicates the relationships between the variables in this study.

Figure 0-1

Conceptual Framework

| Independent variables | Dependent variable |
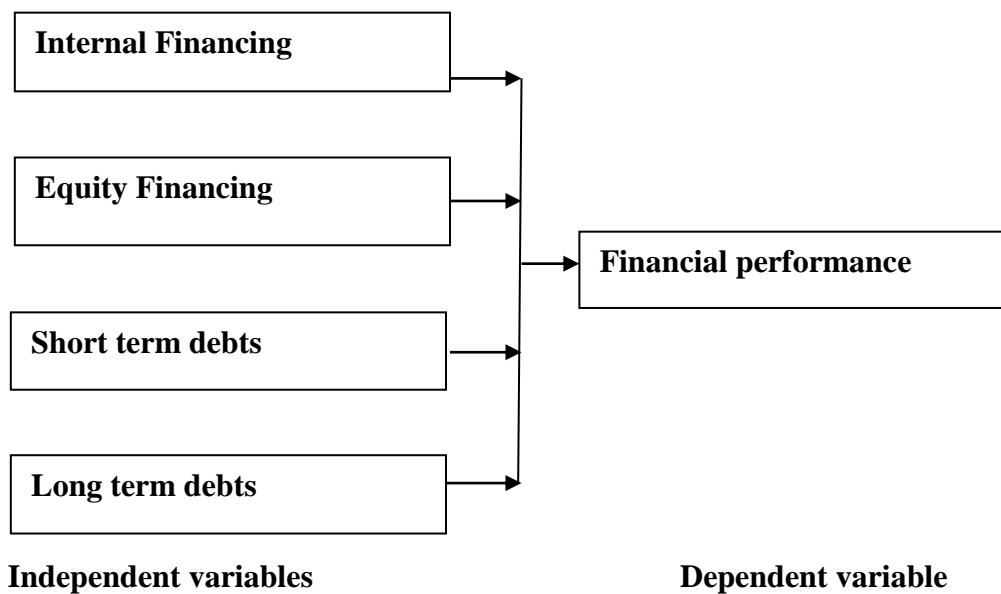
The explanatory constructs represents capital structure compositions that are internal and external equity, short-term and long-term debts. The choice of each or a combination of these elements affects a firm's financial performance (Mamba & Job, 2013).

2.4.1 Equity

Equity funding reflects a company's ownership interest and is also the debt-free part of resources (Moyer et al., 1999). It is the sum paid by the proprietors and can be in the form of ordinary share capital and preferential capital. Those who provide equity are entitled to returns that are mindful of dividends from income earned by the company (Titman et al., 2011). Preference shareholders are the first to receive their

dividends at a rate agreed before ordinary shareholders, and any unfair advantage to the growth programs of the company is retained (Titman et al., 2011).

2.4.2 Short-term debt

Short term debt, referred to as current liabilities in the financial position statement, are obligations payable within a year like overdraft facilities and are good indicators of liquidity and performance of a firm when compared with current assets. When the current liabilities outweigh current assets, the firm has a poor liquidity performance. Increasing short-term debt is seen as a source of business capital (Ryan, 2004). Short-term debt in an atmosphere of unfinished contracts gives the lender a right of control, as the willingness of the company to roll over the debt can be dependent on financial ratios and satisfactory results. Since this process restricts managerial flexibility, it may help to ease financial constraints (Rajan & Winton, 1995). This increased availability of external finance will improve productivity.

2.4.3 Long-term debt

Long term debt refers to obligations which are payable beyond one year like bonds and mortgages. Such long term loans are used to measure the gearing extent of a firm. Investments that usually have a longer payback period are financed by long term debts. They carry the benefit of having low short term shocks exposure and are usually secured by formal agreements thus more stable than short term debts. It is famous for financing capital expenditures (Lancett, 2008). However, it is usually necessary to carry out cost-benefit analysis at all times to determine the ratio of each component that forms part of the long term debt structure (Ikapel & Kajirwa, 2017). Affordability of long term debt assists a firm to access productive technologies

which are not easy through short term debt due to liquidation worries and thus may interfere with a firm's financial performance (Jaramillo & Schiantarelli, 2002).

2.4.4 Performance

To clearly understand how performance is affected by capital structure, research has been carried out previously but it seems to be rambling. For example, Nwude, Itiri, Agbadua, and Udeh (2016) looked at how debt structure affects the performance of listed companies in Nigeria. They concluded that there is a significant negative relationship between a firm's success and its debt structure. Kajirwa (2015) also conducted an analogous study but on listed firms in NSE and concluded that debt affects return on assets negatively but not statistically significant. Samuel (2016) conducted a study into the effect of capital structure on commercial banks' financial performance. Findings revealed that preferential shares, debt, and retained earnings are related positively to financial performance while ordinary shares are related negatively. The study carried out by Muchiri, Muturi, and Ngumi (2016) was in disjoint as current liabilities, non-current liabilities, internal equity, and external equity had an insignificant negative relationship with financial performance.

2.5 Operational Framework

The operational framework represents the relationships between different components that relate to the study.

Figure 0-1

Operational Framework

Dependent Variable   Independent Variables
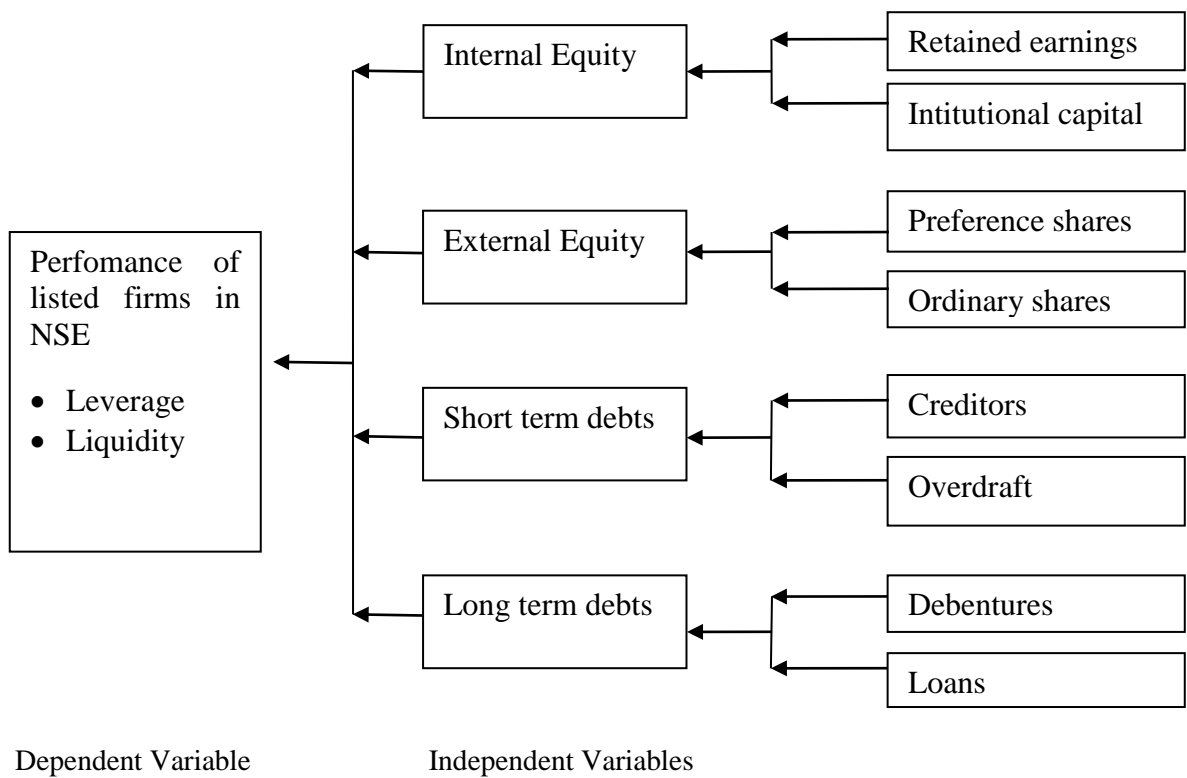
CHAPTER THREE

3.0   RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the design that was used, target population, sampling procedure, data collection instruments and procedures, and how data was analyzed.

3.2 Research Design

According to Miller, Research Design is a planned sequence of the entire process involved in the conducting of the research study. This study covered all non-financial listed companies at the NSE between the years 2009 to 2016. The choice of this period was informed by various reforms that have been undertaken at the NSE. These includes a rise in initial public offers (IPOs), additional offers (AOs), right issues, bonus issues and stock splits all of which have great influence on stock returns. Moreover, cross listing, demutualization, dematerialization and global financial crisis occurred in this period which is likely to influence returns' volatility. With the upward surge of the NSE index and bullish behavior dominating the market to the end of 2013, an empirical scrutiny was therefore worthwhile and timely. There were 51 non-financial listed companies in 2009. This study used a causal research design. This research involved both descriptive and inferential. Descriptive analysis involved the use of frequencies and tables while in inferential statistics multiple linear regression was used.

Document analysis was also used to relate events that have occurred in the past to current events. It enabled the researcher to relate the research problem to the missing gaps of other research work which have been covered and also show what the other

researchers overlooked possibly due to time differences or economics and social factors (Kombo & Tromp, 2006).

3.3 Target Population

The study targeted all the listed companies that traded at the NSE, for the period 2009-2016. There were 51 listed companies that were in operation over the eight years period of interest to this study. The selection of listed firms was due to their ability to raise a large amount of capital and they are accountable to the majority of stakeholders by providing mandatory and voluntary information. It refers to a set of elements that the researcher wants to make a conclusion using the sample statistics. The group possesses the information and view relevant to the survey content (Edwards, Thomas, Rosenfeld, & Booth-Kewley, 1997). Sekaran and Bougie (2011) describe the population as the whole group of people, incidents, or interesting things that the researcher would like to examine.

3.4 Sampling Design

The study did not rely on any sampling technique since respondents were drawn from the entire population. Consequently, a census was conducted across the 51 listed firms, whereby the respondents were the 51 finance managers of the listed companies.

3.5 Data Collection Instruments

The study utilized both primary and secondary sources of data. Data was collected using questionnaires that were administered to the respondents by the researcher. Data was collected using closed ended questions, which gave the respondents limited, and pre-determined response options to choose from. For this analysis, a questionnaire was adequate as questionnaires are widely used to gather essential

population information (Orodho, 2004) and each parameter in the questionnaire was designed to answer a specific objective (Mugenda & Mugenda, 2003).

The questionnaires were administered through email because it was not feasible to meet with all the financial managers from the 51 listed firms (2009-2016). The researcher retrieved the respondents' contacts through referrals as well as from company websites and professional profiles provided in such platforms as LinkedIn. Secondary sources mainly entailed industry reports and the annual financial reports from the individual firms. The reports were obtained from the NSE portal as well as the individual firm's websites. Data from these sources were compared against that returned from questionnaires in order to derive the appropriate conclusions and recommendations regarding the relationship between capital structure and performance.

3.6 Reliability

To check the accuracy of the research tools with a view to correcting them, a reliability test was carried out. The thesis used the internal consistency method to test for reliability by using the Cronbach Coefficient Alpha test to check the research tools. This was deemed appropriate on a scale of 0 to 1, 0.7, and above. Internal consistency of the data was calculated by correlating the scores obtained at one time with scores obtained in the research instrument from other times.

3.7 Validity

Using the material validity test, the validity of the instrument which is the accuracy and meaningfulness of inferences was measured. The degree to which data obtained using a particular instrument reflects a specific scope of measures or content of a particular concept is assessed by information validity.

3.7 Data Analysis and Presentation

Descriptive and inferential statistics were used to analyze both primary data. Descriptive statistics were presented in the form of frequencies and percentages. Data was edited, coded, classified, and summarized into categories. Multiple linear regression and correlation were used to correlate the independent variables (equity financing, short term debts, and long term debt) and the dependent variable (performance). This assisted in indicating the strength and direction of the relationship between the variables.

The multiple linear regression model for the study is expressed as follows:

Where $Y = \beta_0 + \beta_1 ef + \beta_2 std + \beta_3 ltd$

Where:

Y is performance

β_0 is the constant

β_1, β_2, β_3, are the regression coefficient the contribution of each independent variables (equity financing, short term debt, long term debt) to performance.

ef is equity financing

std is short term debt

ltd is long term debt

Trend analysis was used to analyze secondary data. The researcher analyzed the trends of performance of the listed company to understand and explain how firm performance was influenced by the capital structure. Zikmund et al. (2012) suggested that it is imperative to evaluate the trends of causality between variables to understand the extent to which the independent variable affects the dependent variable.

3.8 Ethical Considerations

Before data collection commenced, the researcher obtained authority from the School of Business of Kenya Methodist University. By use of this letter, the researcher acquired a permit from NACOSTI to conduct the research. The research kept data collected from the respondents confidential and safe. All data collected in this connection is kept in safe custody. To prevent revealing who gave what details the identification was, respondents were asked not to write their names on the questionnaire.

CHAPTER FOUR

4.0   RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the data analysis results and explains the procedure and review and profile of the quoted firms for data collection. For the study of the connection between capital structure and performance of quoted firms in Kenya, descriptive statistics and multiple regression analysis used.

4.2 Data Collection Process and Analysis

The analysis utilized primary as well as secondary data. Primary data was collected using a questionnaire administered to the financial officers in the listed firms while secondary data were collected from NSE handbooks and the quoted companies released financial statements. Nonetheless, this study focused on the 51 listed companies that were active for this study's eight-year duration (2009 to 2016). The research results from the collected data were analyzed using SPSS and presented in tables.

