

RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND PERFORMANCE OF NON FINANCIAL
FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

I declare that this research project is my original work and has not been presented for the award of any master's degree or any other academic qualification in any University.

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I take this opportunity to thank God the almighty for giving me the means, courage and perseverance to complete this project. Also great appreciation goes to my Supervisor, Dr. Lishenga L. Josephat for his time and dedication to ensure that I completed the project.

Dedication

This project is dedicated to my late mother Grace Namarome Tale who passed on in the course of the project, my family, and my brother Edward Nabangi for their generous and un ending support towards my achievements in academics. May almighty God bless them abundantly.

Abstract

The choice between debt and equity financing has been directed to seek the optimal capital structure. Several studies show that a firm with high leverage tends to have an optimal capital structure and therefore it leads it to produce good performance, while the Modigliani-Miller theorem proves that it has no effect on the value of firm. The importance of these issues has only motivated researchers to examine the relationship between capital structure and firms financial performance. The objective of this study was to establish the relationship between capital structure and financial performance of non-financial firms listed at the Nairobi securities exchange in Kenya between the period January 2008 to December 2013. Financial performance was measured by return on equity while capital structure was measured by debt ratio. Other control independent variables: Tangibility of assets, size of the firm and the growth of the firm. It is important to note that during this period Kenya experienced political anxiety, leading to uncertainty in the securities market. This presents an interesting period of study considering the ups and downs of the trade cycle in the securities market. The beginning of this period also experienced the global financial crisis which was witnessed in the period around 2008-2009. The population of study consisted of all the 40 non-financial firms listed and duly registered with capital market authority of Kenya. Secondary data used was obtained mainly from the annual audited and published books of accounts, financial statements and the NSE. Data analysis was done by use of regression analysis model with the help of a computer that was used to analyze regression statistics, Analysis of Variances and coefficients or gradients of variables and the constant. From the study, there exists a linear significant positive relationship between financial performance of the firm and debt ratio. Also, there is a positive insignificant relationship between financial performance and tangible assets. However, the results show that there exists a linear insignificant negative relationship between financial performance of the firm and size and growth of the firm.

TABLE OF CONTENTS	Page
COVER PAGE.....	i
DECLARATION.....	ii
ACKNOWLEDGEMENTS.....	iii
DEDICATION.....	iv
ABSTRACT.....	v
TABLE OF CONTENTS.....	vi
ABBREVIATIONS.....	x
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1 Background to the study.....	1
1.1.1 Capital structure of a firm.....	4
1.1.2 Financial performance of a firm.....	5
1.1.3 Capital structure and financial performance.....	6
1.1.4 Nairobi Securities Exchange.....	8
1.2 Research Problem.....	9
1.3 Objective of the study.....	10
1.4 Value of the study.....	11

CHAPTER TWO.....	12
LITERATURE REVIEW.....	12
2.1 Introduction.....	12
2.2 Review of theories on capital structure.....	13
2.2.1 The Modigliani-Miller Theorem	14
2.2.2 Free cash-flows theory.....	15
2.2.3 Static Trade-off Theory	16
2.2.4 The Dynamic Trade-off Theory	16
2.2.5 Market Timing Theory	17
2.3 Determinants of capital structure.....	17
2.3.1 Profitability.....	17
2.3.2 Size of the firm.....	18
2.3.3 Tangible Assets	18
2.3.4 Liquidity Ratios.....	19
2.3.5 Growth of the firm	19
2.4 Empirical literature review.....	19
2.5 Summary of literature review.....	23
CHAPTER THREE.....	24
RESEARCH METHODOLOGY.....	24
3.1 Introduction.....	24

3.2 Research design.....	24
3.3 Research population.....	24
3.4 Sample design.....	25
3.5 Data collection.....	25
3.6 Data analysis.....	25
3.6.1 Financial performance.....	26
3.6.2 Debt ratio.....	26
3.6.3 Tangible assets.....	26
3.6.4 Firm size.....	27
3.6.5 Firm growth	27
3.6.6 Table of variables.....	27
3.6.7 Test of significance.....	27
3.6.8 Model specification	28
CHAPTER FOUR.....	29
4.0 DATA ANALYSIS, RESULTS AND DISCUSSION.....	29
4.1 Introduction.....	29
4.2 Data analysis, Results and Discussion.....	29
4.2 Data analysis.....	29
4.3 Results	30
4.4 Discussion of the Results.....	31

4.4.1 Regression statistics.....	31
4.4.2 ANOVA.....	32
4.4.3 Regression Coefficients and the p-value	33
4.4.4 Relationship between Dependent and Independent variables.....	34
CHAPTER FIVE.....	35
5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS.....	35
5.1 Introduction.....	35
5.2 Summary and conclusions	35
5.3 Policy recommendations.....	36
5.3.1 Use of debt as source of funds	37
5.3.2 Effect of Tangible asset on the firm performance.....	37
5.3.3 Consider the leverage risk of asset to be financed.....	37
5.4 Limitations of the study.....	38
5.5 suggestions for further research.....	38
References.....	39
Appendices	42
LIST OF TABLES.....	44

Abbreviations

CR	Current Revenue
CMA	Capital Markets Authority
DR	Debt ratio
EAT	Earnings after interest and tax
E	Owners' equity
FL	Financial leverage
g	Growth of the firm
I	Interest rate
LTD	Long term debt
NFA	Net fixed Assets
NSE	Nairobi Securities Exchange
T	Tangible assets
TA	Total Assets
TL	Total liabilities
MM	Modigliani and Miller
PR	Previous Revenue
ROE	Return on Equity
X _n	Independent variables
Y	Dependent variable

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Capital structure refers to a mixture of a variety of long term sources of funds and equity shares including reserves and surpluses of an enterprise. The historical attempt to building theory of capital structure began with the presentation of a paper by Modigliani & miller (MM) (1958).They revealed the situations under which the Capital Structure is relevant or irrelevant to the financial performance of the listed companies.

Capital structure decision is an important financing decision which cannot be overlooked, since many of the factors that contribute to business failure can be addressed using strategies and financial decisions that drive growth and achievement of organizational objectives (Salazar, Soto & Mosqueda, 2012). Financing decisions can result in a given capital structure which may lead to financial distress and corporate failure (Memba & Nyanumba, 2013). A great dilemma for management and investors alike is whether there exists an optimal capital structure.

To understand how companies finance their operations, it is necessary to examine the determinants of their financing or capital structure decisions. Company financing decisions involve a wide range of policy issues which have implications for capital market development, interest rate and security price determination, and regulation. Such decisions affect capital structure, corporate governance and company development (Green, Murinde and Suppakitjarak, 2002). Knowledge about capital structures has mostly been derived from

developed economies that have many institutional similarities (Booth et al., 2001). It is important to note that different countries have different institutional arrangements, mainly with respect to their tax and bankruptcy codes, the existing market for corporate control, and the roles banks and securities markets play.

The relationship between capital structure and financial performance of the firm is one area of corporate finance that received considerable attention in the finance literature. How important is the concentration of control for the company performance or the type of investors exerting that control are questions that authors have tried to answer for a long time. Prior studies show that capital structure is related to financial performance of the firm, which is a key issue in corporate finance (Brigham and Gapenski, 2008).

To study the relationship of capital structure on financial performance of the firm will help us to know the potential problems in performance and capital structure. The study on capital structure attempts to explain the mix of securities and financing sources used by companies to finance investments (Myers, 2001). Brigham (2004) referred to Capital structure as the way in which a firm finances its operations which can either, be through debt or equity capital or a combination of both.

According to Myers (2001), there was no universal theory on the debt to equity choice but noted that there were some theories that attempted to explain the capital structure mix. Myers (2001) cited the trade-off theory which states that firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress.

The pecking order theory states that firms will borrow rather than issue equity when internal cash flow is not sufficient to fund capital expenditure (Myers, 2001). The theory concluded that the amount of debt will reflect the firms' cumulative need for external funds.

The free cash flow theory on the other hand stated that dangerously high debt levels would increase firm value despite the threat of finance distress when a firms' operating cash flow significantly exceed its profitable investment opportunities.

Financial performance is a subjective measure of how well a firm can use its' assets from its' primary business to generate revenues. Erasmus (2008) noted that financial performance measures like profitability and liquidity among others provided a valuable tool to stakeholders to evaluate the past financial performance and the current position of a firm. Brigham and Gapenski (1996) argued that in theory, the Modigliani and Miller model was valid however in practice, bankruptcy costs did exist and that these costs were directly proportional to the debt levels in a firm. This conclusion implied a direct relationship between capital structure and financial performance of a firm. Berger & di Patti (2006) concluded that more efficient firms were more likely to earn a higher return from a given capital structure, and that higher returns can act as a cushion against portfolio risk so that more efficient firms are in a better position to substitute equity for debt in their capital structure. This is an incidental of the trade-off theory of capital structure where differences in efficiency enable firms to alter their optimal capital structure either upward or downwards. In addition, Singh & Hamid (1992) in their research used data on the largest companies in selected developing countries and found that firms in developing countries used more of debt finance in financing their growth than was the case in industrialized countries. Abor (2005) also found a positive relationship between total assets and return on equity and those profitable firms in Ghana depended more on debt as a main financing option due to a Perceived low financial risk.

