

EXAMINING THE EFFECT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE: A STUDY OF FIRMS LISTED UNDER MANUFACTURING, CONSTRUCTION AND ALLIED SECTOR AT THE NAIROBI SECURITIES EXCHANGE

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA), SCHOOL OF BUSINESS, AND UNIVERSITY OF NAIROBI.

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DECLARATION

STUDENT'S DECLARATION

This research project is my original work and has not been presented for a degree in any other university.

Signed Date

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SUPERVISOR'S DECLARATION

This research project has been submitted for examination with my approval as the candidate's university supervisor.

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DEDICATION

This project is dedicated to my family members for the prayers and encouragement.

May the Good Lord bless them abundantly.

ACKNOWLEDGEMENT

I thank the Almighty God for the opportunity and blessing to undertake this research project. I may also take this opportunity to acknowledge my supervisor Ms Zipporah Onsomu for the invaluable support and commitment devoted in making this research project a reality. I also recognize the commitment made by my friend Rachael Sidi towards the study.

I would also like to give my sincere appreciation to my family and friends for their support and understanding during the period of the study.

ABSTRACT

This study sought to examine the effect of capital structure on financial performance of firms listed under manufacturing, construction and allied sector at the Nairobi Securities Exchange. Return on Asset and Return on equity were used as the measures of firm performance while Short term Debt, Long-term Debt and Total Debt represented capital structure indicators. The study covered the firms listed under manufacturing, construction and allied sector at the Nairobi Securities Exchange from 2010 to 2013. The research design used was a descriptive research. Data was collected from the firms consolidated financial statement. The target population for the study consisted of manufacturing, construction and allied firms Listed at The Nairobi Securities exchange from 2010 to 2013. The data was then analyzed using linear regression models using SPSS to establish if there is any significant relationship of capital structure and the financial performance . Two regression models were utilized, with return on asset and return on equity as the dependent variables so as to assess the effects of debt on firm performance. A series of regression analysis were executed for each model, where both one of the capital structure proxies was included in each analysis and lag values were used so as to achieve the best fitted relationship between capital structure and firm performance. The correlation between return on equity and current debt was significant compared to the correlation between return on equity and long-term debt with a correlation of 0.778 and -0.518 respectively. The study also found that only long term debt has significant relationship with return on assets but not with return on equity. It was concluded that capital structure changes does affect firm's performance. The study recommended that firms should use high levels of long term debt for financing its operations as long as the cost of debt does not exceed the required rate of return of the firm.

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LIST OF ABBREVIATIONS

ANOVA	:	Analysis Of Variance
LTD	:	Long Term Debt
MM	:	Modigliani and Miller
NSE	:	Nairobi Securities Exchange
STD	:	Short Term Debt
ROA	:	Return on Asset
ROE	:	Return on Equity

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Recognizing the critical role that capital structure decisions play in determining a firm's performance, it is imperative that firms adopt best practices with respect to capital structure decisions. Academic researchers and practitioners have come to recognize capital structure decisions as a significant managerial decision since it influences the shareholder return and risk (Pandey 2002). The study of capital structure mainly attempts to explain the mix of securities and financing sources used by corporations to finance real investment (Myers, 2001). Capital structure is the proportion of debt instruments, preferred and common stock on a company's statement of financial position. It can also be said to be the mix of different securities issued by the firm to finance its operations (James, 2002). The theory of capital structure tries to find out whether the way in which investment proposals are financed matters, and if it does, what the optimal capital structure might be. An optimal capital structure is usually defined as one that will minimize a firm's cost of capital while maximizing shareholder's wealth. Exactly how firms choose the amount of debt and equity in their capital structure remains an enigma (Jermias, 2008). The capital structure is very vital in corporate finance since it is related to the ability of the firm to meet the needs of its stakeholders. By altering capital structure, firms have the opportunity to change their cost of capital and therefore the market value of the firm. Therefore the finance manager or board of directors of a company should always endeavor to develop optimal capital structure that would be beneficial to the equity shareholders in particular and to other groups such as employees, customers, creditors and society in general (Abor, 2007).