4.3 Response Rate

A total of 51 questionnaires were distributed to the financial officers of the quoted companies. Only 34 questionnaires were successfully completed; hence a 66.7% response rate was realized. Mugenda (2003) observed that a response rate of 50% is adequate for analysis and reporting. The impressive return rate could be attributed to the fact that the primary data was collected via email. Besides, the respondents were assured that the study was purely for academic purpose and the researcher had sought approval from the relevant authorities.

4.4 Reliability Test Results

The Cronbach's Alpha coefficient for the eight questions on the independent variables was found to be 0.895; hence the internal consistency of the items under the study was good since it was within the acceptable range of 0.7 to 0.9 as recommended by (Siegle, 2011).

4.5 Profile of the Respondents

The profile of the respondents details the education level, the position held, working experience, and the duration the firm has been in operation in Kenya.

4.6 Distribution of Respondents by Education Level

It was established that 58.8% of the respondents had master's degree qualification, 35.3% had a first degree while 5.9% had a CPA (K) qualification. This result signifies that most of the respondents had at least a first-degree qualification since only less than a twentieth indicated not having a first-degree qualification. Hence, the financial officers working with the listed firms were well educated.

Table 0-1

Distribution of respondents by education level

	Frequency	Percent
First Degree	12	35.3
Master's Degree	20	58.8
CPA (K)	2	5.9
Total	34	100.0

4.6.1 Distribution of Respondents by Position Held

It was revealed that 64.7% of the respondents were in top management while 35.3% were in middle level management. This was good for the study since the caliber of

respondents interviewed were likely to give credible information relating to the research variables.

Table 0-2

Position held by the respondent

	Frequency	Percent
Middle level management	12	35.3
Top level management	22	64.7
Total	34	100.0

4.6.2 Distribution of Firms by Duration of operation in Kenya

Slightly above a third (35.3%) of the firms included in the study had operated in Kenya for 41 to 60 years, 26.5% for more than 80 years, 14.7% for 61 to 80 years, same as 21 to 40 years while 8.8% had operated in Kenya for up to 20 years. The findings imply that most of the organizations included in the study had operated in Kenya for more than 20 years since only around a tenth indicated duration of up to 20 years.

Table 0-3

Duration the company has operated in Kenya

Range	Frequency	Percent
Up to 20 years	3	8.8
21 to 40 years	5	14.7
41 to 60 years	12	35.3
61 to 80 years	5	14.7
Above 80 years	9	26.5
Total	34	100.0

4.7 Descriptive Analysis of Study Variables

The study wanted to determine the effect of equity financing, short term, and long term debts on performance. The following section provides descriptive findings based on the research constructs.

4.7.1 Internal Financing

A descriptive analysis of internal financing is presented. This analysis comprise; how firms are distributed by percentage of balance sheet financed internally, respondents opinion on the influence of internal financing on financial performance, internal financing trend analysis for listed firms in Kenya (2009 to 2016), internal financing means for the trading firms, distribution of NSE listed companies by internal financing category, and industry versus internal financing cross-tabulation.

4.7.2 Distribution of Firms by Percentage of Balance Sheet Financed Internally

The study established that majority of the firms (41.2%) had up to 20% of their balance sheet financed internally, 29.4% had more than 50% of their balance sheet financed internally, 11.8% had 31 to 40% of their balance sheet financed internally same as those with 21 to 30% while 5.9% had 41 to 50% of their balance sheet financed internally. The outcome signifies that the majority of the trading companies had less than half of their balance sheet financed internally since close to three-quarters of the respondents indicated so.

Table 0-4

Percentage of balance sheet financed internally

Range	Frequency	Percent
Up to 20%	14	41.2
21 to 30%	4	11.8
31 to 40%	4	11.8
41 to 50%	2	5.9
Above 50%	10	29.4
Total	34	100.0

4.7.3 Respondents opinion on influence of internal financing on performance

Close to two thirds of the respondents (64.7%) opined that to a large extent, internal financing influenced performance, 20.6% indicated moderate extent influence while 14.7% specified that to a very large extent internal financing influenced the performance of a firm. Hence, in the opinion of the respondents, internal financing significantly influenced the performance of a firm since around four fifths of the respondents upheld this opinion.

Table 0-5

Respondents opinion on influence of internal financing on financial performance

	Frequency	Percent
Moderate extent	7	20.6
Large extent	22	64.7
Very large extent	5	14.7
Total	34	100.0

4.7.4 Internal Financing Trend analysis for Quoted Companies (2009 to 2016)

The research revealed that the mean internal financing of the quoted companies had consistently increased from 5.346 billion shillings in the year 2009 to 14.7 billion shillings in the year 2016. Hence, the mean retained earnings and reserves for the

trading firms had steadily increased from the year 2009 to 2016 as shown in figure 4.1.

Figure 0-1

Internal Financing Trend analysis for listed firms in Kenya (2009 to 2016)

	YR 2009	YR 2010	YR 2011	YR 2012	YR 2013	YR 2014	YR 2015	YR 2016
Series1	5,346.	6,542.	7,168.	9,260.	10,428	11,913	13,133	14,700
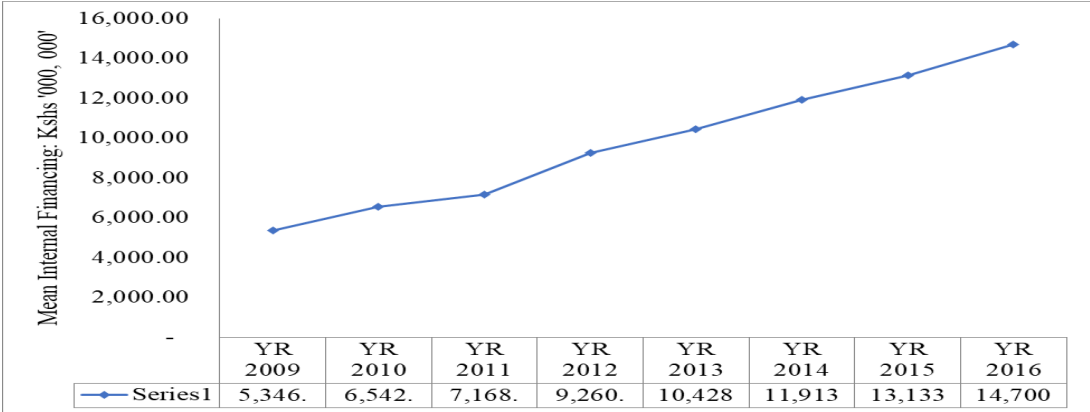
4.7.5 Internal Financing Means for the Trading Firms: 2016

It was further reported that the telecommunications and technology industry registered the highest amount of internal funding for 2016 with an average of 82.05 billion, closely followed by the insurance industry with an average of 70.369 billion shillings (SD= 110.367). With 1,386 (SD= 1,212), 1,226 (SD= 1,441) and 0,986 (SD= 1,114) billion shillings respectively, manufacturing and allied, automotive and accessories, and investment industries reported the lowest internal funding numbers. That is shown in table 4.6.

Table 0-6

Internal Financing Means for the Trading Firms: 2016

Industry	N	Mean (Kshs '000,000')	Std. Deviation	Std. Error
Telecommunication and Technology	1	82,052.20	.	.
Insurance	4	70,369.46	110,367.64	55,183.82
Energy and Petroleum	4	25,980.93	23,355.41	11,677.71
Banking	7	18,253.02	22,075.84	6,656.12
Construction and Allied Sector	2	4,718.01	7,477.65	3,344.11
Agricultural Sector	2	4,452.45	5,068.14	2,069.06
Commercial and Services	8	1,980.52	3,108.38	1,098.98
Manufacturing and Allied	2	1,386.76	1,212.07	458.12
Automobiles and Accessories	2	1,226.23	1,441.97	832.52
Investment	2	986.81	1,114.17	787.84
Total	34	211,406.39	175,221.27	82,108.28

4.7.6 Industry and Internal Financing Cross tabulation

A cross tabulation was done to establish the relationship between industry and internal financing. The result indicates that the distribution of the firms by internal financing was different between the industries. For instance, insurance, energy, and telecommunication and technology sectors had all their companies registering internal financing amounts of more than 3 billion shillings while automobiles, investment, and accessories, segments had none of their companies registering internal financing of more than 3 billion shillings.

Table 0-7

Industry and Internal Financing Cross tabulation

		<100M	100M - 1B	1-3B	3-20B	>20B	Total
			Internal Financing category: 2016				
Agricultural Sector	F	0	0	1	1	0	2
	%	.0%	.0%	50.0%	50.0%	.0%	100.0%
Automobiles and Accessories	F	0	0	2	0	0	2
	%	.0%	.0%	100.0%	.0%	.0%	100.0%
Banking	F	2	0	0	2	3	7
	%	28.6%	.0%	.0%	28.6%	42.9%	100.0%
Commercial and Services	F	3	2	1	2	0	8
	%	37.5%	25.0%	12.5%	25.0%	.0%	100.0%
Construction and Allied Sector	F	1	0	0	1	0	2
	%	50.0%	.0%	.0%	50.0%	.0%	100.0%
Energy and Petroleum	F	0	0	0	2	2	4
	%	.0%	.0%	.0%	50.0%	50.0%	100.0%
Insurance	F	0	0	0	2	2	4
	%	.0%	.0%	.0%	50.0%	50.0%	100.0%
Investment	F	0	1	1	0	0	2
	%	.0%	50.0%	50.0%	.0%	.0%	100.0%
Manufacturing and Allied	F	0	1	0	1	0	2
	%	.0%	50.0%	.0%	50.0%	.0%	100.0%
Telecommunication and Technology	F	0	0	0	0	1	1
	%	.0%	.0%	.0%	.0%	100.0%	100.0%
Total	F	6	4	5	11	8	34
	%	17.6%	11.8%	14.7%	32.4%	23.5%	100.0%

4.8 Equity Financing of Trading Firms

A descriptive analysis of equity financing of quoted companies is presented. This
analysis comprise; distribution of firms by the percentage of balance sheet financed

by equity, respondents opinion on the influence of equity financing on performance, equity financing trend analysis for listed firms in Kenya (2009 to 2016), equity financing means for the trading firms, distribution of NSE listed companies by equity financing category, and industry versus equity financing cross-tabulation.

4.8.1 Distribution of Firms by Percentage of Balance Sheet Financed by Equity

In regard to the percentage of the balance sheet financed by equity, nearly half of the respondents (44.1%) indicated up to 2%, 23.5% specified 2.1 to 5%, 14.7% indicated 5.1 to 10%, and 11.8% cited more than 20% while 5.9% stated that 10.1 to 20% of their balance sheet had been financed by equity. Hence, in the opinion of the respondents, most of the firms had up to 10% of their balance sheet financed by equity since more than four fifths of the respondents indicated up to 10% equity financing of the balance sheet.

Table 0-8

Percentage of balance sheet financed by Equity

Range	Frequency	Percent
Up to 2%	15	44.1
2.1 to 5%	8	23.5
5.1 to 10%	5	14.7
10.1 to 20%	2	5.9
Above 20%	4	11.8
Total	34	100.0

4.8.2 Respondents opinion on Influence of Equity Financing on Performance

Half of the respondents (50%) indicated moderate extent influence, 41.2% specified large extent influence while 9.8% opined that to a very large extent, equity funding meaningfully determines the success of trading firms in Kenya. Hence, in the

respondent's opinion, financing through equity had a meaningful effect on the performance of the quoted companies since more than half indicated either a large extent or very large extent influence.

Table 0-9

Respondents opinion on influence of equity financing on performance

	Frequency	Percent
Moderate extent	17	50.0
Large extent	14	41.2
Very large extent	3	9.8
Total	34	100.0

4.8.3 Equity Financing Trend analysis for listed firms in Kenya (2009 to 2016)

In regard to equity financing trend analysis of companies listed at the NSE, three movements can be observed from the financial statements. For the year 2009 to 2011, the mean equity financing did not change significantly; from 1.195 billion shillings in 2009 to 1.254 in 2010, then to 1.237 billion shillings in 2011. From the year 2011 to 2013, a constant improvement was registered in the mean equity financing of the quoted firms; from 1.237 billion shillings in 2011 to 2.448 billion shillings in 2013. However, from the year 2013 to 2016, there was a remarkable decline in the mean equity financing from 2.448 billion shillings at 2013 to 1.537 billion shillings at 2016. This result reveal that the mean equity financing of the trading firms was fluctuating within the eight years period of examination as illustrated in figure 4.3.

Figure 0-2

Equity Financing Trend analysis for listed firms in Kenya (2009 to 2016)

	YR 2009	YR 2010	YR 2011	YR 2012	YR 2013	YR 2014	YR 2015	YR 2016
Series1	1,195.	1,254.	1,237.	1,400.	2,448.	1,614.	1,645.	1,537.

Mean Equity: Ksh '000, 000'

4.8.4 Equity Financing Means for the Quoted Firms: 2016

Analysis of the NSE revealed that Energy and petroleum sector posted the highest equity financing mean of 5.105 billion shillings (SD = 2.025), banking industry registered a mean of 2.445 billion shillings (SD = 2.104) while telecommunication and technology enumerated a mean of 2.003 billion shillings. Automobiles and accessories, investment, and agricultural sector posted the least equity financing means of 554.73 (SD = 727.69), 170.07 (SD = 42.33), and 86.16 (SD = 30.80) million shillings respectively.