1.1.1 capital structure of a firm

Capital structure defines the decision made by a firm in the selection of sources of finance to raise their capital. The work by Modigliani and Miller (1958) on capital structure provided foundation upon which the debate in corporate finance about determinants of capital structure. Their assertion was that the mix between debt and equity under perfect market conditions is irrelevant and has no effect on the firm's market value or its cost of capital. This assertion was also consistent with prior work of Burr (1938) who argued that a change in the firm's capital structure has no effect on its investment value.

Many Kenyan researchers have contributed a lot to this field of knowledge. Kamere (1987) did a research on some factors that influence capital structure of public companies in Kenya. From his research, he concluded that profitability was a very important and major factor that influenced capital structure decisions in firms in NSE. His observation was that those companies whose profits were very high borrowed very little, that is; they did not borrow so much since some of the profit would be ploughed back into the business. He further noted that those with small profit would not be able to plough back any substantial amount into the business; therefore, they were forced to seek additional funds from outside sources. In fact, this result concurred with the pecking order theory which argues that in the presence of asymmetric information, a firm would prefer internal finance over the other sources of finance, but would issue debt if internal funds were exhausted. However, Omondi (1996) in his research on capital structure in Kenya came up with a conclusion that totally contradicted the Pecking order theory. In his research, he observed that those firms in NSE and with high returns on investments used relatively high debt. That is, those firms which recorded high profit were also found to have borrowed much.

Other similar researches that have been done include that of Musilo (2005): capital structure choices, a survey of industrial firms in Kenya. His objective was to find out the factors that motivate management of

industrial firms in choosing their capital structure. The research found out that industrial firms are more likely to follow a financing hierarchy than to maintain a target -debt to equity ratio, and that the models based on corporate and personal taxes, bankruptcy, and other leverage related cost are not as useful in determining the financing mix as are the models that suggest that new financing reveals aspects of the firm's marginal asset performance. He further added that, the importance managers attach to specific capital structure theories is not related to managerial perceptions of market efficiency.

Jensen (1986) as quoted in Roy and Ming Fang (2000) observe that in order for to maintain their competitive capabilities, goals and objectives, reduce risks and continue with their existence, they need adequate knowledge about capital structure. He further notes that, they should direct their special attention to those factors that are likely to influence the governance structure of a firm to make strategic choices

1.1.2 Financial performance of a firm

Financial performance is a subjective measure of how well a firm can use its' assets from its' primary business to generate revenues. Erasmus (2008). A firm's financial performance, in the view of the shareholder, is measured by how better off the shareholder is at the end of a period, than he was at the beginning and this can be determined using ratios derived from financial statements (Berger and Patti, 2002). Erasmus, (2008) noted that financial performance measures like profitability and liquidity among others provided a valuable tool to stakeholders to evaluate the past financial performance and the current position of a firm. Brigham and Gapenski (1996) argued that in theory, the Modigliani and Miller model was valid however in practice, bankruptcy costs did exist and that these costs were directly proportional to the debt levels in a firm. The value of the firm is linked to profit maximization. A firm that is expected to maximize its profits is concerned with maximizing its value (Bayer Michael R, 2006). One of the major issues of

concern to firms is the availability and the inherent cost of capital. Firms therefore search for the lowest-cost financial structures depending on the costs and risks involved in the various financing strategies (Titman and Wessels, 1988). It should be noted that there are multiple financing sources, where the firms can depend on it to finance their investments. Financing sources categorize into two sources, the internal financing which includes common stock issuance, preferred stocks, reserves and retained earnings and external financing which consists short and long term loans and bonds issuance. Firms must choose the best financing sources to reach the optimal capital structure to be in harmony with firms' requirements to take suitable financing decision and then reflect positively on their performance. The performance measure plays crucial role in management of firms to identify the general position where from, the ability of the firm to use capital structure optimally and enhance its performance will be assessed. The study used profitability as dependent variables to measure the firm performance to examine the effect of capital structure on firm performance. To achieve this, the study employed a measure of profitability by using the indicator which express of performance such as return on equity. Return on equity is a profitability measure that takes into consideration the return that shareholders can obtain from efficient utilization of capital by the management. ROE is measured by dividing net income after tax to book value of owner equity (Onalapo and Kajola (2010).

1.1.3 Capital structure and financial performance of a firm

The relationship between capital structure and firm performance is one of the argumentative topics in the field of corporate finance that has plagued the academic world for a number of years. At the genesis of capital structure is the work by Modigliani and Miller,(Modigliani & Miller,1958:261-297).Modigliani and Miller's work sort to identify conditions under which capital structure decisions were irrelevant to the value of the firm albeit in a perfect capital market (Modigliani & Millert,1958:269).

The Modigliani and Miller (1958, 1963) seminal papers advanced the capital structure theory by considering capital structure without taxes and with taxes. They argued that in a perfect capital market, the value of the firm is independent of its capital structure; hence the firm's overall cost of capital cannot be reduced as debt is substituted for equity. In the presence of corporate taxes, the firm's value is positively related to its debt. But since firms deduct interest payments but not deduct dividend payments, leverage lowers tax payments. The cost of equity thus rises with leverage because the risk to equity rises with leverage. There have been substantial research efforts devoted by different scholars in determining what seems to be an optimal capital structure for firms, yet there is no universally accepted theory throughout the literature explaining the debt-equity choice of firms. But in the last decades, several theories have emerged explaining firm's capital structure and the resultant effects on their market values. Some of the theories that try to explain this behavior include among others; the static trade-off theory (Modigliani and Miller, 1963) which is based on firms' observation of a target debt ratio, the pecking order hypothesis (Myers, 1984; Myers and Majluf, 1984) which is based on asymmetric information as the influence of financing behavior. The agency theory (Jensen and Meckling, 1976) which considers the costs to the shareholders and managers of a firm for holding debt. Although the capital structure issue has received much attention in developed countries, it has remained neglected in developing economies in Africa (Bhaduri;2002).The reason for this neglect is that until recently,developing economies have placed little importance to the role of firms in economic development (Bhaduri ;2002).Singh & Hamid, (1992) in their research, used data on the largest companies in selected developing countries and found that firms in developing countries used more of debt finance in financing their growth than was the case in industrialized countries. Abor, (2005) also found a positive relationship between total assets and return on equity and that profitable firms in Ghana depended more on debt as a main financing option due to a perceived low financial risk.

In Nigeria, financial constraints have been a major factor affecting firm's performance. According to Salaan and Agboola (2008), the move towards a free market coupled with the widening and deepening of various financial markets has provided the basis for the corporate sector to optimally determine their capital structure. Since 1987, financial liberalization has changed the operating environment of firms by giving more flexibility to managers in choosing their firm's capital structure (Salaan and Agboola , 2008).In Kenya, in a survey of enterprise attitudes, Wagacha (2001) found that firms seemed to increase their borrowing after listing. For large listed firms the debt to equity ratios seemed to rise, while for the small firms they fell, indicating that market development favored large listed firms. Muthama, et al. (2013) did analysis of macroeconomic influences on capital structure of listed companies in Kenya. The research concluded that macro-economic factors have strong influence on capital structure, GDP growth rate have positive influence on long term debt ratio and negative influence on total and short term debt ratio.

1.1.4 Nairobi Securities Exchange

According to NSE website (2013), NSE was established in 1954 as a voluntary association of stock brokers and registered under the society's Act with an aim to regulate informal dealings that was being practiced in colonial times. The arrangement confined to the European settler community until 1963.In 1991,the NSE was incorporated under the company's act as accompany ltd by guarantee without share capital and in July 2011,Nairobi Stock Exchange changed its name to Nairobi Securities Exchange.NSE has undergone revolution since its establishment, which includes enactment of trading and settlement rules, Central depository system, automation of the market, demutualization from mutual company to company ltd by shares. The listing requirements at Nairobi Securities Exchange includes having in place stable dividend policy and gearing ratio of not more than 4:1(NSE manual 2013).These are also reinforced by the legal notice no.60 of 2002 which

provides that companies that want to be listed will need a sound dividend policy in place. The Nairobi Securities Exchange has listed firms in nine sectors. Out of the nine sectors, this study focused on seven sectors, leaving out banks and other financial institutions whose capital structures are regulated.