Modigliani and Miller (1958) challenged the traditional view of capital structure, by making a formidable attack on the traditional position by offering behavioral justification for having the cost of capital remain constant throughout all degrees of leverage. They argued that based on certain assumptions, there does not exist an optimal capital structure and that the cost of capital is independent of a firm's mode of financing hence a firm's capital structure is irrelevant or has no effect on the value of a firm. In view of this, the market value of a firm is determined solely by the magnitude and risk of the cash flow generated by capital assets. Over the years major theories of capital structure emerged which diverged from irrelevance model. Theories include; trade off theory which assumes that firms trade off the benefits and costs of debt and equity

financing and find an optimal capital structure after accounting for market imperfections such as taxes, bankruptcy costs and agency costs. The second is the pecking order theory that argues that firms follow a financing hierarchy to minimize the problem of information asymmetry between the firm's managers-insiders and the outside shareholders and the third theory is market timing which states that the current capital structure is the cumulative outcome of past attempts to time the equity market. Market timing implies that firms issue new shares when they perceive they are overvalued and that firms repurchase own shares when they consider these to be undervalued (Naidu, 2011).

The government of Kenya, since the early 1990's, has shown an interest in the development of small scale and micro enterprise. It has been aided in this effort by assistance from donors such as the World Bank, the US Agency for International Development (USAID) the European Union, United Nations Development Program (UNDP) and Ford Foundation among others. Further, Kenya's own commercial banking sector has now started focusing on micro enterprises (World Bank, 1997). Recently, the government of Kenya established the Youth Development Funds, Women Enterprise Fund in recognition that MFIs are the engines for economic growth while awarding a prize to Equity bank for exemplary performance in Kenya. One of the fundamental pillars of credit issuance in Kenya is the Microfinance industry. It started in earnest in the 1980's. Most of these institutions were set up as NGO's with donor support. There are more than 150 microfinance institutions operating in Kenya today. Microfinance institutions serve as important providers of credit to poorer borrowers and thus can play a significant role in programs to alleviate poverty and promote economic opportunity in nations around the world (Morduch 1999a, Zohir and Matin 2004). The study is relevant in the Kenya context as it gives the importance role the manufacturing, construction and allied sector is expected to play in the growth and in an attempt to achieve the vision 2030. The sector has remained the engine of Kenya's economic growth accounting for 18% and employed more than 2.3 million people both in the formal and informal sector (Cliff & Willy, 2014).

1.1.1 Capital Structure

The capital structure is combination of debt and equity that the company uses to finance its business. The proportion of debt to equity is a strategic choice of corporate managers. Capital structure decision represents important financial decision of a business organization since it involves huge amount of money and has long term implication on the firm. Hence, proper care

and attention need to be given while determining capital structure decision in order to economize the use (Ahmad et al, 2012). The capital structure of a firm is described as the components of its sources of financing, broadly categorized as equity and debt finance. Equity finance is that finance provided by the owners of the business and it is the risk bearing finance. Debt finance on the other hand is finance generated through borrowing from external sources as banks or from issues of bonds, all of which attract a fixed return. Debt may be short term repayable over period shorter than one year or long term repayable over periods longer than one year (Brockington, 1990).

The capital structure decision is a significant managerial decision since it influences the shareholder returns and risks and also affects the market of the shares of firms. Therefore, the firm must plan its capital structure and make critical analysis. The capital structure is measured in terms of total debts to assets, long term debts to total assets (Nirajini, 2013).

1.1.2 Financial Performance

Metcalf and Titard (1976) defined financial performance as the act of performing financial activity in order to achieve financial objectives over a specific period of time. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation.

Metcalf & Titard (1976) pointed out that the financial performance is to convey an understanding of some financial aspects of a business firm. It may show a position at a moment of time as in the case of balance or may reveal a series of activities over a given period of time as in the case of income statement. The financial performance analysis identifies the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and income statement by selecting the information relevant to the decision under consideration from the total information contained in the financial statements, arranging the information in a way to highlight significant relationships and interpret and draw inferences and conclusions.

Ratio is used as benchmark for evaluating financial performance of a firm and helps to summarize large quantities of financial data and to make qualitative judgement about the firm

performance. Measures of financial performance of a firm are return on equity and return on assets (Tharmila & Arulvel, 2013).