Table 0-10

Equity Financing Means for the Quoted Firm: 2016

Industry	N	Mean (Kshs '000,000')	Std. Deviation	Std. Error
Energy and Petroleum	4	5,105.73	4,051.08	2,025.54
Banking	7	2,456.63	2,104.64	634.57
Telecommunication and Technology	1	2,003.27	.	.
Commercial and Services	8	1,399.67	2,515.92	889.51
Insurance	4	1,353.72	1,032.80	516.40
Manufacturing and Allied	2	940.37	1,075.23	406.40
Construction and Allied Sector	2	648.55	667.39	298.47
Automobiles and Accessories	2	554.73	727.69	420.13
Investment	2	170.07	42.33	29.93
Agricultural Sector	2	86.16	75.45	30.80
Total	34	14,718.90	12,292.53	5251.75

4.8.5 Industry and Equity Financing Cross tabulation

Similarly, cross tabulation was done to establish the relationship between industry and equity financing. The result indicates that the distribution of the firms by equity financing was different between the industries. For instance; insurance, and telecommunication and technology sectors had all their companies registering equity financing amounts of more than 300 million shillings while agriculture and investment sectors had none of their companies registering equity financing of more than 300 million shillings.

Table 0-11

Industry and Equity Financing Cross tabulation

Industry		Equity Financing category: 2016					
		<100M	100 - 300M	300M - 1B	1-3B	>3B	Total
Agricultural Sector	F	1	1	0	0	0	2
	%	50.0%	50.0%	.0%	.0%	.0%	100.0%
Automobiles and Accessories	F	0	0	0	1	0	1
	%	.0%	.0%	.0%	100.0%	.0%	100.0%
Banking	F	1	0	1	3	2	7
	%	14.3%	.0%	14.3	42.9%	28.6%	100.0%
Commercial and Services	F	0	1	3	1	3	8
	%	.0%	12.5%	37.5%	12.5%	37.5%	100.0%
Construction and Allied Sector	F	0	0	1	1	0	2
	%	.0%	.0%	50.0%	50.0%	.0%	100.0%
Energy and Petroleum	F	1	0	0	0	3	4
	%	25.0%	.0%	.0%	.0%	75.0%	100.0%
Insurance	F	0	0	2	2	0	4
	%	.0%	.0%	50.0%	50.0%	.0%	100.0%
Investment	F	0	2	0	0	0	2
	%	.0%	100.0%	.0%	.0%	.0%	100.0%
Manufacturing and Allied	F	1	0	1	0	1	3
	%	33.3%	.0%	33.3%	.0%	33.3%	100.0%
Telecommunication and Technology	F	0	0	0	1	0	1
	%	.0%	.0%	.0%	100.0%	.0%	100.0%
Total	F	4	4	8	9	9	34
	%	11.8%	11.8%	23.5%	26.5%	26.5%	100.0%

4.9 Short term debt Financing of Companies Listed at the NSE

A concise review of the financing of listed companies at the NSE through short-term debt is presented. This analysis includes: distribution of firms by the percentage of the balance sheet financed by short-term debt, opinion of respondents on the influence of short-term debt financing on performance, short-term trend analysis of debt financing for quoted companies in Kenya (2009 to 2016), short-term debt

financing for companies listed in the NSE, distribution of NSE listed firms by short-term debt financing

4.9.1 Distribution of Firms by Percentage of Balance Sheet Financed by Short Term Debt

Majority of the respondents (32.4%) indicated that more than 70% of their balance sheet were financed by short term debt, same as those who specified 30.1 to 50%, and 14.7% indicated 10.1 to 30% while 11.8% specified 50.1 to 70% and 14.7 specified 10.1 to 30%. This result signifies that most of the firms had more than 30% of their balance sheet financed by short term debt since more than two thirds of the respondents indicated short term debt financing of more than 30% of the balance sheet.

Table 0-12

Percentage of balance sheet financed by Short Term Debt

Range	Frequency	Percent
Up to 10%	3	8.8
10.1 to 30%	5	14.7
30.1 to 50%	11	32.4
50.1 to 70%	4	11.8
Above 70%	11	32.4
Total	34	100.0

4.9.2 Respondents opinion on the Influence of Short Term Debt Financing on Performance

Majority of the respondents (41.2%) indicated that to a large extent financing through short term debt influenced the performance of the firm, 32.4% specified little extent influence, and 17.6% indicated moderate extent while 8.8% stated that, to a very large extent, short term debt financing influenced the performance of listed firms in the NSE in Kenya. Hence, in the opinion of the respondents, short term debt financing had a substantial impact on firms' performance since more than half indicated either large extent or very large extent influence.

Table 0-13

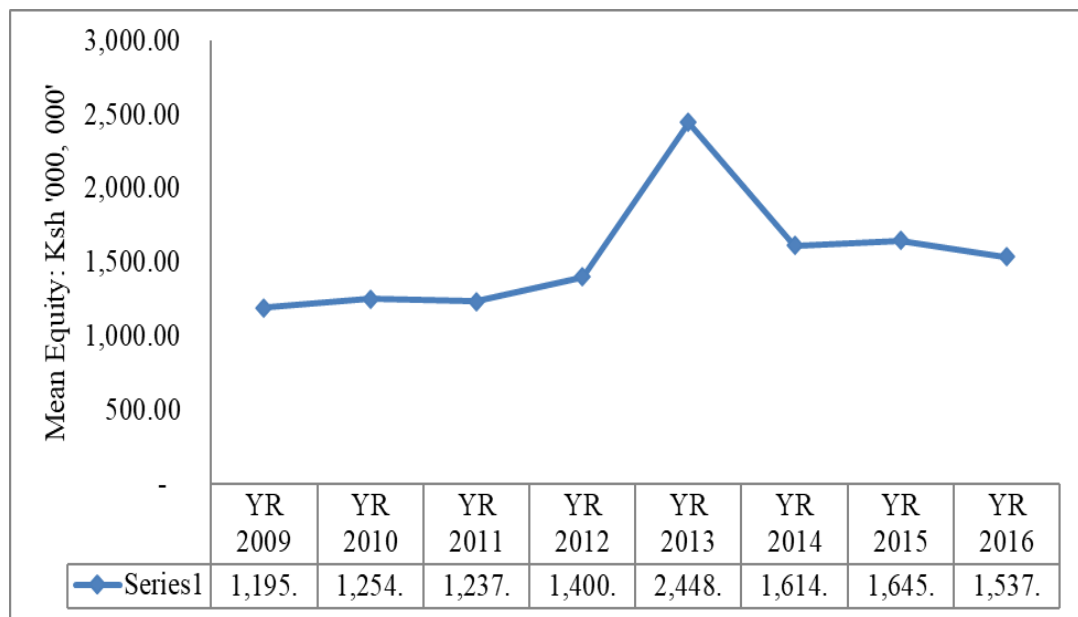*Respondents opinion on influence of short term debt on performance*

	Frequency	Percent
Little extent	11	32.4
Moderate extent	6	17.6
Large extent	14	41.2
Very large extent	3	8.8
Total	34	100.0

4.9.3 Short Term Debt Financing Trend analysis for listed firms in Kenya (2009 to 2016)

It was established that there was a consistent increase in the mean short term debt for the NSE listed companies from the year 2009 to the year 2015; from 19.344 billion shillings in 2009 to 56.891 billion shillings in 2015. However, there was a slight decline in the mean short term debt; from 56.891 billion shillings at 2015 to 56.297 billion shillings at 2016. This result signifies that, other than for the last year under examination, the mean short term debt financing for companies listed at the NSE had a consistent upward trend as illustrated in figure 4.5.

Figure 0-3

Short Term Debt Financing Trend analysis for losted firms in Kenya (2009 to 2016)

	YR 2009	YR 2010	YR 2011	YR 2012	YR 2013	YR 2014	YR 2015	YR 2016
Series1	19,344	23,624	29,369	33,583	38,399	45,865	56,891	56,297
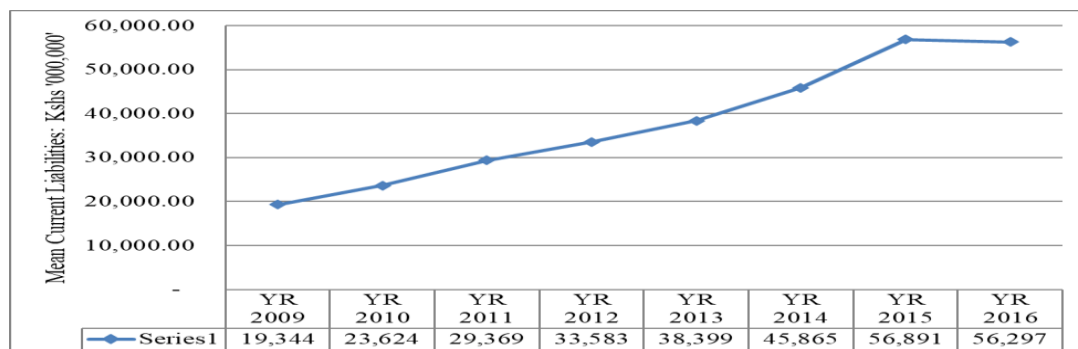
4.9.4 Short Term Debt Financing Means for the Companies listed at the NSE: 2016

The banking industry registered the highest short term financing debt mean of 189.618 billion shillings (SD = 149.988) while energy and petroleum sector and telecommunication industry followed with 76.235 (SD = 100.119) and 42.443 billion shillings in that order. The construction and allied sector, automobile, and accessories industry, and agricultural sector registered the least short term debt financing means of 6.020 (SD = 4.607), 2.449 (SD = 2.882), and .399 (SD = .306) billion shillings respectively. This result is shown in table 4-14.

Table 0-14

Short term debt financing means for the quoted firms 2016

Industry	N	Mean (Kshs '000,000')	Std. Deviation	Std. Error
Banking	7	189,618.71	149,988.61	45,223.27
Energy and Petroleum	4	76,235.65	100,449.80	50,224.90
Telecommunication and Technology	1	42,443.54	.	.
Insurance	4	31,866.62	25,196.00	12,598.00
Commercial and Services	8	25,941.42	43,528.40	15,389.61
Investment	2	7,054.54	9,589.12	6,780.53
Manufacturing and Allied	2	7,002.53	10,030.21	3,791.06
Construction and Allied Sector	2	6,020.78	4,607.56	2,060.56
Automobiles & Accessories	2	2,449.87	2,822.34	1,629.48
Agricultural	2	399.10	306.22	125.01
Total	34	389,032.76	346,518.26	137,822.42

4.9.6 Industry and Short term debt Financing Cross tabulation

To determine the relationship between industry and short-term debt financing, a cross tabulation was made. The result suggests that the distribution between the sectors of companies funded by short-term debt has been different. For example; insurance, telecommunications and technology, and the energy and petroleum sectors had all of their companies registering short-term debt financing amounts of more than 5 billion shillings, while the agricultural sector had all of its companies

registering short-term debt financing of less than 1 billion shillings as illustrated in table 4.15.

Table 0-15

Industry and Short term debt Financing Cross tabulation

		Short Term Debt Financing category: 2016					
		<1B	1-5B	5-20B	20-100B	>100B	Total
Agricultural Sector	F	2	0	0	0	0	2
	%	100.0%	.0%	.0%	.0%	.0%	100.0%
Automobiles and Accessories	F	0	2	0	0	0	2
	%	.0%	100.0%	.0%	.0%	.0%	100.0%
Banking	F	1	0	0	1	5	7
	%	14.3%	.0%	.0%	14.3%	71.4%	100.0%
Commercial and Services	F	1	4	1	1	1	8
	%	12.5%	50.0%	12.5%	12.5%	12.5%	100.0%
Construction and Allied Sector	F	0	1	1	0	0	2
	%	.0%	50.0%	50.0%	.0%	.0%	100.0%
Energy and Petroleum	F	0	0	2	1	1	4
	%	.0%	.0%	50.0%	25.0%	25.0%	100.0%
Insurance	F	0	0	2	2	0	4
	%	.0%	.0%	50.0%	50.0%	.0%	100.0%
Investment	F	1	0	1	0	0	2
	%	50.0%	.0%	50.0%	.0%	.0%	100.0%
Manufacturing and Allied	F	1	0	0	1	0	2
	%	50.0%	.0%	.0%	50.0%	.0%	100.0%
Telecommunication and Technology	F	0	0	0	1	0	1
	%	.0%	.0%	.0%	100.0%	.0%	100.0%
Total	F	6	6	8	7	7	34
	%	17.6%	20.6%	20.6%	20.6%	20.6%	100.0%

4.10 Long term debt Financing of Trading Firms

A descriptive analysis is provided by companies funded by long-term debt. The research includes: distribution of companies by percentage of the balance sheet financed by long-term debt, opinion of respondents on the impact of financing

through long-term debt on results, long-term trend analysis of debt financing for listed companies in Kenya (2009 to 2016), long-term debt financing means for listed companies in the NSE, distribution of NSE listed companies through long-term debt financing.

4.10.1 Distribution of Firms by Percentage of Balance Sheet Financed by Long Term Debt

Close to two fifths of the respondents (38.2%) indicated that up to 1% of their balance sheet were financed by non-current liabilities, 23.5% specified 1.1 to 10%, 14.7% indicated 10.1 to 20%, and 11.8% specified 20.1 to 30% and same indicated that more than 30% of their balance sheet was financed by non-current liabilities. Hence, the majority of the firms had up to 10% of their balance sheets financed by non-current liabilities since nearly two thirds of the respondents indicated up to 10% financing by non-current liabilities.