1.2 Research problem

The relationship between capital structure and financial performance of the firm is one of the fields of corporate finance that has been widely researched with no universally accepted explanations. Following the work of MM (1958 and 1963), much research has been done to determine the relationship that exists between capital structure and financial performance of the firm. Capital structure decision being an important financial decision, firms ought to exercise caution when making the decision as it may determine its survival in the market. Some capital structure decisions made by managers may not add value to the firm but may be meant for protecting the managers' interests (Dimitris and Psillaki, 2008)

Capital structure issue has received much attention in developed countries. However, it has remained neglected in developing countries. The reason for this neglect according to Bhaduri (2002) was, that until recently, developing economies have placed little importance to the role of firms in economic development as well as corporate sectors in many developing countries are faced with several constraints on their choices regarding sources of funds and access to stock markets which may either be regulated or limited due to underdeveloped stock markets. Consequently, in Kenya, determining the actual effect a firm has on its market value has been a challenge among researchers. Particularly specifying what capital mix seems to optimize firm's values has been a difficult puzzle to unravel. Although some studies have been done on the relationship between capital structure and firm performance they have not been conclusive enough. Kanyaru

(2010) and Ondiek (2010) studied the relationship between capital structure and financial performance of firms listed at Nairobi Securities Exchange. Kaumbuthu (2010) studied the relationship between capital structure and financial performance of listed firms in the industrial and Allied sector. Munene (2006) studied the impact of profitability on capital structure of companies listed at NSE while Musili (2005) studied capital structure choice on industrial firms in Kenya. Oginda (2013) studied on the relationship between capital structure and financial performance of listed firms in Kenya using a two factor model. From the study, leverage gave strong negative relation while firm size gave weak positive relation.

According to Bhaduri (2002), not much emphasize has been put on the role played by the firm in economic development in third world economies. For any meaningful development should do well by posting good performance. This study involved an investigation of the relationship that exists between capital structure and financial performance of the firms listed at the Nairobi Securities Exchange in the non-financial sector for the period between 2008 and 2013. To achieve this, the study established trends in variables for the period of six years. The study then established the direction of the trend in the variables. To achieve this study used secondary data from published books of accounts, the Nairobi Securities Exchange and Capital Markets Authority.

The research question for this study was; what is the relationship between capital structure and financial performance of non-financial companies listed at the Nairobi Securities Exchange?

1.3 Objective of the study

This study sort to establish the relationship between capital structure and financial performance of all non-financial companies listed at the Nairobi Securities Exchange.

1.4 Value of the Study

This study will be of great interest to the government of Kenya in formulating capital structure policies that steer towards maximizing firm performance and value of the firm.

From a theoretical perspective, the study aims to contribute to the existing body of knowledge as well as make up for the paucity of scholarly papers in Kenya on firm's capital structure and its performance.

From a practical perspective, the findings of the study will be of invaluable assistance to managers of firms in their decision making process and their attempts to maximize their firm's performance and value. Also, the findings of this study will aid in effective and efficient financing decisions of firms in Kenya.

Consultants and financial analysts will find the study helpful in their financial and advisory services to firms on the subject of capital structure and financial performance of firms.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The term capital structure according to Kennon (2010) refers to the percentage of capital by type. Alfred (2007) stated that a firm's capital structure implies the proportion of debt and equity in capital structure of the firm. Pandey (1999) differentiated between capital structure and financial structure of a firm by affirming that the various means used to raise funds represent the firm's financial structure. The capital structure of a firm as discussed by Inanga and Ajayi (1999) does not include short-term credit, but means the composite of a firm's long-term funds from various sources. Therefore, a firm's capital structure is described as the capital mix of both equity and debt capital in financing its assets. According to Inanga and Ajayi (1999) the various sources of capital may be classified into equity capital, preference capital and long-term loan (debt) capital as described in the following. Equity capital as explained by Pandey (1999) includes share-capital, share premium, reserves and surpluses (retained earnings). Typically, equity capital consists of two types which include: contributed capital, which is the money that was originally invested in the business in exchange for shares of stock or ownership and retained earnings, which represents profits from past years that have been kept by the company and used to strengthen the Balance Sheet or fund growth, acquisitions, or expansion. The cost of equity capital of a firm using the dividend growth basis can be expressed in terms of the current dividend per share, ex-dividend market price per share and the expected constant annual growth rate in earnings and dividend per share. This is a hybrid in that it combines the features of debentures and those of equity shares except the benefits. Its cost can be expressed in terms of expected preference dividend and issue price of preference shares.

Debt capital in the firm's capital structure refers to the long-term bonds the firm uses in financing its investments. Its cost depends on the health of the firm's balance sheet and can be expressed in terms of interest associated with the debt and its issue price. The tax savings that results from use of the debt will be considered while computing the after tax cost of the debt.

2.2 Review of theories on capital structure

To represent and examine the possible determinants of leverage requires some theoretical Platform. The importance of making a decision relating to the capital structure decision was first introduced by the article published by Modigliani and Miller (MM) in 1958 where they proved that, in a world of no taxes, the firm's value is unaffected by the debt to equity ratio. Following the Pioneering works of MM in this field, many critical studies have been made about the assumptions made by MM. In fact, the MM theory does not crystallize the definition on how a company should finance its assets to enjoy the benefits of optimal capital structure and also it does not explain the empirical findings on capital structure very well. Then, after such criticisms, they reviewed their capital structure theory including corporate tax factor in and excluding dividends from the model and published the new article in 1963. Then, in 1977, Miller published another article and included corporate tax and individual income tax in their models. Roy and Ming Fang (2000) state that an appropriate capital structure is crucial decision for a firm because of the need to maximize returns to various organizational needs and also the importance of such decision on firm's ability to deal with competitive environment. Roy and Ming Fang quote (Modigliani and Miller 1958, 1963) emphasizing that there exists an optimal capital structure which balances the risk of bankruptcy with the tax savings of debt. They further argue that once established, this capital structure should provide greater returns to stockholders than they could receive from all equity firms. However, many empirical researches carried out later

disapproved this relationship. They argued that there are many other firm related characteristics such as future growth options, earnings volatility, profitability and control which affect firm's capital structure. According to MM theory, an optimum capital structure is subject to tax advantages of debt and that is why firms should have a capital structure almost totally composed of debt. But in the real world, firms generally assume to use moderate amounts of debt due to its high bankruptcy costs. After MM theorem, three fundamental theorems have been developed on capital structure. These are Static Tradeoff Theory, Pecking Order theory and Agency Cost Theory. Capital structure theories can be explained as below

2.2.1 The Modigliani-Miller Theorem

The theory of business finance in a modern sense starts with the Modigliani and Miller (1958) capital structure irrelevance proposition. Before them, there was no generally accepted theory of capital structure. Modigliani and Miller start by assuming that the firm has a particular set of expected cash flows. When the firm chooses a certain proportion of debt and equity to finance its assets, all that it does is to divide up the cash flows among investors. Investors and firms are assumed to have equal access to financial markets, which allows for homemade leverage. The investor can create any leverage that was wanted but not offered, or the investor can get rid of any leverage that the firm took on but was not wanted. As a result, the leverage of the firm has no effect on the market value of the firm. Their paper led subsequently to both clarity and controversy. As a matter of theory, capital structure irrelevance can be proved under a range of circumstances. There are two fundamentally different types of capital structure irrelevance propositions.

The classic arbitrage-based irrelevance propositions provide settings in which arbitrage by investors keeps the value of the firm independent of its leverage. In addition to the original Modigliani and Miller paper,

important contributions include papers by Hirshleifer (1966) and Stiglitz (1969). The second irrelevance proposition concludes that “given a firm’s investment policy, the dividend payout it chooses to follow will affect neither the current price of its shares nor the total return to its shareholders” (Miller and Modigliani, 1961). In other words, in perfect markets, neither capital structure choices nor dividend policy decisions matter. The 1958 paper stimulated serious research devoted to disproving irrelevance as a matter of theory or as an empirical matter. This research has shown that the Modigliani-Miller theorem fails under a variety of circumstances. The most commonly used elements include consideration of taxes, transaction costs, bankruptcy costs, agency conflicts, adverse selection, lack of reparability between financing and operations, time-varying financial market opportunities, and investor clientele effects. Alternative models use differing elements from this list. Given that so many different ingredients are available, it is not surprising that many different theories have been proposed. Covering all of these would go well beyond the scope of this paper. Harris and Raviv (1991) provided a survey of the development of this theory as of 1991. As an empirical proposition, the Modigliani-Miller irrelevance proposition is not easy to test. With debt and firm value both plausibly endogenous and driven by other factors such as profits, collateral, and growth opportunities, we cannot establish a structural test of the theory by regressing value on debt. But the fact that fairly reliable empirical relations between a number of factors and corporate leverage exist, while not disproving the theory, does make it seem an unlikely characterization of how real businesses are financed. A popular defense has been to argue as follows: “While the Modigliani-Miller theorem does not provide a realistic description of how firms finance their operations, it provides a means of finding reasons why financing may matter.” This description provides a reasonable interpretation of much of the theory of corporate finance. Accordingly, it influenced the early development of both the trade-off theory and the pecking order theory.