1.1.3 Capital Structure and Financial Performance

Modigliani and Miller (1958) argued based on the following assumptions; capital markets are perfect, no transaction, bankruptcy cost and taxes, and there is information symmetry and that firm's capital structure has no effects on a firm's market value, hence the market value of a firm is argued to be independent of its capital structure.

Ebaid (2009) did a study that investigated the impact of capital structure choice of firms in Egypt as one of the emerging or transition economies based on a sample of non financial listed firms from 1997 to 2005. The methodology used was multiple regression analysis. The sample was 64 firms drawn from ten non financial industries. The findings of the study revealed that there is a negatively significant influence of short term debt and total debt on financial performance measured by return on assets but no significant relationship founded between long term debt and financial performance. Mwangi (2010) did a study on capital structure on firms listed at Nairobi Stock Exchange to examine the relationship between capital structure and financial performance. The study identified a strong positive relationship between leverage and return on equity, liquidity, return on investment existed.

1.1.4 Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE), formerly Nairobi Stock Exchange, is the principal stock exchange of Kenya. It began in 1954 as an overseas stock exchange while Kenya was still a British colony with permission of the London Stock Exchange. The NSE is a member of the African Securities Exchanges Association. It is Africa's fourth largest stock exchange in terms of trading volumes, and fifth in terms of market capitalization as a percentage of GDP (Iraya & Musyoki, 2013). In 1990, a trading floor and secretariat was set up at the IPS building, before moving to the Nation Centre Nairobi in 1994. Over the past decade, the securities exchange has witnessed numerous changes such as automating its trade in September 2006 and in 2007 making it possible for stockbrokers to trade remotely from their offices. Trading hours were also increased from two to six. Moving to Westlands in the environs of Nairobi symbolically marked the end of an era where the market away owned and run by stockbrokers. Nairobi Securities Exchange aims at supporting trading clearing settlement of equities, debts, derivatives and other

associated instruments. It's mandated to list companies on the securities exchange and enables investors to trade in securities of companies thus it's charged with the health of securities Exchange. It's regulated by Capital Market Authority (Musiega et al, 2013).

Security exchange market is an organized market for buying and selling corporate and other securities. Securities are purchased and sold out as per certain well-defined rules and regulations. Security markets promote higher standards of accounting, resource management and transparency in the management of business. This is because financial markets encourage the separation of owners of capital on one hand, from managers of capital on the other. The stock exchange also improves the access to finance of different types of users by providing the flexibility for customization. The stock exchange provides investors with an efficient mechanism to liquidate their investments in securities. The very fact that investors are certain of the possibility of selling out what they hold, as and when they want, is a major incentive for investment as it guarantees mobility of capital in the purchase of assets (www.nse.co.ke,2014).

The Nairobi Securities Exchange are grouped into eleven sectors namely; agricultural, automobile and accessories, banking, commercial and services, construction and allied, energy and petroleum, insurance, investment, manufacturing and allied and telecommunication and technology and growth enterprise market segment, (www.nse.co.ke,2014).

1.2 Research Problem

A firm's capital structure refers to the mix of its financial liabilities. It has long been an important issue from the financial management standpoint since it is linked with a firm's ability to meet the demands of various stakeholders (Roy & Minfang, 2000). Debt and equity are the two major classes of liabilities, with debt holders and equity holders representing the two types of investors in the firm. Each of these is associated with different levels of risk, benefits, and control. While debt holders exert lower control, they earn a fixed rate of return and are protected by contractual obligations with respect to their investment. Equity holders are the residual claimants, bearing most of the risk and have greater control over decisions (Siro, 2011).

Various studies have tried to address the issue of capital structure. Abor (2005) did a study on capital structure and profitability of SMEs in Ghana and found out that short term debt ratio is positively correlated with return on equity. Chiang et al (2002) carried out a study on capital

structure and profitability of the property and construction sectors in Hong Kong. The result was that high gearing is positively related to asset but negatively related to profit margins. Hammes (2003) examined the relation between capital structure and performance by comparing Polish and Hungarian firms to a large sample of firms in industrialized countries. Panel data analysis was used to investigate the relation between total debt and performance. The results show a significant and negative effect for most countries. Zeitun and Tian (2007) found that capital structure has a significant and negative impact on firm's performance and underestimation of bankruptcy costs may lead firms to borrow excessively and carry high debt in their capital structure.