Table 0-16

Percentage of balance sheet financed by Non-Current Liabilities

Range	Frequency	Percent
Up to 1%	13	38.2
1.1 to 10%	8	23.5
10.1 to 20%	5	14.7
20.1 to 30%	4	11.8
Above 30%	4	9.8
Total	34	100.0

4.10.2 Respondents opinion on Influence of Long Term Debt Financing on Performance

Slightly above two fifths of the respondents (41.2%) indicated that to a very large extent non-current liabilities financing influenced firms' outcomes in Kenya, same as those who specified large extent influence while 17.6% opined that non-current liabilities financing influenced the performance of the firms to a moderate extent. This result signifies that, in the opinion of the respondents, non-current liabilities financing had a meaningful effect on the performance of the trading organizations in Kenya since more than four fifths of the respondents indicated a very large extent or large extent influence.

Table 0-17

Respondents opinion on influence of non-current liabilities financing on performance

	Frequency	Percent
Moderate extent	6	17.6
Large extent	14	41.2
Very large extent	14	41.2
Total	34	100.0

4.10.3 Long Term Debt Financing Trend analysis for listed firms in Kenya (2009 to 2016)

In regard to the long term debt financing trend of NSE listed companies, three movements can be observed. From 2009 to 2012, there is a gentle increase in non-current liabilities; from 3.367 billion shillings in 2009 to 4.753 billion shillings in 2012. From 2012 to 2014 the slope of the curve is steeper; from 4.753 billion

shillings in 2012 to 7.554 billion shillings in 2014. Notably, from 2014 to 2016, the gradient of the curve increases signifying an increase from 7.554 billion shillings in 2014 to 15.587 billion shillings in 2016. This result is illustrated in figure 4.7.

Figure 0-4

Long Term Debt Financing Trend analysis for listed firms in Kenya (2009 to 2016)

	YR 2009	YR 2010	YR 2011	YR 2012	YR 2013	YR 2014	YR 2015	YR 2016
Series1	3,367.	4,051.	4,499.	4,753.	6,056.	7,554.	10,099	15,587
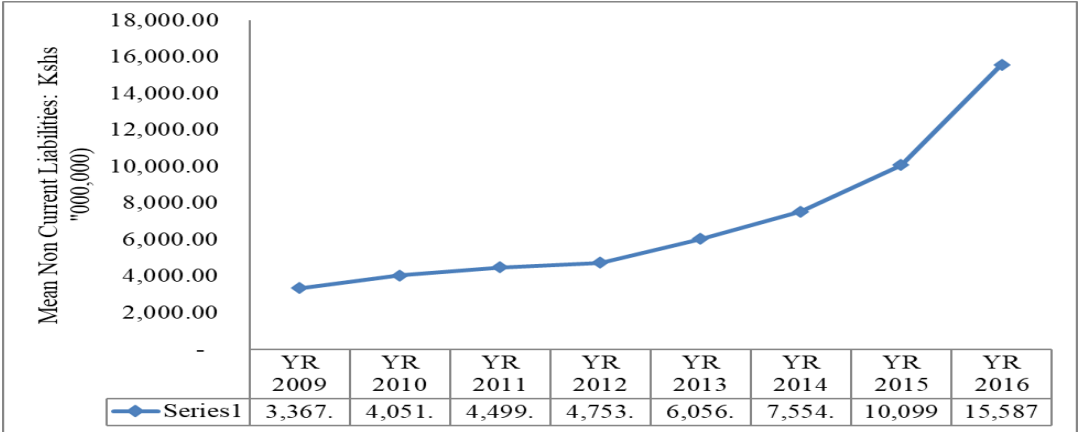
4.10.4 Long Term Debt Financing Means for the Listed Companies at the NSE: 2016

Energy and Petroleum sector posted the highest long term debt financing mean of 90.334 (SD = 103.312) billion shillings then commercial and services with a mean of 46.124 (SD = 31.609) billion shillings. Remarkably, the banking sector, insurance industry, and telecommunication and technology did not have any of their companies posting a single shilling in long term debt financing for the year 2016. This result is illustrated in table 4.18.

Table 0-18

Long Term Debt Financing Means for Quoted Firms: 2016

Industry	N	MeanKshs '000,000'	Std. Deviation	Std. Error
Energy and Petroleum	4	90,334.38	103,312.23	51,656.12
Commercial and Services	8	46,124.49	89,406.46	31,609.96
Manufacturing and Allied	3	5,147.30	8,405.45	3,176.96
Construction and Allied	2	3,580.81	3,527.15	1,577.39
Investment	2	2,262.99	3,074.71	2,174.15
Agricultural Sector	2	882.76	905.62	369.72
Automobiles and Accessories	1	282.35	474.66	274.05
Banking	7	-	-	-
Insurance	4	-	-	-
Telecommunication and Technology	1	-	.	.
Total	34	148,615.08	209,106.28	90,838.35

4.10.6 Industry and Long term debt Financing Cross tabulation

A cross tabulation was done to establish the relationship between industry and long term debt funding. The result indicates that the distribution of the firms by long term debt financing was different between the industries. Investment, energy, and petroleum and construction and allied sector had all their companies registering long term debt financing amounts of more than 50 million shillings while the banking sector, insurance industry, and telecommunication and technology did not have any long term financing obligations.

Table 0-19

Industry and Long Term Debt Financing Cross tabulation

		Long Term Debt Financing category: 2016					
		Nil	Sh1-50M	50M-1B	1-100B	>100B	Total
Agricultural Sector	F	0	1	0	1	0	2
	%	.0%	50.0%	.0%	50.0%	.0%	100.0%
Automobiles and Accessories	F	0	2	0	0	0	2
	%	.0%	100.0%	.0%	.0%	.0%	100.0%
Banking	F	7	0	0	0	0	7
	%	100.0%	.0%	.0%	.0%	.0%	100.0%
Commercial and Services	F	1	2	2	1	2	8
	%	12.5%	25.0%	25.0%	12.5%	25.0%	100.0%
Construction and Allied Sector	F	0	0	1	1	0	2
	%	.0%	.0%	50.0%	50.0%	.0%	100.0%
Energy and Petroleum	F	0	0	1	1	2	4
	%	.0%	.0%	25.0%	25.0%	50.0%	100.0%
Insurance	F	4	0	0	0	0	4
	%	100.0%	.0%	.0%	.0%	.0%	100.0%
Investment	F	0	0	1	1	0	2
	%	.0%	.0%	50.0%	50.0%	.0%	100.0%
Manufacturing and Allied	F	1	0	0	1	0	2
	%	50.0%	.0%	.0%	50.0%	.0%	100.0%
Telecommunication and Technology	F	1	0	0	0	0	1
	%	100.0%	.0%	.0%	.0%	.0%	100.0%
Total	F	14	5	5	6	4	34
	%	41.2%	14.7%	14.7%	17.6%	11.8%	100.0%

4.11 Performance of Listed Firms in Kenya

The performance was the dependent variable in this study. Liquidity and Leverage levels were employed to examine the performance of the listed companies. A trend analysis on the components of the rate of return, namely; assets and net profit is discussed, and later on, return on asset trend.

4.11.1 Asset Base Trend Analysis of Quoted Companies in Kenya

The research established that the asset base of the listed firms had consistently increased from 14.115 billion shillings in 2009 to 30.175 billion shillings in 2016. This result signifies that over the eight year period under examination, the mean asset base of the listed firms in Kenya had doubled.

4.11.2 Asset Base Means for Quoted Companies: 2016

It was further developed that the telecommunications and technology industries reported the highest average asset base of 116,738 billion shillings, followed by energy and petroleum sector and banking industry which registered asset base mean of 95.172 (SD = 105.574) and 55.788 (SD = 27.781) billion shillings respectively. On the other hand, the manufacturing and allied industry, agricultural sector, and investment industry posted the least asset base means with 10.607 (SD = 11.688), 5.429 (SD = 6.128), and 4.620 (SD = 4.775) billion shillings respectively as shown in table 4.20.

Table 0-20

Asset Base Means for Quoted Companies: 2016

Industry	N	Mean Ksh'000,00 0'	Std. Deviation	Std. Error
Telecommunication and Technology	1	116,738.95	.	.
Energy and Petroleum	4	95,172.71	105,574.12	52,787.06
Banking	7	55,788.75	27,781.40	8,376.41
Construction and Allied Sector	2	17,528.89	14,545.82	6,505.09
Commercial and Services	8	15,288.27	28,611.37	10,115.65
Automobiles and Accessories	2	14,951.37	20,290.43	11,714.68
Insurance	4	14,241.67	10,023.45	5,011.72
Manufacturing and Allied	2	10,607.91	11,688.01	4,417.65
Agricultural	2	5,429.88	6,128.65	2,502.01
Investment	2	4,620.15	4,755.65	3,362.76
Total	3 4	30,175.54	43,229.50	6,053.34

4.11.3 Distribution of Listed Firms by Asset Base: 2016

Majority of the firms (29.4%) posted had an asset base of 2 to 10 billion shillings, 23.5% registered 20 to 45 billion shillings, 17.6% had over 45 billion shillings same as less than 2 billion shillings while 11.8% had an asset base of 10 to 20 billion shillings.

4.11.4 Industry and Asset Base Cross tabulation

A cross tabulation was done to establish the relationship between industry and asset base. The result indicates that the distribution of the firms by asset base was different between the industries. The banking industry and telecommunication and technology sector had all their firms posting an asset base of over 10 billion shillings while the investment sector had none of its firms recording an asset base of more than 10 billion shillings as illustrated in table 4.21.

Table 0-21

Industry and Asset Base Cross tabulation

Industry		<2B	2 - 10B	10 - 20B	20 - 45B	>45B	Total
			Asset Base 2016				
Agricultural Sector	F	0	1	1	0	0	2
	%	.0%	50.0%	50.0%	.0%	.0%	100.0%
Automobiles and Accessories	F	0	2	0	0	0	2
	%	.0%	100.0%	.0%	.0%	.0%	100.0%
Banking	F	0	0	1	3	3	7
	%	.0%	.0%	14.3%	42.9%	42.9%	100.0%
Commercial and Services	F	3	3	1	0	1	8
	%	37.5%	37.5%	12.5%	.0%	12.5%	100.0%
Construction and Allied Sector	F	1	0	0	1	0	2
	%	50.0%	.0%	.0%	50.0%	.0%	100.0%
Energy and Petroleum	F	0	1	1	0	2	4
	%	.0%	25.0%	25.0%	.0%	50.0%	100.0%
Insurance	F	0	2	0	2	0	4
	%	.0%	50.0%	.0%	50.0%	.0%	100.0%
Investment	F	1	1	0	0	0	2
	%	50.0%	50.0%	.0%	.0%	.0%	100.0%
Manufacturing and Allied	F	0	1	0	1	0	2
	%	.0%	50.0%	.0%	50.0%	.0%	100.0%
Telecommunication and Technology	F	0	0	0	0	1	1
	%	.0%	.0%	.0%	.0%	100.0%	100.0%
Total	F	5	11	4	7	7	34
	%	14.7%	32.4%	11.8%	20.6%	20.6%	100.0%

4.12 Liquidity Levels Trends Analysis of Listed Firms in Kenya

From the findings, it can be observed that the rate of liquidity levels for quoted companies had consistently declined from 18.9% in 2009 to 10.7% in 2015. The curve had its steepest gradient from the year 2010 to the year 2012. During this period, the rate of return on assets sharply declined from 18.5% in 2010 to 15.5% in 2011 and later to 13.2% in 2010. The curve moved down gently up to 2015 where it takes an upward turn signifying an increase in the rate of return on assets from 10.7% in 2015 to 11.3% in 2016. Hence, for the larger part of the eight year period under examination, the rate of return had declined but the movement of the curve at the very last year takes a different direction as illustrated in figure 4.9.

Figure 0-5

Liquidity level analysis for listed firms in Kenya (2009 to 2016)

	YR 2009	YR 2010	YR 2011	YR 2012	YR 2013	YR 2014	YR 2015	YR 2016
Series1	18.9	18.5	15.5	13.2	12.7	11.1	10.7	11.3
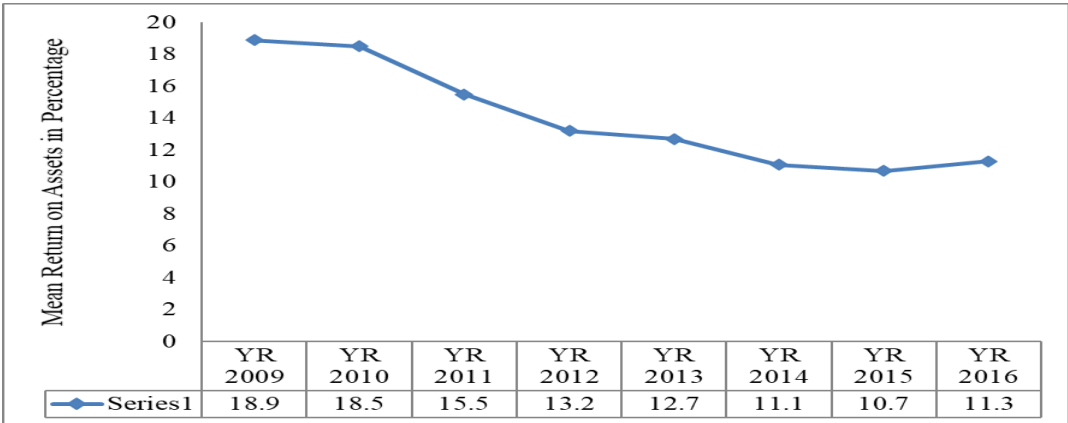
4.12.1 Liquidity Level Means for Quoted Companies: 2016

Telecommunication and technology posted the highest liquidity level of 32.6% followed by the banking industry and manufacturing and allied sector which posted a rate of 19.3% (SD = .14) and 15.1% (SD = .13) respectively. In contrast,

commercial and services sector, automobiles and accessories industry and investment sector enumerated the least liquidity level of 5.9% (SD = .09), 1.1% (SD = .02), and .6% (SD = .01) as demonstrated in Table 4.22.