2.2.2 Free cash-flows theory

Jensen, M. (1986) develops the free cash-flows theory to limit the managerial discretion. He defines the free cash-flows as the sum of the cash available to the managers after the financing of all the projects with a positive NPV. It concerns Jensen that the managers with ample free cash flow may be tempted to plough too much cash into mature business or ill-advised projects. If it is treated as problem, then it can be solved by either using more debt or paying more dividends. Even a firm can apply both policies concurrently. According to this theory debt reduces free cash flows, because the firm must make interest and principal payments. Furthermore, an increase in dividends should benefit the stockholders by reducing the ability of managers to pursue wasteful activities.

2.2.3 Static Trade-off Theory

According to Static Trade-off theory(TOT),firms select optimal capital structure by comparing the tax benefits its debt, bankruptcy costs and agency costs of debt and equity that's to say the disciplinary role of the debt and the fact that the debt suffers less from informational costs than outside equity(Modigliani and Miller,1963; stiglitz,1972;Jensen and Meckling,1976;Myers,1977;Titman,(1984),as quoted in Jean (2008).He further quotes (Donaldson,1961;Myers & Majluf,1984;Myers,1984) arguing that in the so called pecking order theory (POT),because of asymmetries of information between insiders and outsiders, the company will prefer financing by internal resources, then debt and then finally by stockholders equity. The debt ratio then depends on the degree of asymmetry of information, capacity of self financing of the company and various constraints which the firm meets in the access to the various sources of financing.

2.2.4 The Dynamic Trade-off Theory

The dynamic trade-off theory (DTOT) is a compromise between TOT and POT as reported by Fischer, E.(1998) as quoted in Jean (2008).Although, due to information asymmetries, market imperfections and transaction costs many companies allow their leverage ratios to drift away from their targets for some time when distance becomes large enough, managers take some steps to move their companies back towards the targets.

2.2.5 Market Timing Theory

According to the theory of market timing, the structure of the debt is as a result of historical processes over a period of time. According to this theory, leaders will carry out increases in the capital when they think that actions are over-estimated. A small debt ratio will thus follow market to book high ratio(Baker & Wugler,2008;Jean, 2008).According to Welch,2004 and Jean,2008,the companies do not adjust their debt ratios to fluctuations of the stockholders equity immediately, one period rise of the courses must be accompanied by small debt ratios. In the static approach of the theory of trade-off, it is a question of explaining the target debt ratio, the debt ratios of the companies are supposed to converge towards the target debt ratio but the process of working towards convergence is not explicitly taken into account.

2.3 Determinants of capital structure

There are several factors that are known to affect capital structure from documented literature and empirical studies undertaken as explained below.

2.3.1 Profitability

The pecking order theory states that in the presence of asymmetric information, a firm would prefer internal finance over other sources of funds, but would issue debts if internal finance was exhausted. It further argued

that the least attractive alternative for the firm would be to issue new equity. This implies that high profits would encourage a firm to finance itself from a fraction of that profit. In other words, there is a negative relation between leverage and past profitability, Donaldson (1961), Myers and Majluf (1984) as quoted in Al-Najjar and Taylor (2008). Liquidity-This liquidity ratios has both positive and negative effects on the capital structure and so far the net effect is unknown (Basil and Taylor 2008), as quoted in Al-Najjar and Taylor (2008). They argue that the effect is positive from the fact that firms with high liquidity ratios may have relatively higher debt ratios due to their greater ability to meet short term obligations; and the effect is negative from the fact that firms with more liquid assets may use such assets as source of finance to fund future investment opportunities

2.3.2 Size of the firm

There is enough evidence to show that the size of the firm plays an important role in capital structure decision. Large firms tend to be more diversified and therefore less prone to bankruptcy. Therefore, a positive relationship is expected between a firm's size and its leverage (Titman and Wessels, 1988; Bhaduri, 2002). This motivates institutional investors to lend or loan large enterprises since they believe that their probability of bankruptcy is very low.

2.3.3 Tangible assets

Is also another important determinant of capital structure. There is a positive relationship between tangible assets and debt (Titman and Wessels, 1988). The more tangible the firm's assets are the more such assets can be used as collateral. This will encourage borrowing. The degree to which the firms' assets are tangible and generic should result in the firm having a greater liquidation value. By pledging the assets as collateral (Harris and Raviv, 1990) or arranging so that a fixed charge is directly placed to particular tangible assets of the firm, also reduces adverse selection and moral hazard costs (Long and Malitz, 1992), as quoted in Gay,

Louis and Wallace (1994). However, Huchinson and Hunter (1995) observed that tangible assets would also have a negative impact on financial leverage by augmenting risk through the increase of operating leverage. Part of the intangible assets, such as reputation, becomes quasi-tangible and interpreted by debt holders as a guarantee (Balakrishnan and Fox, 1993), as quoted in Gay, Louis and Wallace (1994).

2.3.4 Liquidity ratios

May have a mixed impact on the capital structure decision. Companies with higher liquidity ratios might support a relatively higher debt ratio due to greater ability to meet short-term obligations. On the other hand firms with greater liquidities may use them to finance their investments. Therefore the companies' liquidities should exert a negative impact on its leverage (Ozkan, 2001).

2.3.5 Growth of the firm

Has importance in determining capital structure. Al-Najjar and Taylor (2008) argue that agency problems are likely to be more severe for growing firms because they are more flexible on their choice of future investments, and therefore, in their view, the expected growth rate should be negatively related to long term leverage. Applying pecking order arguments, growing firms place a greater demand on the internally generated funds of the firm. Firms with relatively high growth. Will tend to issue securities less subject to information asymmetries, i.e. short-term debt. This should lead to firms with relatively higher growth having more leverage (Gay, Louis and Wallace, 1994).

2.2.4 Empirical literature review

Some studies had proved that increase in debt levels increases financial performance of the firm. Wipperm (1966) investigated the relationship between financial leverage and firm value on some industries which marked on high degree in difference characteristics from where growth cost and demand. The study used

debt to equity ratio as financial leverage indicator and earnings to market value of common stock as performance indicator. Results revealed that leverage relate positively on firm value and this traditional evidence which said that shareholders wealth can be enhanced by using outside financing. Majumdar and Chhibber (1997) reached a level of debt (capital structure) that showed negative relationship with firm's performance. The result referred to the creditors who are using loans as disciplinary tool on the firm. This tool bases on the restrictions imposed on the firm by creditors, as prevention from distributing the earnings to shareholders or impose restrictive conditions on the loans by increasing the interest rates or impose sufficient collaterals on loans, thus, these restrictions will lead firm to focus on how to pay the debt burden without concerning in achieving earnings and reflect adversely on firm performance. Dessi and Robertson (2003) found that financial leverage affect positively on the expected performance, where they explained this result to low growth firms which attempt to depend on the borrowed funds for utilizing in the expected growth opportunities and investing in profitable projects. This will increase will increase the financial performance of the firm. Rao, Hamed, Al-yahee and Syed (2007) reached a capital structure that related inversely on financial performance on Oman firms. The relationship refers to high borrowing costs in Oman economy and to the weakness of the debt market activity. They suggested that tax savings as a result of debt usage is not sufficient to meet the costs of debt and cost of debt will be greater than the rate of return.

McConnell and Servaes (1995) and Agarwal and Zhao (2007) presented additional evidence on how the growth of the firm may have an impact on the relationship between capital structure and firm performance. High growth firms have negative relationship between financial leverage and firm value, while low growth firms have a positive relation. Abor (2005) noted that various capital structure measures which represented short term debt , long term debt and total debt associated negatively with firm performance .The conclusion refers to firms that rely on heavy borrowing , it will not achieve tax shields which leads increased borrowing

cost thus the firm will be exposed to bankruptcy risks and reduce the return.

Munene (2006) studied the impact of profitability on capital structure of companies listed at NSE for period of six years from 1999 to 2004. He established that profitability alone cannot account for variations in the capital structure of firms listed at the Nairobi Securities Exchange.

Weill (2007) investigated the effect of financial leverage on the firm performance in seven European countries. The study summarized that financial leverage related positively and significantly on firm performance in Spain and Italy, whereas negatively and significantly in Germany, France, Belgium and Norway, but insignificantly in Portugal.

Ghosh (2007) reached a level of debt (capital structure) that showed negative relationship with firm's performance. The result referred to the creditors who are using loans as disciplinary tool on the firm. This tool bases on the restrictions imposed on the firm by creditors, as prevention from distributing the earnings to shareholders or impose restrictive conditions on the loans by increasing the interest rates or impose sufficient collaterals on loans, thus, these restrictions will lead firm to focus on how to pay the debt burden without concerning in achieving earnings and reflect adversely on firm performance.