Locally, many researchers have reviewed various aspects of capital structure in the Kenyan context such as; Mwangi (2010) examined the relationship between capital structure and financial performance of firms listed in NSE and found out that there was a strong positive relationship between leverage and return on equity and return on investment; Kiogora (2000) carried out an empirical study testing for variations in the capital structure at the Nairobi Stock Exchange; Lutomia (2002) studied the relationship between the firm's capital structure and the systematic risk of common stocks in an empirical study of companies quoted on the Nairobi Stock Exchange; Munyui (2005) reviewed the capital structure choice in an empirical testing of the pecking order theory among firms quoted on the Nairobi Stock Exchange; Wandeto (2005) carried out an empirical investigation of the relationship between dividend changes and earnings, cash flows and capital structure for firms listed in the Nairobi Stock Exchange while Nyaboga (2008) researched on the relationship between capital structure and agency cost. Chepkemoi (2013) carried out a study to analyze the effect of capital structure of SMEs on their financial performance. The finding revealed that capital structure had a negative effect on firm profitability but positive effect on sales growth.

Due to lack of common agreement on what constitutes an optimal capital structure, it is significant to examine the effects of capital structure on the firms' performance. Several studies were conducted in European countries to find out the balancing cost and benefit of debt financing. They found contradictory results; Gleason (2000) supported a negative impact of leverage on the profitability of the firm while Roden and Lewellen (1995) found a significant positive association between profitability and total debt as a percentage of the total buyout-financing package in their study on leveraged buyouts. Clearly, these results are mixed and

therefore not conclusive. Similar studies can be replicated in Kenya because of it is an emerging economy given that most of the studies have been conducted in developed countries. Also, Kenya has a unique and a diverse culture. Motivated by this gap, this study therefore seeks to examine the effect of capital structure on financial performance of firms listed under manufacturing, construction and allied sector at Nairobi Securities Exchange. The study attempt to answer this question; does capital structure have an effect on financial performance of firms listed under manufacturing, construction and allied sector at the Nairobi Securities Exchange?

1.3 Research Objective

To examine the effect of capital structure on financial performance of firms listed under manufacturing, construction and allied sector at the Nairobi Securities Exchange.

1.4 Value of the Study

This study aims to contribute to the existing body of knowledge on the topic of capital structure. The study aims to apply a more holistic view on the topic of optimal capital structure and to make a unique contribution by comparing the various funding mechanisms and funding mix adopted by firms in Kenya in an attempt to identify best practices.

The finding of this study will also provide information to regulatory organizations that involved in promoting investments such as Capital Markets Authorities in Kenya to assist in analyzing and harnessing financial resources relevant to business and form policies that foster investments in developing countries.

The study will be of invaluable assistance to management of firms in their decision making process and attempts to maximize their firms' value and performance thereby contributing to maximization of shareholders wealth. The findings will also provide information to institutions, consultants and entrepreneurs with the necessary tools to plan financing their business and make informed decision for investment.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents a theoretical foundation of the study regarding the capital structure and financial performance that have been documented in the financial literature. Section 2.2 reviews the main capital structure theories. Section 2.3 stipulates the capital structure measures. Section 2.4 discussed the empirical related studies. Section 2.5 summarized literature on capital structure review.

2.2 Theoretical Review on capital structure

Theories concerning capital structure and financial performance have been documented in the financial literature. These theories are; trade off theory, pecking order theory and market timing theory.

2.2.1 Modigliani and Miller Propositions

At the forefront of modern capital structure theory are the propositions put forth by Modigliani and Miller (1958) who, using economic theory established the well known Modigliani and Miller propositions based on the following assumptions; capital markets are perfect, no transaction, bankruptcy cost and taxes, and there is information symmetry and changes in a firm's capital structure have no long term effects on a firm's market value, hence the market value of a firm is argued to be independent of its capital structure.

Baxter (1976) argued that bankruptcy cost has effect on the value of the indebted firm. These costs include liquidation fees, legal fees and reorganization costs, which would result from the firm going bankrupt. Thus a firm with higher debt would incur higher bankruptcy costs than one with less debt. So in the world of corporate taxes and bankruptcy costs there should be an optimal capital structure, where the value of the firm is maximized.