Table 0-22

Liquidity level Means for the Trading Firms: 2016

Industry	N	Mean (%)	Std. Deviation	Std. Error
Telecommunication and Technology	1	32.6	.	.
Banking	7	19.3	0.14	0.04
Manufacturing and Allied	2	15.1	0.13	0.05
Energy and Petroleum	4	12.4	0.11	0.05
Insurance	4	10.8	0.11	0.06
Construction & Allied Sector	2	8.9	0.09	0.04
Agricultural Sector	2	6.1	0.05	0.02
Commercial and Services	8	5.9	0.09	0.03
Automobiles and Accessories	2	1.1	0.02	0.01
Investment	2	0.6	0.01	0.01
Total	34	11.3	0.12	0.02

4.12.2 Distribution of Listed Firms by Liquidity Level: 2016

Slightly more than a third of the firms (35.3%) realized a return on assets of 1 to 10%, 21.6% recorded a return of less than 1%, 17.6% enumerated a rate of 10.1 to 20%, and 15.7% registered a return of 20.1 to 30% while 9.8% enumerated a return on assets on more than 30%.

4.12.3 Industry and Liquidity Level Cross tabulation

A cross tabulation was done to establish the relationship between industry and Liquidity level. The result indicates that the distribution of the firms by liquidity level was different between the industries. For instance, the automobiles and

accessories sector and investment industry had all their firms enumerating a liquidity

level of less than 10% while the banking sector had more than two-thirds of its firms

posting a return on asset of more than 10%.

Table 0-23

Industry and liquidity level Cross tabulation

Industry		Return on Assets: 2016					
		<1%	1 - 10%	10.1 - 20%	20.1 - 30%	>30%	Total
Agricultural Sector	F	0	1	2	0	0	2
	%	.0%	50.0%	50.%	.0%	.0%	100.%
Automobiles and Accessories	F	0	2	0	0	0	2
	%	.0%	100.0%	.0%	.0%	.0%	100.0%
Banking	F	0	1	1	1	3	7
	%	.0%	14.3%	14.3%	14.3%	42.9%	100.0%
Commercial and Services	F	3	3	1	1	0	8
	%	37.5%	37.5%	12.5%	12.5%	.0%	100.0%
Construction and Allied Sector	F	0	0	1	1	0	2
	%	.0%	.0%	50.0%	50.0%	.0%	100.0%
Energy and Petroleum	F	0	3	0	1	0	4
	%	.0%	75.0%	.0%	25.0%	.0%	100.0%
Insurance	F	0	2	1	1	0	4
	%	.0%	50.0%	25.0%	25.0%	.0%	100.0%
Investment	F	1	1	0	0	0	2
	%	50.0%	50.0%	.0%	.0%	.0%	100.0%
Manufacturing and Allied	F	1	0	0	1	0	2
	%	50.%	.0%	.0%	50.%	.0%	100.0%
Telecommunication and Technology	F	0	0	0	0	1	1
	%	.0%	.0%	.0%	.0%	100.0%	100.0%
Total	F	5	13	6	6	4	34
	%	14.7%	38.2%	17.6%	17.6%	11.8%	100.0%

4.13 Preliminary Analysis

Preliminary analysis was performed to confirm that assumptions of normality, linearity, multicollinearity, and homoscedasticity were not violated. This was a condition for running a regression that subsequently tested the study hypothesis.

4.13.1 Test of Normality

A Shapiro-Wilk's test (P-value > .05) and a visual inspection of their histograms, normal Q-Q plots, and box plots indicated that performance data was approximately normally distributed with skewness of .088 (S.E = .333) and kurtosis of .497 (S.E = .656). The results are indicated in Tables 4-24 & 4-25.

4.13.2 Descriptive Test of Normality

In regard to skewness and kurtosis: the data is a little skewed and kurtotic, but it does not differ significantly from normality. The Z values for skewness and kurtosis are .264 and .757 respectively; which are neither below -1.96 nor above 1.96 (Results in Table 4.25), hence within the desired range. The Z scores are computed by dividing the skewness and kurtosis statistic by their corresponding standard error. Accordingly, the data measuring performance is approximately normally distributed, in terms of skewness and kurtosis.

Table 0-24

Performance Test of Normality: Descriptive statistics

			Statistic	Std. Error
Performance	Mean		.2004	.01098
	95% Confidence Interval for Mean	Lower Bound	.1783	
		Upper Bound	.2225	
	5% Trimmed Mean		.2000	
	Median		.2000	
	Variance		.006	
	Std. Deviation		.07845	
	Minimum		.01	
	Maximum		.41	
	Range		.40	
	Interquartile Range		.10	
	Skewness		.088	.333
	Kurtosis		.497	.656

4.13.3 Shapiro Wilk Test of Normality

The null hypothesis for Shapiro Wilk test for normality is that data is normally distributed. Results displayed below indicate that the p-value is > .05; hence we keep the null hypothesis. Therefore, in terms of Shapiro-Wilk test, the data for measuring performance is approximately normally distributed.

Table 0-25

Tests of Normality

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Performance	.090	34	.200[*]	.985	34	.759

4.13.4 Linearity Tests

Scatter diagrams were used to detect non-linearity concerns between financial performance and each of the three predictor variables. The results were interpreted

alongside the bivariate correlation. For a significant correlation, the linearity assumption is met. Concern hence is for non – significant correlations. Consequently, the focus for the visual inspection of the scatter diagrams was to diagnosis for non – linearity patterns.

The distribution of dots displayed suggests a random pattern, indicating no correlation at all. This condition is acceptable for linearity assumption, thus the relationship between performance and internal financing, short term financing, equity financing, and long term financing did not violate the linearity assumption as there was no evidence to suggest the presence of a non – linearity pattern.

The linearity assumption is met since, scatter plot between financial performance and internal financing, equity financing, short term, and long term financing have a considerable number of dots forming a straight line.

4.13.5 Multicollinearity Tests

To diagnose the existence of multicollinearity, the variance inflation factor (VIF) and the condition index were utilized. Each of the four independent variables was regressed against the other three sets of independent variables. Accordingly, tests for multicollinearity indicated that a very low level of multicollinearity was present.

Short Term Financing Collinearity Statistics (Variance Inflation Factor)

Results indicated a very low level of Collinearity (VIF < 3.0). Subsequently, in regard to the VIF generated by regressing short term financing against the other three predictors, there was no evidence for multicollinearity issues.

Short Term Financing Collinearity Diagnostics (Conditional Index)

Results indicated that Collinearity was not suspected since the condition index was < 3.0. Accordingly, in regard to the condition index generated by regressing short term financing against the other three predictors, there was no evidence for multicollinearity issues.

Table 0-26

Equity Financing Collinearity Statistics (Variance Inflation Factor)

Model		Collinearity Statistics	
		Tolerance	VIF
1	Internal Financing	.953	1.050
	Long Term Financing	.974	1.027
	Short Term Financing	.930	1.075

Equity Financing Collinearity Statistics (Variance Inflation Factor)

Results indicated a very low level of Collinearity (VIF < 3.0). Subsequently, in regard to the VIF generated by regressing equity financing against the other three predictors, there was no evidence for multicollinearity issues.

Equity Financing Collinearity Diagnostics (Conditional Index)

Results indicated that Collinearity was not suspected since the condition index was < 3.0. Accordingly, in regard to the condition index generated by regressing equity financing against the other three predictors, there was no evidence for multicollinearity issues.

Internal Financing Collinearity Diagnostics (Conditional Index)

Results indicated that Collinearity was not suspected since the condition index was < 3.0. Accordingly, in regard to the condition index generated by regressing internal

financing against the other three predictors, there was no evidence for multicollinearity issues.

Long Term Financing Collinearity Statistics (Variance Inflation Factor)

Results indicated a very low level of Collinearity (VIF < 3.0). Subsequently, in regard to the VIF generated by regressing long term financing against the other three predictors, there was no evidence for multicollinearity issues.

Long Term Financing Collinearity Diagnostics (Conditional Index)

Results indicated that Collinearity was not suspected since the condition index was < 3.0. Accordingly, in regard to the condition index generated by regressing long term financing against the other three predictors, there was no evidence for multicollinearity issues.

4.13.6 Heteroscedasticity Test

To examine whether the data adhered to homoscedasticity assumption, a heteroscedasticity test was conducted, such that the absence of heteroscedasticity signified adherence to homoscedasticity assumption. To perform the heteroscedasticity test, the standardized predicted variables were plotted against the standardized residual for liquidity level and each predictor and the plot interpreted thereafter.

Heteroscedasticity test for Short Term Financing

A visual inspection of the plot for liquidity level and short term financing indicates that heteroscedasticity could not be suspected since the dots formed a pattern resembling a rectangle (Figure 4.10). Hence, the relationship between capital performance and short term financing did not violate the homoscedasticity assumption.

Figure 0-6

Heteroscedasticity test for Performance and Short Term Financing
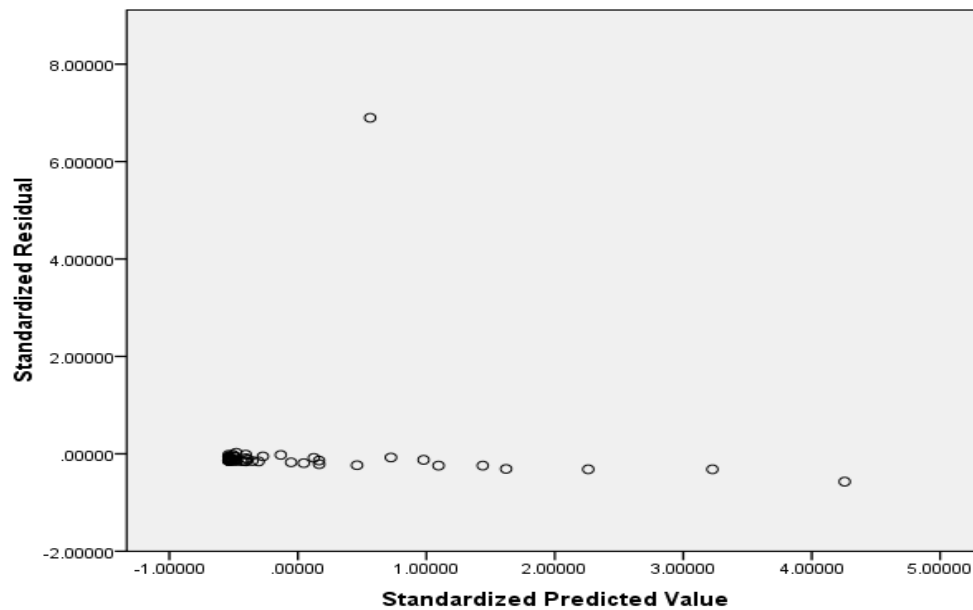
Heteroscedasticity test for Equity Financing

A visual inspection of the plot for performance and equity financing indicates that heteroscedasticity could not be suspected since the dots formed a pattern resembling a rectangle (Figure 4.11). Hence, the relationship between capital performance and equity financing did not violate homoscedasticity assumption.

Figure 0-7

Heteroscedasticity test for Liquidity level and Equity Financing
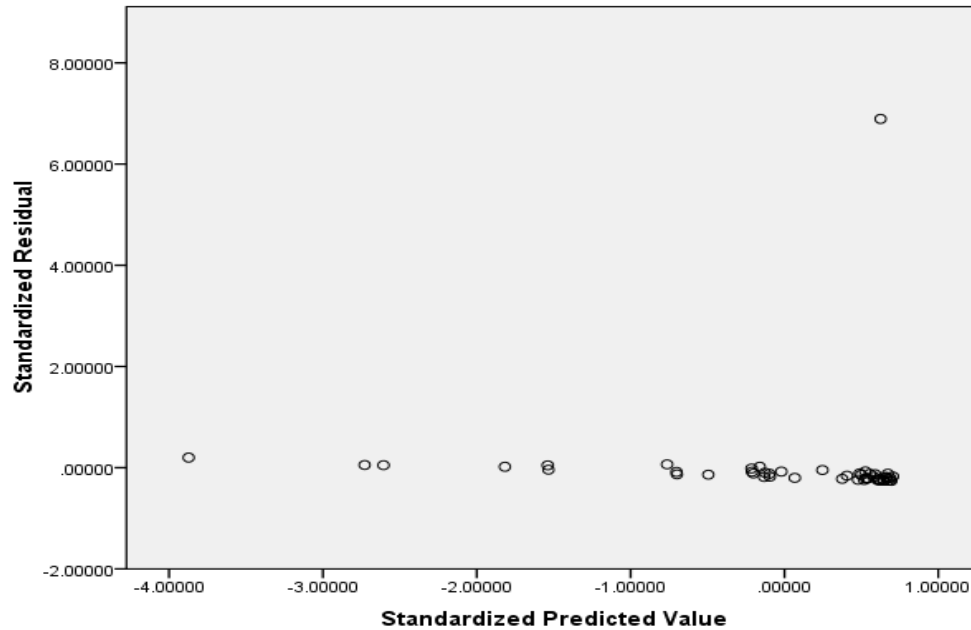
Heteroscedasticity test for Long Term Financing

A visual inspection of the plot for financial performance and long term financing indicates that heteroscedasticity could not be suspected since the dots formed a pattern resembling a rectangle (Figure 4.12). Hence, the relationship between capital performance and long term financing did not violate homoscedasticity assumption.