Onalapo and Kajola (2010) found out negative relationship between capital structure and financial performance of the firm in the case of food and beverage companies in Nigeria. They found out that financial leverage related negatively to indicators of profitability. Margraves and Psillaki (2008) also proved that financial leverage (debt ratio) correlated positively and significantly with firm performance. This study was carried out across all sectors in the case of French firms

Ondiek (2010) analyzed the relationship between capital structure and financial performance of firms listed at the Nairobi Securities Exchange as at June 2010 using secondary data. The study revealed that capital structure is influenced by asset tangibility, size of the firm and profitability.

Ibrahim (2009) examined relationship between leverage and financial performance of firms in Egypt, using multiple regression analysis. The study covered the period between 1997 and 2005 and using financial measures of (Return On Equity) and (Return On Assets).He concluded that capital structure has weak or no impact on firm's financial performance.

Mwangi (2010) studied relationship between capital structure and financial performance of firms listed at the Nairobi Securities Exchange. The research found that strong relationship existed between firm performance, as shown by return on equity. However, leverage, liquidity and investment gave negative relationship with capital structure of the firms

Oginda (2013) studied on the relationship between capital structure and financial performance of firms listed at the Nairobi Securities Exchange, using a two factor model, Leverage and debt ratio. The study revealed a strong negative relationship between financial performance and leverage and weak positive relationship between performance and leverage.

2.5 Summary of literature review

From a practical perspective it is quite impractical to apply any of the above theories to a firm consistently in actual circumstances. The theories mentioned are based on some rigid assumptions and may not always hold when these assumptions are challenged as is in practice. These theories however are not meant to be exhaustive in their explanation of the relationship between capital structure and financial performance but rather provide a financial manager with a toolkit to utilize in their decision making. One approach that is gaining wide acceptance is where a firm establishes a range of acceptable capital structures that over time lead to the WACC being minimized (Correia, Flynn, Uliana, & Wormald). As a whole range of capital structures are deemed to be optimal, the selection of a particular capital structure is made easier. If a firm deviates marginally from its target over time it will be acceptable provided that the new level is within the acceptable range.

In practice, what influence the capital structure decision is the Debt and debt capacity. The tax deductibility of interest payments makes debt comparatively cheaper than equity and as such all firms should make use of debt in their capital structure. However, too much debt increases financial risk and financial distress costs. Also, Flexibility and ease of raising capital, effects of asymmetric information where firms may want to utilize capital from internal sources first, then debt and finally equity (Brigham & Ehrhardt) and some firms preferring to maintain some slack (Brigham & Ehrhardt) are other factors that affect the type of capital structure adopted by the firm.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This study aims to provide a status on the extent to which a firm's capital structure may affect financial performance and value of Non-financial companies listed at NSE and it includes data collections, sources of data and techniques of analysis. By means of a survey research design, this study examined the relationship that exists between a firm's choice of capital structure and its value in for the case of listed non-financial companies at Nairobi Securities Exchange (NSE).

3.2 Research design

This study used cross-sectional research design, employing secondary quantitative data. Cross-sectional research design is observational, repetitive study done over a period of time with an aim of establishing a trend. The reason for this design was for the study to detect developments on the changes in the variables of the target population, both at the firm level and sector level. Since the study will be carried over a period of six years, a trend will be established. The data will be obtained from published annual books of accounts of selected non-financial companies, Nairobi Securities Exchange, and capital markets authority for five (6) years from 2008 to 2013.

3.3 Population of the study

To study the impact of capital structure on the financial performance of the firm, this study analyzed non financial firms listed at the NSE as at 31st December 2013. The population of the study was taken from published books of non-financial companies listed at Nairobi Securities Exchange .This study used only

secondary data, which was taken from the selected companies' published accounts for five (6) years from January 2008 to December 2013. The study then attempted to select a number of factors that are essential to explain the relations between capital structure and firm performance. Out of the population of the secondary data of non-financial firms listed at Nairobi Securities Exchange, firms were selected based on the sample design. This represents seven sectors of the total firms listed at the NSE, after excluding banks and financial institutions. The reason for this exclusion is because banks, insurance firms and other micro-finance institutions are regulated by Central Bank of Kenya (CBK) which sets levels of capital to operate.

3.4 Sample design

Out of the population of study of forty (40) non-financial firms listed at the Nairobi Securities Exchange, a total of thirty firms (30) were selected to carry out the study. This represents 75% of the firms selected. A maximum of five firms was selected from each sector and where there are five or less firms in a given sector, all the firms were selected.

3.5 Data collection

To produce the above mentioned research objective, the data for the study was collected from the published financial statements by listed selected companies at Nairobi Securities Exchange (NSE) and Capital Markets Authority(CMA).In addition, some other sources of data was reference to review of different articles, papers and relevant previous studies. All the selected firms were taken for the study representing for the period between 2008 and 2013.

3.6 Data Analysis

Collected data was validated, and checked for any errors and omissions. To achieve this, a regression analysis

of the variables was done. ANOVA was used to measure the effect of debt ratio (financial leverage on return on equity (ROE). The Strength of the model was tested using F-test, R squared, Multiple R and adjusted R squared. R squared was used to explain the level of variance in the dependent variable (financial performance shown by Return on Equity) that is caused by variation in independent variables. Durbin Watson statistics will be used to test for any correlation. Multiple regression analysis will be used to assess the relationship between financial performance and capital structure. Analyzed data was represented using tables. Variable specifications are shown in the table 3.5.6. Capital structure was measured using debt ratio and financial performance was measured using return on equity. The variables used in the study have been measured as explained below from 3.6.1 to 3.5.6

3.6.1 Financial performance

The financial performance was considered as the return on equity. This being a profitability measure it takes into consideration the return that shareholders can obtain from efficient utilization of capital structure by the management. Return on equity is measured by dividing net income after tax to book value of owner equity, Onalapo and Kajola (2010) and Krishnan and Moyer (1997).

3.6.2 Debt Ratio (Financial leverage)

Financial leverage is the degree to which a company uses fixed income securities such as debt and equity. Financial leverage in the capital structure is measured by dividing the book value of total liabilities to the book value of total assets, King and Santor (2008), Ghosh (2007), Weill (2007), Margraves and Psillaki (2010)

3.6.3 Tangible assets:

These are assets that has long term physical existence. As a variable for financial performance of it is measured by dividing the net fixed assets to total assets (Dessi and Robertson (2003), Weill (2007) and

Margraves and Psillaki (2010)).

3.6.4 Firm size:

It is control variable which measure by natural logarithm of total Assets (Onaolapo and Kajola (2010) and King and Santor (2008)). It’s a total of fixed assets and current assets.

3.6.5 Firm growth

This is measured by find the difference rate in the book value of total assets.It is measured as the ratio between the change in the level of revenue for the current period compared to the previous period and revenue for the previous period.

3.6.6 Table of variables

	Variable	Abbreviation	Expression
1	Return on Equity	ROE	EAT/E.....3.6.1
2	Debt ratio(Financial leverage)	DR	TL/TA.....3.6.2
3	Tangible assets	T	NFA/TA.....3.6.3
5	Net Fixed Assets	NFA	FA-Acc Dep.....3.6.3
6	Firm Size	S	Nat log(TA).....3.6.4
4	Total assets	TA	FA+CA3.5.5
7	Firm growth	g	(CR-PR)/PR.....3.5.5

3.6.7 Test of significance

Analysis of variance was used to test and estimate any relationships in the population of study. This involved use of P and F to explain random variables. To test the strength and robustness of the model, F test will be used and t test to investigate existence of any relationship.

3.6.8 Model Specification

Based on the above explanations about the dependent and independent variables, the relationship between capital structure and financial performance of the firm can be represented by the following model equation

$$Y = \alpha + \beta_n X_n + \varepsilon \dots\dots\dots(1)$$

Where: **Y** is a dependent variable for the firm in a period of time in years, **α** is a constant coefficient for firms, **β_n** is the slope coefficient of independent variables of the firm, **X_n**: independent variables for firms over period of time in years standard error of firms in years. Taking into consideration the explanations about the variables and expanding equation the multi regression model between financial performance and capital structure is

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \dots\dots\dots(2)$$

Where:

Y is the measure of financial performance of the firm given by Rate of Return on equity

α constant coefficient for the firms

B_n is the coefficient of the independent variable

X₁ is the debt ratio and is the main factor.