Berens and Cuny (1995) criticize the MM proposition with corporate tax on the grounds that if the firm value is an increasing function of indebtedness, due to tax deductibility of the interest payment on debt at the corporate level, then it implies that the more the debt a firm employs the less tax it would pay, indicating that the value maximizing capital structure should be all debt, since the tax benefits are maximized.

The Modigliani and 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, and structural test of the theory by regressing value on debt cannot be established (Luigi and Sorin, 2007). Luigi and Sorin (2007) argued that Modigliani and Miller theorem does not provide a realistic description of how firms finance their operations but provide a means of finding reasons why financing may matter

2.2.2 Trade off Theory

This theory assumes that there are benefits to leverage with capital structure used until an optimal capital structure is attained. The theory recognized that debt interest is tax deductible. This reduces tax liability thus increasing tax shield. A high proportion of debt in a company makes it very risky for investors to invest in it hence they demand a high premium on stock or high dividend. The theory assumes that a firm has an optimum capital structure based on trade off between costs and benefits of using debt. This theory does not explain the conservative nature of firms when using debt finance, why leverage is consistent in most countries yet they have divergent taxation systems (Popescu, 2009). Firm's optimal debt ratio is determined by a tradeoff between the bankruptcy cost and tax advantage of borrowing and it is achieved at the point when the marginal present value of the tax on additional debt is equal to the increase in the present value of financial distress cost (Owalobi and Anyang, 2013).

However, researches on trade-off theory conclude mixed results. Titman and Wessels (1988), Rajan and Zingales (1995) and Fama and French (2002) affirm that higher profitability firms tend to borrow less that is inconsistent with the actual trade off prediction that higher profitability firms should borrow more to reduce tax liabilities. Graham (2000) estimating cost and benefit of debt finds that the large and more profitable firms with low financial distress expectation use the debt conservatively.

2.2.3 Pecking Order Theory

This theory was developed by Myers and Majluf (1984). According to this theory firms prefer internal funding to external funding. In case firms require external funding they would prefer debt over equity and equity is generated as last resort. So firms do not have predetermined or optimum debt to equity ratio due to information asymmetry. The firms adopt conservative approach when it comes to dividend and use debt financing to maximize the value of the firm. The theory suggest that firms have a particular preference order for capital used to finance their business (Myers and Majluf,1984). Owing to this information asymmetries between the firm and

potential investors, the firm will prefer retained earnings to debt, short term debt over long-term debt and debt over equity. Myers and Majluf (1984) argued that if firms issue no new security but only use its retained earnings to support the investment opportunities, the information asymmetry can be resolved. This implies that issuing equity become more expensive as information asymmetry between insiders and outsiders increases. Firms that have large information asymmetry should issue debts to avoid selling under priced securities.

In addition, Myers (1984) stated that in the event that external finance is required, firms are most likely to issue the safest security that is to say they start with debt then possibly convertible debt then equity comes as a last resort. Myer's argument was such that business adheres to a hierarchy of financing sources and prefers internal financing when available. Should external financing be required, debt would be preferred to equity. Pandey (2005) concurred with Myers argument when that manager always preferred to use internal finance and would only resort to issuing shares as last resort.

It is worth noting that the pecking order theory is criticized on the grounds of its underlying arguments and suggestions. Adedji (1998) concludes that the suggestion of the theory that it is only the internal funds that motivates firms to raise funds externally is questioned due to it ignores the effects of institutional factors that might affect the firm's choice of financing instruments such as the level of interest rate, borrower-lender relations and the government intervention. Cull and Xu (2005) argued that sometimes reinvestment of firm's profits in projects is conditioned by the ability to raise funds externally, investment is lumpy since internal and external funds are needed to finance the available profitable projects and government intervention through monetary policy during financial crisis may make the cost of borrowing lower than the cost of internal funds hence the firm use debt before internal funds.