Figure 0-8

Heteroscedasticity test for Performance and Long Term Financing
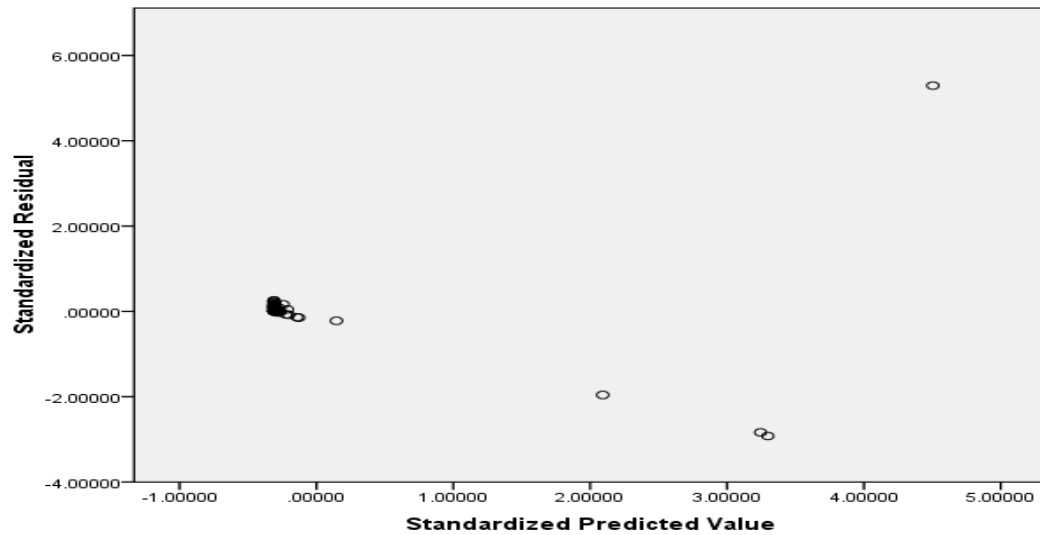
4.14 Hypothesis Testing

Multiple regression was used in order to determine the independent variable that is significantly correlated with the output of quoted firms in Kenya since the dependent and independent variables were continuous. Simple linear regressions were conducted before the multiple linear regression was applied to test the relationship between each of the independent variables and the dependent variable. The statistics models and description of ANOVA tests were used to calculate the overall relation between independent variables and the dependent variable.

4.14.1 Long Term Debt Financing and Performance: Hypothesis Testing

The research attempted to establish whether long-term debt financing affected performance significantly. A simple linear regression was carried out to test if long term debt financing significantly predicted leverage and liquidity levels. The results are presented in Tables 4.27, 4.28, 4.29, and 4.30.

Model Summary for Long Term Debt Financing

The value in the R column, r = .636 indicates the existence of a strong correlation between long term debt financing and performance. The R^2 column indicates the proportion of the outcome variable (Leverage level) that can be explained by the model. The result indicates that 40.4% of the variation in Leverage level can be explained by long term debt financing.

Table 0-27

Model Summary for Long Term Debt Financing

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.636ª	.404	.392	0.01582

a. Predictors: (Constant), Long Term Debt

Proof of the Regression Results Using ONE-WAY ANOVA for Long Term Debt Financing

The ANOVA table tests whether or not the model is a significant predictor of the outcome variable (performance). The results indicate that the model is a significant predictor $F_{(155, 116)} = 4.632$, $p < .05$. The null hypothes is that there exists no

relationship between long term debt financing and performance was thus rejected. Subsequently, support was given to the research hypothesis that there is a statistically significant link between long-term debt financing and performance.

Table 0-28

ONE-WAY ANOVA for Long Term Debt Financing on Leverage level

ANOVA

Dependent Variable Leverage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.445E+23	155	2.222E+21	4.632	.000
Within Groups	5.566E+22	116	4.798E+20		
Total	4.001E+23	271			

ONEWAY DependentParameter BY LongTermDebtFinancing

Regression Coefficients for Long Term Debt Financing

The coefficients table indicates how the individual predictor variables contribute to the model. Since the p-value is $< .05$; we conclude that long term debt financing significantly contributes to the model. A model which takes the form of a statistical equation as mentioned below can capture the connection between long-term debt financing and performance;

$Y = b_0 + b_1 X$

Where Y represents the performance

and X represents long term debt financing

Replacing the coefficients with the correct values, a predictive model is arrived at,

$\text{Leverage level} = -1.817 + (0.257 * \text{Long Term Debt Financing})$

Hence, the results of the regression indicated that the model explained 40.4% of the variance and that the model was significant, $F_{(155, 116)} = 4.632$, $p < .05$. It was subsequently established that long term debt financing significantly predicted Leverage level ($b_1 = .257$, $p < .05$).

Table 0-29

Regression Coefficients for Long Term Debt Financing on Leverage level

	Coefficients[a]				
	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	T	Sig.
1 (Constant)	-1.017	0.213		-0.108	.999
Long Term Debt	.227	0.145	.526	5.068	.000

a. Dependent Variable: Leverage level

Long Term Debt Financing and Performance Correlation Analysis

To assess the connection between funding via long-term debt and Leverage rates, a Pearson product-moment correlation was conducted. Such results indicate that Pearson's r (34) = .636, p<.001 (Findings shown in Table 4.30) has a positive correlation between long-term debt financing and leverage rates.

Table 0-30

Long Term Financing and Leverage level Correlation Analysis

			Long Term Financing	Leverage level
Long Term Financing	Term	Pearson Correlation	1	.636**
		Sig. (2-tailed)		.000
		N	34	34
Leverage level		Pearson Correlation	.636**	1
		Sig. (2-tailed)	.000	
		N	34	34

Model Summary for Long Term Debt Financing

The value in the R column, r=.66 shows a strong association between debt financing and results over the long term. The R2 column indicates the proportion of the outcome variable (Leverage level) that the model can describe. The result reveals that long-term debt financing will explain 44 percent of the Leverage level variability.

Table 0-31

Model Summary for Long Term Debt Financing

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.66^{a}	.44	.32	0.10534

a. Predictors: (Constant), Long Term Debt

4.14.1. ONE-WAY ANOVA for Long Term Debt Financing on Liquidity

The ANOVA table tests whether or not the model is a substantial contributor of the outcome variable (Liquidity Level). Therefore, the null hypothesis that there is no correlation between long-term debt financing and degree of liquidity was rejected. Subsequently, support was given to the research hypothesis that there is a statistically meaningful link between long-term debt financing and liquidity level, defined by $F_{(262, 9)} = 3.030$, $p < .05$.

Table 0-32

ONE-WAY ANOVA for Long Term Debt Financing on Liquidity level

ANOVA

Dependent Variable Liquidity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.516E+21	262	3.251E+19	3.030	.035
Within Groups	9.656E+19	9	1.073E+19		
Total	8.613E+21	271			

ONEWAY DependentParameter BY LongTermDebtFinancing

Regression Coefficients for Long Term Debt Financing

The coefficients table indicates how the individual predictor variables contribute to the model. Since the p −value is < .05; we conclude that long term debt financing significantly contributes to the model. The connection between long term debt financing and liquidity level can be captured in a model which takes the form of a statistical equation as described below;

$Y = b_0 + b_1 X$

Where, Y represents liquidity level

and X represents long term debt financing

Replacing the coefficients with the correct values, a predictive model is arrived at,

Liquidity level = 2.107+ (0.027* Long Term Debt Financing)

It was established that long term debt financing significantly predicted Liquidity level (b_1= .027, p < .05).

Table 0-33

Regression Coefficients for Long Term Debt Financing on Leverage level

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.107	0.123		-0.018	.999
	Long Term Debt	.027	0.240	.206	2.698	.000

a. Dependent Variable: Liquidity level

Long Term Financing and Performance Correlation Analysis.

Correlation was done to examine the association between financing through long term debt and liquidity level. These results indicate that there was a positive correlation between financing through long term debt and leverage level, Pearson's *r* (34) = .697, *p*< .05

Table 0-34

Long Term Financing and liquidity level Correlation Analysis

		Long Term Financing	Leverage level
Long Term Financing	Pearson Correlation	1	.697**
	Sig. (2-tailed)		.000
	N	34	34
Leverage level	Pearson Correlation	.697**	1
	Sig. (2-tailed)	.000	
	N	34	34

4.15 Equity Financing and Leverage Level: Hypothesis Testing

The study sought to establish whether equity financing significantly influenced leverage level. A simple linear regression was carried out to test if equity financing significantly predicted leverage and liquidity level. The results are presented in Tables 4-35, 4-36, 4-37 and 4.38.

4.15.1 Model Summary for Equity Financing

The R column value, r=.89, shows a strong connection between equity financing and performance. The R2 column shows the proportion of the outcome variable (performance) which the model will explain. The result shows that equity financing accounts for 79% of the output variance.

Table 0-35

Model Summary for Equity Financing

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.89	.79	.100	0.08713

a. Predictors: (Constant), Equity Financing

4.15.1.1 Proof of Regression Results Using ONE-WAY ANOVA for Equity Financing

The ANOVA table tests whether or not the model is a substantial contributor of the outcome variable (performance). The results indicate that the model is a significant predictor $F_{(155, 116)} = 4.632$, $p < .05$. Therefore, the null hypothesis that there is no connection between equity funding and level of leverage was dismissed. Subsequently, evidence was given for the research hypothesis that there is a statistically significant relationship between equity funding and leverage rates.

Table 0-36

ANOVA for Equity Financing

ANOVA

Dependent Variable Leverage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.445E+23	155	2.222E+21	4.632	.000
Within Groups	5.566E+22	116	4.798E+20		
Total	4.001E+23	271			

ONEWAY DependentParameter BY EquityFinancing

Regression Coefficients for Equity Financing

The coefficients table indicates how the individual predictor variables contribute to the model. Since the p −value is < .05; we conclude that equity financing

significantly contributes to the model. The relationship between equity financing and performance can be captured in a model which takes the form of a statistical equation as described below;

$Y = b_0 + b_1X$

Where,

Y represents performance

and X represents equity financing

Replacing the coefficients with the correct values, a predictive model is arrived at,

Leverage = -.283+ (0.018* Equity Financing)

Hence, the results of the regression indicated that the model explained 79% of the variance and that the model was significant, $F_{(155, 116)} = 4.632$, $p < .05$. It was subsequently established that equity financing significantly predicted financial

Table 0-37

Regression Coefficients for Equity Financing
performance ($b1 = .018$, $p < .05$).

	Coefficients[a]					
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.803	0.405		-4.328	.000
	Equity Financing	.108	0.102	.789	1.729	.000

a. Dependent Variable: Leverage level

Equity Financing and Leverage level Correlation Analysis

To test the relationship between equity and performance a Pearson product-moment correlation was developed. Such results show a positive association between equity financing and efficiency, r (34) = .829, p<.001 (Table 4.46 indicates the findings).

Table 0-38

Equity Financing and Performance Correlation Analysis

		Financial Performance	Equity Financing
Financial Performance	Pearson Correlation	1	.829[**]
	P - Value		.000
	N	34	34
Equity Financing	Pearson Correlation	.829[**]	1
	P - Value	.000	
	N	34	34

4.15.2 Equity Financing and Liquidity level: Hypothesis Testing

The study sought to establish whether Equity financing significantly influenced liquidity level. A simple linear regression was carried out to test if equity financing significantly predicted liquiditylevel. The results are presented in Tables 4.47, 4.48, 4.49 and 4.50.

Model Summary for Equity Financing

The value in the R column, r = .52 indicates a very weak correlation between equity financing and liquidity level. The R2 column shows the proportion of the outcome variable (the degree of liquidity) that the model can describe. The result shows that equity financing will explain less than 1 percent of the liquidity level variability.

Table 0-39

Model Summary for Equity on Liquidity level

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.52	.27	0.018	0.02047

a. Predictors: (Constant), Equity Financing

Proof of Regression Analysis Results Using ONE-WAY ANOVA for Equity Financing

The ANOVA table checks whether the model is a significant outcome variable predictor (Liquidity level) or not. The results show that the model was not a meaningful indicator since the value of p was greater than the value of .05. It could not be dismissed the null hypothesis that there is no relationship between Equity financing and Liquidity rates. Therefore, the analysis failed to find a meaning connection between Equity funding and level of liquidity.

Table 0-40

ANOVA for Equity Financing

ANOVA

Dependent Variable Liquidity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.793E+21	155	2.447E+19	.589	.999
Within Groups	4.820E+21	116	4.155E+19		
Total	8.613E+21	271			

ONEWAY Liquidity BY EquityFinancing

Regression Coefficients for Equity Financing

The coefficients table indicates how the individual predictor variables contribute to the model. Since the p −value is > .05; we conclude that Equity financing did not significantly contribute to the model.