X₂ is the independent variables that explains changes in tangible assets

X₃ is the independent variables explained by the size of the firm

X₄ is the independent variables that explains changes in growth of the firm

ε is the error term as shown in equation

CHAPTER FOUR

4.0 DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter covers data analysis, findings and discussions of the research work carried out. The data used in this research was secondary data collected from the Nairobi Securities Exchange Handbooks and published books of accounts of the forty companies listed at the Nairobi Securities Exchange as shown in the sample design. Out of the population of forty companies identified for the study, a sample of 30 companies was used to carry out of the study. I was able to get required data twenty one companies, representing a response rate of 75% which was considered satisfactory for analysis of the data. To get any meaningful explanation in relations between the dependent variable and independent variables as shown in the tables. The information was subjected to regression analysis by use of computer module for data analysis. The results of the regression analysis includes regression statistics, Analysis of variances (ANOVA) and regression coefficients, as explained in the tables that follow

4.2 Data analysis

The aim of the study was to establish the relationship between capital structure and financial performance of firms listed at the Nairobi Securities Exchange. To get financial performance of the listed firms, return on equity (ROE) was calculated for the 75.0% of the sample and whose published books of accounts were able to be accessed by the researcher. On the other hand, capital structure of the firms listed was obtained by calculating the debt ratio of the firms and other control variables which included asset tangibility, size of the firm and growth of the firm. The results of the data collected is shown in 4.3.1

4.3 Results

4.3.1 Summary of Research Data collected

	Firm's name	$\Sigma Y/n$	$\Sigma \chi_1/n$	$\Sigma \chi_2/n$	$\Sigma \chi_3/n$	$\Sigma \chi_4/n$
1	Athi River Mining	4.538	4.448	4.10	3.4432	3.63
2	Bamburi cement	11.813	12.319	11.32	10.8685	10.97
3	Car & General	8.252	8.044	7.92	8.0505	8.10
4	Crown Paints	4.795	5.394	5.69	5.9926	6.08
5	EA Portland	5.640	5.587	3.12	4.1680	4.86
6	EA Cables	1.435	1.351	1.32	1.3947	1.44
7	EA Breweries	9.817	9.861	10.05	10.2151	10.37
8	Eveready	0.234	0.258	0.28	0.3184	0.27
9	Kakuzi ltd	17.047	17.701	17.76	18.0565	16.39
10	Kengen ltd	1.520	1.327	1.39	1.4746	1.56
11	Kenolkobil	2.788	1.863	0.71	0.6155	0.35
12	KPLC	19.463	18.991	15.36	10.0944	11.42
13	Kenya Airways	0.790	-0.473	0.92	0.3413	-0.20
14	Scan Group	2.273	2.354	2.44	2.4220	2.40
15	Nation media	11.000	11.317	11.92	12.2727	12.20
16	Rea Vipingo	4.650	4.958	5.37	6.0800	5.79
17	Safaricom ltd	0.270	0.307	0.34	0.3346	0.34
18	Sameer Africa ltd	0.632	0.647	0.66	0.7347	0.80
19	Sasini Tea	1.658	1.960	1.65	1.2041	1.12
20	Total Kenya	1.705	1.319	1.27	0.9689	1.17
21	TPS Serena	3.410	3.628	3.63	3.5069	3.54

Where;

$\Sigma Y/n$ is the average of dependent variable in ROE

$\Sigma \chi_1/n$ is the average debt ratio

$\Sigma \chi_2/n$ is the average tangible assets

$\Sigma \chi_3/n$, is the average size of the firm

$\Sigma \chi_4/n$ is the average growth of the firm

4.4 DISCUSSION OF THE RESULTS

4.4.1 Regression statistics

Multiple R is the correlation coefficient. It tells you how strong the linear relationship is. For example, a value of 1 means a perfect positive relationship and a value of zero means no relationship at all. It is the square root of r-squared. From our results above, **Multiple R is 0.997939545** meaning a relationship exists between the dependent variable and independent variables

R square, is r^2 , the Coefficient of Determination. It tells us how many points fall on the regression line. The result above (99.58%) means that 99.58% of the variation of y-values around the mean are explained by the x-values. In other words, 99.58% of the values fit the model hence it may be concluded that the model

$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ is a good predictor of the changes in the dependent variable as result of changes in the independent variable

The adjusted R-squared adjust for the number of terms in a model. In cases where we have more than one variable, Adjusted R square is preferred over R square

Standard Error of the regression is an estimate of the standard deviation of the error ϵ . This is *not* the same as the standard error in descriptive statistics! The standard error of the regression is the precision that the regression coefficient is measured; if the coefficient is large compared to the standard error, then the coefficient is probably different from 0. In this study, coefficients range from -.03 to 1.02 compared to standard error of 0.396

Observations, is the number of observations in the sample. In this study, a sample of 30 firms were selected from a population of 40 firms, out of which we had 21 observations, which accounts for 75% of the sample, which is deemed satisfactory to carry out the study

Table showing Regression statistics

Multiple R	0.997939545
R Square	0.995883335
Adjusted R Square	0.994854169
Standard Error	0.396575318
Observations	21

4.4.2 ANALYSIS OF VARIANCES (ANOVA)

Analysis of Variance (ANOVA) consists of calculations that provide information about levels of variability within a regression model and forms a basis for tests of significance. The "F" column provides a statistic for testing the hypothesis that $H_1: \beta_1 \neq 0$, against the null hypothesis that $H_0: \beta_1 = 0$.

The test statistic is the ratio MSM/MSE , the mean square model term divided by the mean square error term. When the MSM term is large relative to the MSE term, then the ratio is large and there is evidence against the null hypothesis. i.e $152.185856/0.15727198=967.6603127$ hence $\beta_1 = 0$ fails meaning $\beta_1 \neq 0$ and therefore there exists a significant relationship in the model.

Table showing ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	608.743424	152.185856	967.6603127	7.3963E-19
Residual	16	2.516351724	0.15727198		
Total	20	611.2597757			

4.4.3 Regression Coefficients and the p-value

The p-value for each term tests the null hypothesis that the coefficient is equal to zero (no effect).

A low p-value (< 0.05) indicates that you can reject the null hypothesis. In other words, a predictor that has a low p-value is likely to be a meaningful addition to your model because changes in the predictor's value are related to changes in the response variable.

Conversely, a larger (insignificant) p-value suggests that changes in the predictor are not associated with changes in the response. In the output in table as below, we can see that p values for β_n and x_1 has values less than 0.05 hence a change in these variables has an effect in the independent variable. This also shows that a change in the independent variables, x_2 , x_3 and x_4 does not significantly affect the dependent variable because their p values are more than 0.05.

Regression coefficients represent the mean change in the response variable for one unit of change in the predictor variable while holding other predictors in the model constant. This statistical control that regression provides is important because it isolates the role of one variable from all of the others in the model.

The key to understanding the coefficients is to think of them as slopes, and they're often called slope coefficients. The slope or gradient tells us the direction of the relations. From the table of regression coefficient above, it can be concluded that β_n, χ_1 and χ_2 has positive relations with the dependent variable where as x_3 and x_4 have negative and insignificant relationship in comparison.

Table showing Regression Coefficients of Independent variables xn

	<i>Coefficients</i>	<i>Std Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
βn	0.26122627	0.125183083	2.086753741	0.05326993	-0.004150013	0.526602546
x ₁	1.02387814	0.127641865	8.021491505	5.3557E-07	0.753289473	1.294466802
x ₂	0.1601787	0.183121276	0.87471376	0.39467062	-0.228021061	0.548378461
x ₃	-0.03389908	0.23977531	-0.14137852	0.88933568	-0.542200027	0.474401868
x ₄	-0.20777375	0.25410117	-0.81768119	0.42554897	-0.74644416	0.330896666

From the table above, it can be seen that p-value for χ_1 is less than 0.05 i.e. it is 5.33E-07. This means that there is a strong positive relationship between independent variable χ_1 (debt ratio) and dependent variable Y (Return on Equity). However, p-values χ_2 , χ_3 , χ_4 and β_n are more than 0.05 and therefore not very significant. Analysis of the coefficients shows that there exists strong positive relationship between return on equity and debt ratio and weak negative relationship between χ_3 , χ_4 and Y (Return on equity)

4.4.4 Relationship between Dependent and Independent variables

The model of the study was given by $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ which was found to be a good predictor as explained by R squared. The value of the coefficients has been computed as shown in table 4.2.2.3. The objective of the study was to find out the relationship between capital structure and financial performance of non-financial firms listed at the Nairobi Securities Exchange.

Inserting the coefficients results to the model equation, it gives us the following relationship

$$Y = 0.2612 + 1.024X_1 + 0.1602X_2 - 0.0339X_3 - 0.2078X_4 + \epsilon,$$

Where, Y is the ROE and $\chi_1, \chi_2, \chi_3, \chi_4$ are independent variables as explained in the model specifications. The error term, ϵ in the equation accounts for other factors not included in the model.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter aims at applying the results obtained from the study to solve real life problems of capital structure and financial performance misalignments as described in the statement of the problem

This chapter will also make recommendations to policy makers that can be implemented in order to prudently align institutions capital raising initiatives with the firms performance. Indeed, policy and firm decision makers can play a bigger role in ensuring that leverage risk considerations forms part of the criteria that firms use when making financing decisions as they know that it will ultimately impact on the firm's performance

5.2 Summary and conclusions

The main objective of this study was to find out the relationship between capital structure and financial performance of non-financial firms listed at the Nairobi Securities Exchange. To achieve this, the researcher sampled firms listed at the Nairobi Securities Exchange that exhibited characteristics for the study. Secondary data was used in the study. Data was collected from published annual accounts, audited annual accounts and financial records.