Baskin (1989), Allen (1993) and Adedji (1998) argue that transaction and information cost are not only factors that might discourage the use of external financing in general and for equity in particular and conclude that control consideration may make firms reluctant to issue equities because of their effects on the existing balance of control or even to issue debts which might impose the discipline of the capital market on them. Fama and French (2005) argue that firms can avoid the information cost or adverse selection by issuing the equities which are less to asymmetric information such as equity to employees in their compensation plan or to existing

stock holders and this does not change the ownership structure and the existing balance of control.

Naidu (2011) argued that pecking order theory is based on the costs of obtaining financing, it stands to reason that the marginal cost of financing of new projects does not become an issue if the financial capacity were available in advance to fund future projects. Firms will be able to make use of funds immediately available to pursue opportunities when they arise rather than waste time and cost in approaching the capital markets.

2.2.4 Market Timing Theory

Baker and Wurgler (2002) developed market timing theory. They argue that firms time their equity issues in the sense that they issue new stock when stock price is perceived to be overvalued and repurchase when they are undervalued. The fluctuations in stock prices affect firms' capital structure.

The theory assumes that economic agents are rational. Companies are assumed to issue equity directly after positive information release which reduced the asymmetry problem between firm management and stockholders. The decrease in information asymmetry coincides with an increase in the stock price. In response, firms create their own timing opportunities. The theory also assumes that economic agents are irrational (Baker and Wurgler, 2002). Due to irrational behavior there is a time varying mispricing of the stock of the company. Managers issue equity when they believe its cost is irrationally low and repurchase them when they believe that its cost is irrationally high. The second version of market timing does not require that the market to be inefficient. It does not ask managers to successfully predict stock returns. The assumption is that managers believe that they can time the market. In a study by Graham and Harvey (2001), it was noted that managers admitted that trying to time the equity market and most of those that have considered issuing common stock report that the amount by which our stock is undervalued or overvalued was an important consideration. This study support the assumption of the market timing theory that it managers believe they can time the market but does not immediately distinguish between the mispricing and the dynamic asymmetric information version of market timing.

Baker and Wurgler (2002) provided evidence that equity market timing has a persistent effect on the capital structure of the firm. They define a market timing measure which is a weighted

average of external capital needs over the past few years where the weights used are market to book values of the firm. They find that leverage changes are strongly and positively related to their market timing measure hence it was concluded that the capital structure of a firm is the cumulative outcome of the past attempts to time the equity market.

Market timing theory has been questioned by many other studies. Havokimian (2006) provide confirmation that even if the market timing exists, it doesn't encompass long run impact on corporation power and that business does keenly rebalance their leverage fractions toward several target point.

Most of the evidences support market timing theory in a sense that manager wait for the market condition to get better, that stocks' position in the market get better before the new issuance and before issuing new stocks firms try to make their performance better (Jahanzeb et al ,2013).

2.3 Capital Structure Measures

The term capital structure refers to the mix of different types of securities (long-term debt common stock, preferred stock) issued by a company to finance its assets. A company is said to be unlevered as long as it has no debt, while a firm with debt in its capital structure is said to be leveraged. Note that there exist two major leverage terms: operational leverage and financial leverage. While operational leverage is related to a company's fixed operating costs, financial leverage is related to fixed debt costs. Loosely speaking, operating leverage increases the business (or the operating) risk, while financial leverage increases the financial risk. Total leverage is then given by a firm's use of both fixed operating costs and debt costs, implying that a firm's total risk equals business risk plus financial risk (Brealey & Myers, 2003).

There are two major categories of leverage measures; those that are based on market value of equity which is defined as the number of outstanding shares multiplied by the share price of the last trading day of an accounting year, and those that are based on booked value of equity (Loof, 2003). Titman & Wessels (1988) discussed six measures of financial leverage in their study of capital structure choice: long-term, short-term, and convertible debt divided by market and book values of equity respectively. It is though rather common that due to data limitations, empirical studies must use only leverage measures in terms of book values rather than market values of equity.