Table 0-41

Regression Coefficients for Equity Financing

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.314	0.131		2.425	.000
	Equity Financing	-0.229	0.070	0.062	0.213	.000

a. Dependent Variable: Liquidity level

Equity Financing and Liquidity level Correlation Analysis

To check the relationship between financing via Equity and Liquidity stage, a Pearson product-moment correlation was made. This results show no significant correlation between the level of performance and equity funding and the level of liquidity, as the p–value was higher than .05. (For details set out in Table 4.42).

Table 0-42

Equity Financing and Liquidity level Correlation Analysis

		Liquidity level	Equity Financing
Liquidity level	Pearson Correlation	1	-.052
	Sig. (2-tailed)		.718
	N	34	34
EquityFinancing	Pearson Correlation	-.052	1
	Sig. (2-tailed)	.718	
	N	34	34

4.16 Short Term Debt Financing and Performance: Hypothesis Testing

The study sought to establish whether short term debt financing significantly influenced financial performance. A simple linear regression was carried out to test if short term debt financing significantly predicted financial performanc. The results are presented in Tables 4.51, 4.52, 4.53 and 4.54.

4.16.1 Model summary for short term debt financing

The value in the R column, r=.87 shows that the association between short-term debt financing and financial performance was very significant. The R2 column indicates the proportion of the outcome variable (Leverage level) that the model can describe. The result indicates that 77% of the variation in Leverage level can be explained by short long term debt financing.

Table 0-43

Model Summary for Short Term Debt Financing on leverage

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.87	.77	.001	0.02037

a. Predictors: (Constant), Short Term Debt Financing

ONE-WAY ANOVA for Short Term Debt Financing

The ANOVA table checks if the model is a meaningful predictor of the outcome variable (Leverage) or not. The results indicate that the model is a significant predictor $F_{(243, 28)} = 43.484$, $p < .05$. Therefore, the null hypothesis that there is no connection between short-term debt financing and level of leverage was

dismissed. Subsequently, evidence was given for the research hypothesis that there is a statistically significant relationship between short-term debt financing and leverage rates.

Table 0-44

ANOVA for Short Term Debt Financing

ANOVA

Dependent Variable Leverage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.991E+23	243	1.642E+21	43.484	.000
Within Groups	1.057E+21	28	3.777E+19		
Total	4.001E+23	271			

ONEWAY DependentParameter BY ShortTermDebts

Regression coefficients for short term debt financing

The coefficients table indicates how the individual predictor variables contribute to the model. Since the p–value is < .05; we conclude that short term debt financing significantly contribute to the model.

Table 0-45

Regression Coefficients for Short Term Debt Financing

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.709	0.04		0.687	.000
	Short Term Debt	0.110	0.084	0.100	0.623	.000

a. Dependent Variable: Leverage level

Short term debt financing and leverage level correlation analysis

To examine the association between short-term debt financing and Leverage point, a Pearson product-moment correlation was developed. These results show no significant correlation between short-term debt financing and degree of leverage, r (34) = .87, p<.001 (Table 4.46 indicates the findings).

Table 0-46

Short Term Debt Financing and Performance Correlation Analysis

		Leverage level	Short Term Financing
Leverage level	Pearson Correlation	1	.100
	Sig. (2-tailed)		.485
	N	34	34
Short Term Financing	Pearson Correlation	0.100	1
	Sig. (2-tailed)	.485	
	N	34	34

4.16.2 Model Summary for Short Term Debt Financing for Liquidity Level

The value in the R column, r=.81 reveal that the association between short-term debt financing and liquidity level was very high. The R2 column shows the proportion of the outcome variable (the degree of liquidity) that the model can describe. The result suggests that short-term debt financing may explain less than 1 per cent of the liquidity level variance.

Table 0-47

Model summary for Short Term Debt Financing

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.81	.66	.051	0.03021

a. Predictors: (Constant), Short Term Debt Financing

ONE-WAY ANOVA for Short Term Debt Financing

The ANOVA table tests whether or not the model is a substantial contributor of the outcome variable (performance). The results indicate that the model is a significant predictor $F_{(243, 28)} = 1.001$, $p > .05$. Therefore, the null hypothesis that there is no connection between short term debt financing and level of retained. Subsequently, evidence was given for the research hypothesis that there is a statistically significant relationship between short term debt financing funding and leverage rates.

Table 0-48

ANOVA for Short Term Debt Financing

ANOVA

Dependent Variable Liquidity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.724E+21	243	3.179E+19	1.001	.528
Within Groups	8.889E+20	28	3.175E+19		
Total	8.613E+21	271			

ONEWAY Liquidity BY ShortTermDebts

Regression Coefficients for short Term Debt Financing

The coefficients table indicates how the individual predictor variables contribute to the model. Since the p −value is > .05; we conclude that short term debt financing did not significantly contribute to the model.

Table 0-49

Regression Coefficients for Short Term Debt Financing

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.879	0.002		0.587	.000
	Short Term Debt	0.360	0.004	0.100	0.263	.000

a. Dependent Variable: Liquidity level

Short Term Debt Financing and Liquidity level Correlation Analysis

To evaluate the connection between short-term debt financing and degree of liquidity, a Pearson product-moment correlation was made. This results show no meaningful correlation between short-term debt financing and degree of liquidity, as the p-value was higher than 0.05. (Findings shown in Table 4.50).

Table 0-50

Short Term Debt Financing and Performance Correlation Analysis

		Liquidity level	Short Term Financing
Liquidity level	Pearson Correlation	1	.100
	Sig. (2-tailed)		.565
	N	34	34
Short Term Financing	Pearson Correlation	0.100	1
	Sig. (2-tailed)	.565	
	N	34	34

4.17 Internal Financing and Performance: Hypothesis Testing

The research attempted to establish whether internal financing affected performance significantly. A simple linear regression was carried out to test if internal financing significantly predicted leverage and liquidity levels. The results are presented in Tables 4.59, 4.60, 4.61, and 4.62.

Model Summary for Internal Financing

The value in the R column, r = .736 indicates the existence of a strong correlation between internal financing and performance. The R^2 column indicates the proportion of the outcome variable (Leverage level) that can be explained by the model. The result indicates that 54.1% of the variation in Leverage level can be explained by internal financing.

Table 0-51

Model Summary for Long Term Debt Financing

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.736ᵃ	.541	.392	0.01382

a. Predictors: (Constant), Internal Financing

Financing The ANOVA table tests whether or not the model is a significant predictor of the outcome variable (performance). The results indicate that the model is a significant predictor $F_{(86, 185)} = 26.934$, $p < .05$. The null hypothesis that there exists no relationship between internal financing and performance was thus rejected. Subsequently, support was given to the research hypothesis that there is a

Table 0-52

ONE-WAY ANOVA for internal financing on Leverage level

statistically significant link between internal financing and performance.

ANOVA

Leverage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.705E+23	86	4.309E+21	26.934	.000
Within Groups	2.959E+22	185	1.600E+20		
Total	4.001E+23	271			

ONEWAY DependentParameter BY InternalFinancing

Regression Coefficients for Internal Financing

The coefficients table indicates how the individual predictor variables contribute to the model. Since the p-value is $< .05$; we conclude that internal financing significantly contributes to the model. A model which takes the form of a statistical equation as mentioned below can capture the connection between internal financing and performance;

$Y = b_0 + b_1 X$

Where Y represents the performance

And X represents internal financing

Replacing the coefficients with the correct values, a predictive model is arrived at,

$$\text{Leverage level} = -1.817 + 0.257 * \text{internal financing}$$

Hence, the results of the regression indicated that the model explained 54.1% of the variance and that the model was significant, $F_{(86, 185)} = 26.934$, $p < .05$. It was subsequently established that internal financing significantly predicted Leverage level ($b_1 = .271$, $p < .05$).

Table 0-53

Regression Coefficients for Internal Financing on Leverage level

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.007	0.213		-0.128	.009
	Internal Financing	.271	0.145	.426	5.068	.000

a. Dependent Variable: Leverage level

Internal Financing and Performance Correlation Analysis

To assess the connection between funding via internal financing and Leverage rates, a Pearson product-moment correlation was conducted. Such results indicate that Pearson's r (34) = .736, p<.05 (Findings shown in Table 4.59) has a positive correlation between internal financing and leverage rates.

Table 0-54

Internal financing and Leverage level Correlation Analysis

			Internal financing	Leverage level
Long Term Financing		Pearson Correlation	1	.736**
		Sig. (2-tailed)		.000
		N	34	34
Leverage level		Pearson Correlation	.736**	1
		Sig. (2-tailed)	.000	
		N	34	34

Model Summary for Internal Financing

The value in the R column, r=.66 shows a strong association between debt financing and results over the internal financing. The R2 column indicates the proportion of the outcome variable (Leverage level) that the model can describe. The result reveals that internal financing will explain 44 percent of the Leverage level variability.

Table 0-55

Model Summary for Long Term Debt Financing

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.76^a	.57	.27	0.21534

a. Predictors: (Constant), Internal Financing

ONE-WAY ANOVA for Internal Financing on Liquidity

The ANOVA table tests whether or not the model is a substantial contributor of the outcome variable (Liquidity Level). Therefore, the null hypothesis that there is no correlation between internal financing and degree of liquidity was rejected.

Subsequently, support was given to the research hypothesis that there is a statistically meaningful link between internal financing and liquidity level, defined by $F_{(86, 185)} = 10.339$, $p < .05$.

Table 0-56

ONE-WAY ANOVA for Internal Financing on Liquidity level

ANOVA

Liquidity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.130E+21	86	8.290E+19	10.339	.000
Within Groups	1.483E+21	185	8.018E+18		
Total	8.613E+21	271			

ONEWAY Liquidity BY InternalFinancing

Regression Coefficients for Internal Financing

The coefficients table indicates how the individual predictor variables contribute to the model. Since the p–value is $< .05$; we conclude that internal financing significantly contributes to the model. The connection between internal financing and liquidity level can be captured in a model which takes the form of a statistical equation as described below;

$Y = b_0 + b_1X$

Where,Y represents liquidity level

and X represents internal financing

Replacing the coefficients with the correct values, a predictive model is arrived at,

Liquidity level $= 1.107 + (0.137*$ internal financing$)$

It was established that internal financing significantly predicted Liquidity level ($b_1 = .027$, $p < .05$).

Table 0-57

Regression Coefficients for internal financing on Leverage level

		Coefficients^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.107	0.123		-0.018	.027
	Internal Financing	.027	0.240	.206	2.698	.000

a. Dependent Variable: Liquidity level

Internal Financing and Performance Correlation Analysis.

Correlation was done to examine the association between financing through internal financing and liquidity level. These results indicate that there was a positive correlation between financing through internal financing and leverage level, Pearson's r (34) = .697, $p < .05$

Table 0-58

Internal financing and liquidity level Correlation Analysis

		Internal Financing	Leverage level
Internal financing	Pearson Correlation	1	.697**
	Sig. (2-tailed)		.000
	N	34	34
Leverage level	Pearson Correlation	.697**	1
	Sig. (2-tailed)	.000	
	N	34	34

4.17.2 Model Summary for the Combined Model

This section presents asummary of the regression analysis models. The multiple R for the relationship between the set of independent variables and the dependent variable is 0.89 which means a strong correlation. R^2 tells us the percentage of the disparity in the dependent variable that is explained by the four predictors. This means that 79% of the variation in performance of firms listed in Kenya can be explained by the capital structure elements namely; equity financing, short term debt financing, internal financing and long term debt financing. Adjusted R^2 corrects for multiple predictors, giving a slightly lower value.

Table 0-59

Model Summary for the Combined Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.89	.79	0.75	0.02037

a. Predictors: (Constant), Long Term Debt,Short Term Debt Financing, Equity financing ,Internal Financing

ANOVA for the independent variables on Leverage

The overall regression relationship is justified by the anova examination based on a regression test, with the anova projecting likelihood of the F coefficient (4.632) at <.05, which is less than the degree of significance of .05. Hence Ho that there is no relationship between the independent variables and the dependent variable (R^2=0) was rejected. The theoretical hypothesis that there is a statistically significant correlation between the set of independent variables and the dependent variable was subsequently accepted.

Table 0-60

ANOVA for the Combined Model

ANOVA

Leverage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.445E+23	155	2.222E+21	4.632	.000
Within Groups	5.566E+22	116	4.798E+20		
Total	4.001E+23	271			

ONEWAY Leverage BY Combined

Capital structure elements and performance of listed firms in the NSE

The constructs for the study were equity financing, short term debt financing, internal financing and long term debt financing. The output of the multiple regressions indicating the significance of each of the predictor variable is shown in table below.

Table 0-61

ANOVA for the Combined Model

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	84.477	69.082		.205	.839
	Short Term Debt	-1.002	.004	-.017	-.576	.567
	Equity Financing	1.001	.001	-.018	-.622	.537
	Internal Financing	-3.002	.002	.001	-.274	.674
	Long term Debt	-7.077	.004	.000	-.016	.987

a. Dependent Variable: Leverage level

Model Summary for independent variables on Liquidity level

The multiple R is .79 for the connection between the set of predictor variables and the outcome variable. R^2 tells us the percentage of variation in the dependent variable that can be linked to the four predictors. This means that 62% of the variation in firm performance can be attributed to the financial structure elements namely; equity financing, short term debt financing, internal financing and long term debt financing. Adjusted R^2 corrects for multiple predictors, giving a slightly lower value.