The research findings indicated that there exists a relationship, both positive and negative between variables. The research also revealed that 99.48% of the financial performance of the firms listed at the Nairobi Securities Exchange can be explained by the independent variables, as shown by adjusted R squared in the table of regression statistics The value of the R squared, t-test and p-value ($p < 0.05$) shows that at 95% confidence level, the variable χ_1 (debt ratio) produces statistically significant values

where as the variables $\chi_2, \chi_3,$ and χ_4 produces insignificant relationship as explained by the model equation $Y = 0.2612 + 1.024X1 + 0.1602X2 - 0.0339X3 - 0.2078X4 + \varepsilon,$

From the study, it would be correct to conclude that debt ratio had direct relationship with Return on Equity (ROE). This finding is also in line with Holz (2002), Dessi and Robertson (2003), Weill (2007) and Mwangi (2010). The findings of this study established a positive relationship between capital structure and financial performance of the firm.

Also tangible assets were found to have a direct relationship with ROE though not very significant compared to debt ratio. However, size of the firm and growth of the firm was found to have negative relationship. This finding is in line with early researchers carried out by McConnell and Servaes (1995) whose study presented evidence to show that growth of the firm had impact on capital structure and performance of the firm. This finding is also in line with the study carried out by Ondiek (2010) at the Nairobi Securities Exchange and found out that capital structure is influenced by asset tangibility, size of the firm and profitability.

5.3 Policy recommendations

It is considered important when finance directors and finance managers understand the effect of capital structure on the financial performance of the firm since it is evident from the findings of this study that there exists a relationship between capital structure and the financial performance of the firm.

5.3.1 Use of debt as source of funds

The conclusion that borrowing does not always improve a firm's performance leads to the recommendation that firms should use shareholders' funds as much as possible before they undertake to borrow, so that they minimize the risks related to borrowing, which include interest on the debt exceeding the return on the assets they are financing. This happens when firms are highly leveraged such that the disadvantages of having debt in the capital structure outweigh the debt advantages. However, finance directors and finance managers are encouraged to use debt as a source of funds so that firms benefit from the tax advantages of the debt because interest on debt is a tax deductible allowable expense. However, too much reliance on debt capital impacts negatively on the firm performance hence debt should be employed at a level where it optimally positively contributes to the performance of the firm.

5.3.2 Effect of Tangible asset on the firm performance

The study has established a positive relationship between performance of the firm and tangible assets. This is so more so because tangible assets generate income in the firm. If a firm wants to finance its assets, it is important to consider risk and return factors. However, it's assumed that tangible assets generate more returns to the firm and there the positive relationship with the performance of the firm. Increasing tangible assets optimally will increase financial performance, as deduced from the results of the study.

5.3.3 Consider the leverage risk of asset to be financed

When a firm has exhausted its shareholders' funding and chooses to finance its expansion of operations by borrowing, special consideration must be taken to ensure that the assets financed by the borrowed funds bring in a higher return than the interest the firm is required to pay on the debt. If this is not done, the firm

will erode the reserves in order to pay the debt as the assets financed will not be making enough returns to cover the debt. The firm must select source of funding carefully to avoid falling into the leverage risk trap

5.4 Limitations of the study

Though the study achieved the objective it had limitations in terms time constraint. The period of the study was short based on the fact that I have a full time job. The research was also affected in terms of financial constraints such that there was no resources to move to firms outside Nairobi County to collect data and hence had to rely on published reports at the Nairobi Securities Exchange.

It was discovered that some firms had not published their accounts or their audited final accounts could not be accessed and this posed a challenge limiting the number of firms to carry out research

5.5 suggestions for further research

This study focused only on non-financial institutions listed at the Nairobi Securities Exchange. It is recommended that further research be could include all non-financial companies in Kenya, both listed and unlisted at the Nairobi Securities Exchange to see if the same relationship applies.

The study covered all the non-financial institutions at the Nairobi Securities Exchange hence further sector studies can be done to see how different sectors will relate to variables in the study.

The period under study was for six years between 2008 and 2013. Since the Nairobi Securities Exchange is developing, further studies can be carried out to see how variables in the study will relate under developed stock exchange. The area of effect of capital structure on the corporate strategy of the firm has become of interest in the recent past and therefore it's recommended that research be done in this area to establish the relationship. The existence of optimal capital structure has been a subject of discussion and it is also recommended that further research be done to establish whether there exists an optimal level of capital structure.

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A. Appendices: Sample of the study

1	Access Kenya	11	Express kenya	21	Rea Vipingo
2	Athi River Mining	12	Kakuzi ltd	22	Safaricom ltd
3	Bamburi cement	13	Kapchorua Tea	23	Sameer Africa ltd
4	BAT	14	Kengen ltd	24	Sasini Tea
5	Car & General	15	Kenolkobil	25	Total Kenya
6	Crown Paints	16	KPLC	26	TPS Serena
7	EA Portland	17	Kenya Airways	27	Unga ltd
8	EA Cables	18	Limuru Tea	28	Uchumi supermarket
9	EA Breweries	19	Scan Group	29	Unilever
10	Eveready	20	Nation media	30	Williamson Tea

B. List of firms whose six-year final accounts could not be found

1. Access Kenya ltd
2. BAT
3. Express Kenya
4. Limuru Tea
5. Unga ltd
6. Uchumi Supermarket
7. Williamson Tea

LIST OF TABLES

Table 1:Return on Equity for selected firms listed at the NSE

	Firm's name	2008	2009	2010	2011	2012	2013	∑Y/n
1	Athi River Mining	5.08	6.52	8.06	2.32	2.51	2.74	4.538
2	Bamburi cement	8.78	18.32	14.02	10.25	10.68	8.83	11.813
3	Car & General	9.5	8.8	7.12	7.78	7.48	8.83	8.252
4	Crown Paints	1.2	3.64	3.85	5.44	5.63	9.01	4.795
5	EA Portland	5.96	20.38	-3.16	0.02	-9.09	19.73	5.640
6	EA Cables	1.94	1.52	0.89	1.15	1.74	1.37	1.435
7	EA Breweries	9.55	8.71	9.08	9.3	13.44	8.82	9.817
8	Eveready	0.085	0.135	0.041	0.59	0.33	0.22	0.234
9	Kakuzi ltd	13.12	17.34	15.99	28.06	19.35	8.42	17.047
10	Kengen ltd	2.68	0.94	0.89	0.94	1.28	2.39	1.520
11	Kenolkobil	8.34	8.77	1.29	2.21	- 4.26	0.38	2.788
12	KPLC	22.3	40.76	46.97	2.16	2.36	2.23	19.463
13	Kenya Airways	8.37	-8.84	4.4	3.58	3.58	-6.35	0.790
14	ScanGroup	1.79	1.81	2.58	2.55	2.21	2.7	2.273
15	Nation media	9.1	7.7	9.8	12.7	13.30	13.4	11.000
16	Rea Vipingo	2.8	2.48	1.12	7.79	6.34	7.37	4.650
17	Safaricom ltd	0.05	0.1	0.38	0.33	0.32	0.44	0.270
18	Sameer Africa ltd	0.54	0.57	0.21	0.35	0.68	1.44	0.632
19	Sasini Tea	-0.15	3.84	4.3	1.72	- 0.30	0.54	1.658
20	Total kenya	4.02	1.62	3.07	-0.24	- 0.32	2.08	1.705
21	TPS Serena	2.1	3.6	4.39	3.32	3.60	3.45	3.410

Table 2:Debt/Leverage ratio for selected firms listed at the NSE

	Firm's name	2008	2009	2010	2011	2012	2013	$\sum x_i/n$
1	Athi River Mining	0.665	0.660	0.703	0.703	0.736	0.723	0.698
2	Bamburi cement	0.412	0.499	0.509	0.278	1.000	0.267	0.494
3	Car & General	0.581	0.652	0.599	0.655	0.624	0.637	0.625
4	Crown Berger	0.578	0.539	0.542	0.479	0.479	0.538	0.526
5	EA Portland	0.560	0.490	0.530	0.580	0.650	0.561	0.562
6	EA Cables	0.551	0.531	0.503	0.545	0.001	0.550	0.447
7	EA Breweries	0.448	3.862	0.541	0.667	1.429	1.569	1.419
8	Eveready	1.039	1.284	0.663	0.724	0.695	0.580	0.831
9	Kakuzi ltd	0.381	0.341	0.313	0.278	0.216	0.219	0.291
10	Kengen ltd	0.388	0.401	0.532	0.569	0.570	0.607	0.511
11	Kenolkobil	1.000	1.000	0.598	0.793	0.803	0.763	0.826
12	KPLC	0.601	0.620	0.605	0.668	0.583	0.64	0.620
13	Kenya Airways	0.776	0.691	0.767	0.747	0.703	0.746	0.738
14	ScanGroup	0.449	0.398	0.553	0.487	0.433	0.363	0.447
15	Nation media	0.518	0.471	0.387	0.429	0.471	0.384	0.443
16	Rea Vipingo	0.464	0.310	0.421	0.358	0.275	0.251	0.346
17	Safaricom ltd	0.427	0.442	0.402	0.398	0.409	0.377	0.409
18	Sameer Africa ltd	0.306	0.241	0.298	0.280	0.316	0.270	0.285
19	Sasini Tea	0.412	0.332	0.317	0.660	0.280	0.295	0.383
20	Total kenya	0.655	0.716	0.685	0.739	0.570	0.615	0.663
21	TPS Serena	0.500	0.486	0.431	0.371	0.464	0.037	0.381