Table 0-62

Model Summary for the Combined Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.79	.62	0.59	0.03023

a. Predictors: (Constant), Long Term Debt,Short Term Debt Financing, Equity financing, Internal Financing

Regression ANOVA for the Combined Model of the independent variables on Liquidity level

For the overall regression relationship, the likelihood of the F statistic (0.589) is >.05, less than the degree of significance of .05. Therefore, the Ho hypothesis that there is no connection between the predictor and the outcome elements ($R^2= 0$) was retained. This means that the Ha that there is no meaningful connection between predictor and the outcome elements

Table 0-63

ANOVA for the Combined Model

ANOVA

Liquidity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.793E+21	155	2.447E+19	.589	.999
Within Groups	4.820E+21	116	4.155E+19		
Total	8.613E+21	271			

ONEWAY Liquidity BY Combined

Capital Structure Elements and Liquidity level of Trading Companies

The variables for the study were equity financing, short term debt financing, internal financing and long term debt financing. The output of the multiple regressions indicating the significance of each of the predictor variable is shown below.

Table 0-64

Capital Structure Elements and Liquidity level of Listed Firms

	Coefficients^a				
	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	4.407	6.022		.305	.999
Short Term Debt	1.112	.005	.023	-.706	.657
Equity Financing	-1.001	.001	.018	-.712	.627
Internal Financing	.887	.002	.037	-1.567	.781
Long term Debt	6.017	.003	.004	-.036	.999
a. Dependent Variable: Liquidity level					

The regression result shows that parameter estimate for equity financing were found to have significant negative impact on liquidity level at 95% level of significance. Short term debt and long term debt were found to have significant positive impact on the liquidity levels at 95% significance level.

CHAPTER FIVE

5.0   SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

The study's main objective was to investigate the relationship between capital structure and performance of listed companies in Kenya's NSE. Discussed in this chapter: 5.2 summaries of the results, 5.3 summarizes the findings and 5.4 provides recommendations.

5.2 Summary of the Findings

The Capital structure elements considered were; equity financing, short term debt financing, internal financing and long term debt financing.

5.2.1 Equity Financing and Performance of Listed Firms

The study sought to examine the influence of financing through equity on the performance of listed firms at the NSE. It was established that the mean equity financing of the quoted firms was fluctuating within the eight years period of examination. Further analysis indicated a statistically significant connection between equity financing and performance of listed firms in the NSE. The probability of the t statistic (4.682) for the b coefficient was <.05, less than the level of significance .05. The Ho that the slope associated with equity financing is equal to zero (b = 0) was therefore rejected. The null hypothesis that there is no relationship between Equity financing and Liquidity level could not be rejected. Hence, the research failed to find a meaningful connection between Equity financing and liquidity level. Therefore, the null hypothesis that there is no connection between equity funding and the level of leverage was dismissed. Subsequently, support was given for the

research hypothesis that there is a statistically significant connection between equity funding and leverage rates.

5.2.2 Short Term Debt Financing and Performance of Listed Firms in the NSE

The study sought to examine the influence of financing through short term debt on the performance of listed firms in the NSE. There was a consistency increase in the mean short term debt for the NSE listed companies from the year 2009 to the year 2015; from 19.344 billion shillings in 2009 to 56.891 billion shillings in 2015, and a slight decline in the mean short term debt; from 56.891 billion shillings at 2015 to 56.297 billion shillings at 2016. The study did not find a meaningful connection between financing through short term debt and the performance of listed firms in Kenya. The p-value was greater than .05, > .05; we conclude that short term debt financing did not significantly contribute to the model on leverage level and Since the p-value is > .05; we conclude that short term debt financing did not significantly contribute to the model on liquidity level.

5.2.3 Long Term Debt Financing and Performance of Listed Firms in the NSE

The study sought to examine the influence of financing through long term debt on the performance of listed firms in the NSE. The mean long term debt financing for the firms listed at NSE had greatly increased from 3.367 billion shillings in 2009 to 15.587 billion shillings in 2016. Further, the analysis showed a statistically significant relationship between long-term debt financing and NSE listed firms' results. The likelihood for the b coefficient of the t statistics (3.871) was <.05, less than the significance level .05. The null hypothesis that the debt financing curve is

equal to zero (b = 0). The research hypothesis that there is a statistically significant relationship between long term debt financing and liquidity level was subsequently supported and it was also subsequently established that long term debt financing significantly predicted Leverage level (b_1 = .257, $p < .05$).

5.2.4 Internal Financing and Financial Performance of Listed Firms in the NSE

The study sought to examine the influence of internal financing on financial performance of listed firms in the NSE. The study revealed that the mean internal financing of the companies listed at the NSE had consistently increased from 5.346 billion shillings in the year 2009 to 14.7 billion shillings in the year 2016. Telecommunication and technology industry registered the highest internal financing amount for the year 2016 with a mean of 82.05 billion, closely followed by insurance industry which posted a mean of 70.369 billion shillings (SD = 110.367). The research hypothesis that there is a statistically significant relationship between internal financing and liquidity level was subsequently supported.

5.3 Conclusions

The study concluded that three out of the four capital structure components included in the study were significantly associated with quoted companies' performance in Kenya.

5.3.1 Equity Financing

The study concluded that there was a statistically significant relationship at the NSE between equity funding and the performance of the listed companies. A company

that uses equity finance will excel financially since the equity holders are the residual claimants and they must ensure that resources are allocated effectively to maximize the wealth of the shareholders. Since the firm will enjoy financing that is not attached to high and compulsory interest rates, it will have a competitive edge over the other firms engaging in the same venture but with funding from external sources.

5.3.2 Long Term Debt Financing

It was developed that the relationship between long-term debt financing and the performance of companies listed in the NSE is statistically significant. Affordable long term debt assists a firm to access productive technologies that it would not have otherwise achieved using internal financing. Debt creates an incentive for the managers to work harder and encourage them to make use of the best investment opportunities. In a situation where a firm has an elaborate growth strategy and does not have adequate internal financing to fund the project; if it has done an accurate assessment of the returns of the project against the cost of debt and is fully satisfied that the venture is worthwhile, taking into consideration the payback period of the venture, then long term debt financing can propel such a firm to greater performance.

5.3.3 Internal Financing

It was concluded that the relationship between internal financing and the performance of companies listed in the NSE is statistically significant. Highly

profitable firms should use internal financing before moving to other options. A firm should source for other financing options when internal finances are inadequate.

5.4 Recommendations

From the conclusion arrived at that three out of the four capital structure components included in the study were significantly associated with trading companies' performance in Kenya, the study makes several recommendations as follows;

1. The board of directors of the listed firms should always give priority to funding options with no compulsory returns to avoid financial distress associated with difficulties in meeting financial obligations.

2. The management of the listed firms should always perform accurate forecasting on projects they intend to venture into, against the cost of debt, and taking into consideration the payback period, in the event, they want to source for long term external funding.

5.4.1 Recommendations for further research

Because the study focused on companies listed in the NSE, it is suggested that the analysis should be expanded to other firms and entities not listed to determine whether different conclusions can be made regarding the relationship between capital structure and organization performance.

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APPENDICES
Appendix I: Listed Companies at Nairobi Securities Exchange

	AGRICULTURAL	FINANCE MANAGER
1	Eaagads Ltd	1
2	Kapchorua Tea Co. Ltd	1
3	Kakuzi	1
4	Limuru Tea Co. Ltd	1
5	Rea Vipingo Plantations Ltd	1
6	Sasini Ltd	1
7	Williamson Tea Kenya Ltd	1

	AUTOMOBILES AND ACCESSORIES	FINANCE MANAGER
8	Car and General (K) Ltd	1
9	Sameer Africa Ltd	1
10	Marshalls (E.A.) Ltd	1

	BANKING	FINANCE MANAGER
11	Barclays Bank Ltd	1
12	CFC Stanbic Holdings Ltd	1
13	I&M Holdings Ltd	1
14	Diamond Trust Bank Kenya Ltd	1
15	HF Group Ltd	1
16	KCB Group Ltd	1
17	National Bank of Kenya Ltd	1
18	NIC Bank Ltd	1
19	Standard Chartered Bank Ltd	1

20	Equity Group Holdings	1
21	The Co-operative Bank of Kenya Ltd	1

COMMERCIAL AND SERVICES   FINANCE MANAGER

22	Express Ltd	1
23	Kenya Airways Ltd	1
24	Nation Media Group	1
25	Standard Group Ltd	1
26	TPS Eastern Africa (Serena)	1
27	Scangroup Ltd	1
28	Uchumi Supermarket Ltd	1
29	Hutchings Biemer Ltd	1
30	Longhorn Publishers Ltd	1
31	Atlas Development and Support Services	1
32	Deacons (East Africa) Plc	1
33	Nairobi Business Ventures Ltd	1

CONSTRUCTION AND ALLIED FINANCE MANAGER

34	Athi River Mining	1
35	Bamburi Cement Ltd	1
36	Crown Berger Ltd	1
37	E.A.Cables Ltd	1
38	E.A.Portland Cement Ltd	1

ENERGY AND PETROLEUM FINANCE MANAGER

39	KenolKobil Ltd	1
40	Total Kenya Ltd	1

41	KenGen Ltd	1
42	Kenya Power & Lighting Co Ltd	1
43	Umeme Ltd	1

	INSURANCE	**FINANCE MANAGER**
44	Jubilee Holdings Ltd	1
45	Pan Africa Insurance Holdings Ltd	1
46	Kenya Re-Insurance Corporation Ltd	1
47	Liberty Kenya Holdings Ltd	1
48	Britam Holdings Ltd	1
49	CIC Insurance Group Ltd	1

	INVESTMENT	**FINANCE MANAGER**
50	Olympia Capital Holdings Ltd	1
51	Centum Investment Co Ltd	1
52	Trans-Century Ltd	1
53	Home Afrika Ltd	1
54	Kurwitu Ventures	1

	INVESTMENT SERVICES	**FINANCE MANAGER**
55	Nairobi Securities Exchange Ltd	1

	MANUFACTURING AND ALLIED	**FINANCE MANAGER**
56	B.O.C Kenya Ltd	1
57	British American Tobacco Kenya Ltd	1
58	Carbacid Investments Ltd	1

59	East African Breweries Ltd	1
60	Mumias Sugar Co. Ltd	1
61	Unga Group Ltd	1
62	Eveready East Africa Ltd	1
63	Kenya Orchards Ltd	1
64	A.Baumann CO Ltd	1
65	Flame Tree Group Holdings Ltd	1

TELECOMMUNICATIONANDTECHNOLOGY FINANCE MANAGER

66	Safaricom Ltd	1

REAL ESTATE INVESTMENT TRUST FINANCE MANAGER

67	StanlibFahari I-REIT	1

(NSE, 2017)

Appendix II: Cover Letter

Erastus Ngure,

Kenya Methodist University,

P.O.Box 267,

MERU.

Dear respondent,

RE: Request for Permission to Carry Out Research Study.

I am a student at Kenya Methodist University in the department of Business Administration and I am carrying out a research on the relationship between capital structure and performance of listed firms in Kenya. I would wish to base my study in your organization. I kindly request you to assist me in this study by filling in the questionnaire attached.

Please note that the information provided will be treated with high degree of confidentiality and will purely be used for the purpose of academics. Thank you in advance and God bless you.

Yours sincerely,

Erastus Ngure

Appendix III: Questionnaire

Please Tick (√) or write the appropriate response in the space provided. You are kindly requested not to write your name anywhere in this questionnaire.

Please tick () the appropriate choice

<u>Section A</u>

1. What is your highest education level?

University   ( )   Tertiary   ( )

Other qualifications attained (please specify) ………....................

2. What is your position in the Company?

Top management……………………………………………..

Middle management………………………………………….

 Subordinate staff ……………………………………………

Others (please specify)…………………………………………

3. How many years has your company operated in Kenya?

     Less than 1 year   ( )

     1 to 3 years   ( )

     4 to 5 years   ( )

     Above 5 years   ( )

Section B

Internal Financing

1. What proportion of dividends do you distribute?

Less than 10% ( )   10 – 20% ( )   20 – 30% ( )

30 – 40% (   )   40% and above (   )

2. In which way do you keep your undistributed dividends and in what proportion?

	0 - 10%	10 – 20%	20 – 30%	30 – 40%	40% and above
Retained earnings					
Reserves					
Others (specify)					

3. To what extent do you think internal financing influence the performance of your

company?

Very Low	Low	Moderate	High	Very High

Section C

Equity Financing

1. In what ways do you finance your firm?

Preference shares (   )   Ordinary shares (   )

Both (preference and ordinary shares) (   )

Others specify ....

2. In what proportion do you have your equity financing?

	0 - 10%	10 – 20%	20 – 30%	30 – 40%	40% and above
Preference shares					
Ordinary shares					
Others (specify)					

3. To what extent do you think equity financing influence the performance of your company?

Very Low	Low	Moderate	High	Very High

Section D

Short Term Debt

1. What form of short-term debts have you secured in your organisation?

Creditors ( )   Overdraft (   )   Notes ( )

Commercial papers (   )   Others specify ....

2. To what level is short term debt sufficient in financing your firm?

Very high	High	Moderate	Low	Very low

3. To what extent do you think short term debts influence the performance of your company?

Very Low	Low	Moderate	High	Very High

Long Term Debt

1. What form of long term debts have been offered to your Firm?

Debentures ( )   Loans ( )   Bonds   ( )

Others specify ....

2. To what level is long term debt sufficient in financing your firm?

Very high	High	Moderate	Low	Very low

3. To what extent do you think long term debts influence the performance of your

company?

Very Low	Low	Moderate	High	Very High

Section E

Performance

What was the return on equity and return on asset for the period between 2009 and

2016?

	Year	2009	2010	2011	2012	2013	2014	2015	2016
Leverage Levels									
Liquidity Levels									