Table 3: Tangibility of assets for firms listed at the NSE

	Firm's name	2008	2009	2010	2011	2012	2013	$\Sigma\chi_2/n$
1	Athi River Mining	0.53	0.71	0.72	0.77	0.66	0.70	0.68
2	Bamburi cement	0.22	0.15	0.16	0.11	0.21	0.26	0.18
3	Car & General	0.51	0.44	0.27	0.34	0.36	0.37	0.38
4	Crown Berger	0.11	0.06	0.00	0.27	0.01	0.02	0.08
5	EA Portland	0.60	0.68	0.64	0.70	0.72	0.72	0.68
6	EA Cables	0.29	0.49	0.56	0.45	0.50	0.44	0.45
7	EA Breweries	0.37	0.80	0.94	0.67	0.60	0.68	0.68
8	Eveready	-0.25	-0.20	-0.06	-0.06	-0.08	-0.13	-0.13
9	Kakuzi ltd	0.55	0.59	0.53	0.49	0.45	0.48	0.51
10	Kengen ltd	0.76	0.67	0.59	0.67	0.63	0.64	0.66
11	Kenolkobil	0.22	0.17	0.19	0.12	0.23	0.21	0.19
12	KPLC	0.42	0.49	0.54	0.53	0.60	0.62	0.53
13	Kenya Airways	0.49	0.47	0.43	0.35	0.32	0.49	0.43
14	ScanGroup	0.04	0.18	0.11	0.08	0.08	0.13	0.10
15	Nation media	0.01	-0.02	-0.04	-0.07	0.02	0.01	-0.01
16	Rea Vipingo	0.28	0.36	0.40	0.39	0.40	0.41	0.38
17	Safaricom ltd	0.39	0.33	0.24	0.24	0.16	0.01	0.23
18	Sameer Africa ltd	0.33	0.31	0.30	0.27	0.22	0.23	0.28
19	Sasini Tea	0.59	0.80	0.76	1.90	0.81	0.77	0.94
20	Total kenya	0.04	0.18	0.16	0.10	0.08	0.04	0.10
21	TPS Serena	0.65	0.63	0.76	0.75	0.81	0.82	0.74

Table 4: Size of the firm for selected firms selected at the NSE

	Firm's name	2008	2009	2010	2011	2012	2013	$\sum \chi_3/n$
1	Athi River Mining	15.6644	16.3121	16.6228	16.8367	14.8070	17.2068	16.2416
2	Bamburi cement	17.2847	17.2847	17.3212	17.3271	17.5776	17.5771	17.3954
3	Car & General	14.0493	14.3112	15.1714	15.5315	15.7472	15.5569	15.0613
4	Crown Berger	14.4825	14.4353	14.4947	14.6301	14.6301	14.8958	14.5947
5	EA Portland	16.0209	16.3049	16.3035	16.4205	16.4658	16.5964	16.3520
6	EA Cables	14.9285	15.0806	15.3237	15.4236	15.6479	15.7338	15.3563
7	EA Breweries	17.0095	17.0389	17.1015	17.3478	17.2844	17.2797	17.1770
8	Eveready	13.0241	13.0594	13.9943	13.8263	13.9504	13.7543	13.6015
9	Kakuzi ltd	14.8710	14.7948	14.9845	15.1551	15.0886	15.1286	15.0037
10	Kengen ltd	18.4147	18.5424	18.8295	18.8969	16.5971	19.0555	18.3894
11	Kenolkobil	17.1373	17.2588	17.0719	17.7464	17.3024	17.1521	17.2781
12	KPLC	17.9067	18.0732	18.2585	18.6020	18.7143	18.9926	18.4245
13	Kenya Airways	18.1883	18.1760	18.1379	18.2172	18.1649	18.6250	18.2515
14	ScanGroup	15.1436	15.1850	15.8961	15.9544	15.9727	16.3766	15.7547
15	Nation media	15.3075	15.5060	15.3848	15.6537	15.5060	15.9350	15.5488
16	Rea Vipingo	14.3053	14.1620	14.3503	14.6435	14.6812	14.8442	14.4977
17	Safaricom ltd	18.1245	18.3338	18.4611	18.5504	18.6187	18.6742	18.4605
18	Sameer Africa ltd	14.9392	14.9159	14.9427	14.9550	15.0392	15.1153	14.9845
19	Sasini Tea	14.9374	14.9860	15.1596	15.2242	16.0041	16.0188	15.3883
20	Total kenya	16.4915	17.2664	17.2292	17.3765	17.3114	17.5040	17.1965
21	TPS Serena	15.5228	15.6126	16.1443	16.2593	16.2525	18.7567	16.4247

Table 5: Growth of the firm for selected firms listed at the NSE

	Firm's name	2008	2009	2010	2011	2012	2013	$\Sigma\chi_a/n$
1	Athi River Mining	0.19	3.43	-0.63	0.15	-0.01	0.11	0.54
2	Bamburi cement	-0.10	1.06	-0.21	-0.26	1.90	-0.25	0.36
3	Car & General	0.23	-0.06	0.30	0.41	-0.29	0.45	0.17
4	Crown Berger	-0.62	2.05	0.06	0.97	-0.21	0.48	0.45
5	EA Portland	-0.30	2.42	-0.85	-1.01	-477.72	-4.04	-80.25
6	EA Cables	0.11	0.26	0.15	-0.55	1.87	-0.55	0.22
7	EA Breweries	0.22	-0.10	0.07	0.02	0.20	-0.38	0.01
8	Eveready	-0.86	0.58	-0.69	-15.25	-1.57	-0.35	-3.02
9	Kakuzi ltd	0.48	0.38	-0.01	0.68	-0.38	-0.56	0.10
10	Kengen ltd	0.97	-0.60	0.71	-0.56	0.29	1.83	0.44
11	Kenolkobil	1.57	-0.28	0.63	-0.02	-3.81	-1.10	-0.50
12	KPLC	0.03	0.18	0.15	0.14	0.06	0.00	0.09
13	Kenya Airways	0.12	-1.89	-1.14	5.34	-0.54	-5.74	-0.64
14	ScanGroup	0.29	0.36	0.55	0.37	-0.19	0.16	0.26
15	Nation media	0.20	-0.14	0.35	0.29	0.34	0.00	0.18
16	Rea Vipingo	0.46	-0.11	-0.71	-0.40	-0.60	0.38	-0.16
17	Safaricom ltd	0.15	-0.24	0.44	-0.13	0.00	0.39	0.10
18	Sameer Africa ltd	0.27	-0.03	-0.83	2.30	0.62	2.19	0.75
19	Sasini Tea	-27.08	-0.55	0.40	0.01	-1.22	-1.43	-4.98
20	Total kenya	0.21	-0.31	0.90	-1.08	1.83	-7.49	-0.99
21	TPS Serena	-0.47	0.41	0.17	4.11	-0.86	1.34	0.79

Table 6: Summary of regression results

REGRESSION STATISTICS	
Multiple R	0.997939545
R Square	0.995883335
Adjusted R Square	0.994854169
Standard Error	0.396575318
Observations	21

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	608.743424	152.185856	967.6603127	7.3963E-19
Residual	16	2.516351724	0.15727198		
Total	20	611.2597757			

COEFFICIENTS	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.261226267	0.125183083	2.08675374	0.053269925	-0.004150013	0.52660255
X Variable 1	1.023878138	0.127641865	8.02149151	5.35566E-07	0.753289473	1.2944668
X Variable 2	0.1601787	0.183121276	0.87471376	0.394670622	-0.228021061	0.54837846
X Variable 3	-0.03389908	0.23977531	-0.14137852	0.889335683	-0.542200027	0.47440187
X Variable 4	-0.207773747	0.25410117	-0.81768119	0.425548973	-0.74644416	0.33089667

Table 7: Correlation matrix of variables

Correlation	Return on Equity	Debt ratio	Tangibility	Size	Growth
Return on Equity	1				
Debt ratio	0.99694418	1			
Tangibility	0.976274391	0.983613	1		
Size	0.916132259	0.9333366	0.9729851	1	
Growth	0.939481361	0.9551312	0.9814992	0.994382	1