When both booked and market values are available, they are both used simultaneously. The reason for this is that the information signaled in book value and market value is informative in different aspects (Loof, 2003). In contrast to this, Titman and Wessels (1988) refers to an earlier study by Bowman (1980), which demonstrated that the cross-sectional correlation between the book value and market value of debt is very large. Furthermore, Brealey and Myers (2003) argue that it should not matter much if only book values are used, since the market value includes the value of intangible assets generated by for instance research and development, staff education, advertising, and so on. These kinds of assets cannot be sold with easiness, and in fact, if the company goes down, the value of intangible assets may disappear altogether. Hence, misspecification due to using book value measures may be fairly small, or even totally unessential. Irrespective of market or book value, we still face the problem of choosing an appropriate leverage measure as the dependent variable. Indeed, in an important paper by Rajan and Zingales (1995), they argue that the choice of the most relevant measure depends on the objective of the analysis. Though, they conclude “the effects of past financing decisions are probably best represented by the ratio of total debt over capital (defined as total debt plus equity)”.

To complete the discussion of different leverage measures, we may consider the following statement by Harris and Raviv (1991) when we compare different empirical studies: “The interpretation of the results must be tempered by an awareness of the difficulties involved in measuring both leverage and the explanatory variables of interest. In measuring leverage, one can include or exclude accounts payable, accounts receivable, cash, and other short-term debt. Some studies measure leverage as a ratio of book value of debt to book value of equity, others as book value of debt to market value of equity, still others as debt to market value of equity plus book value of debt. In addition to measurement problems, there are the usual problems with interpreting statistical results.”

2.4 Empirical Literature Review on Capital Structure and Financial Performance

Sheikh and Wang (2012) examined whether capital structure affects the performance of non financial firms listed on the Karachi Stock Exchange Pakistan during 2004 - 2009. The methodology used was panel econometric techniques (pooled ordinary least squares, fixed

effects and random effects) were used. The sample was 240 firms drawn from eight distinct industrial groups namely cement, chemical, engineering, fuel and energy, paper and board, sugar and allied, textile and miscellaneous. The finding indicated that all measures of capital structure (total debts ratio, long and short term ratio) are negatively related to return on assets in all regression.

Ebaid (2009) did a study that investigated the impact of capital structure choice of firms in Egypt as one of the emerging or transition economies based on a sample of non financial listed firms from 1997 to 2005. The methodology used was multiple regression analysis. The sample was 64 firms drawn from ten non financial industries. The findings of the study revealed that there is a negatively significant influence of short term debt and total debt on financial performance measured by return on assets but no significant relationship founded between long term debt and financial performance. Manawaduge et al (2007) conduct a study that examines the impact of capital structure on the firm performance. The study applies both pooled and panel data regression analysis for a sample of 155 listed firms in Sri Lankan. The result demonstrates that firm performance is negatively affected by use of debt capital.

Pouraghajan and Malekian (2012) conducted a study whose objective was to establish the impact of capital structure on financial performance of companies listed in the Tehran Stock Exchange. They studied and tested a sample of 400 firms in the form of 12 industrial groups during the years 2006 to 2010. Variables of return on assets ratio (ROA) and return on equity ratio (ROE) were used to measure financial performance of companies. The results suggest that there is a significant negative relationship between debt ratio and financial performance of companies. The result also shows that by reducing debt ratio, management can increase the company's profitability and thus the amount of the company's financial performance measures.

Onaolapo and Kajola (2010) investigated the effect of capital structure on financial performance of companies listed on Nigeria Stock Exchange. This study was performed on 30 non financial companies in 15 industry sectors in a 7 year period from 2001 to 2007. The result showed that the capital structure has a significant negative effect on financial measures (ROA and ROE) of these companies. Rajan and Zingales (1995) studied the determinant factors of capital structure of common company corporations in seven large countries around the world (America, Japan, Germany, France, Italy, Britain and Canada) during 1987 to 1991. In this study, they chose 4557

companies as samples of these seven countries. Research findings indicate that financial leverage has negative relationship with profitability and market value to book value ratio and positive relationship with the value of tangible fixed asset and firm size.

Masiega et al (2013) examined the relationship between a firm's capital structure and financial performance among a sample of 30 companies listed at the NSE whose data for 5 years period 2007 - 2011. The findings indicate that there was a significant correlation between total assets of a firm and long term debt. Long term debt had a positive correlation with ROE which is insignificant and weak. Chepkemoi (2013) carried out a study to analyze the effect of capital structure of SMEs on their financial performance. The sample of the study was 295 SMEs in Nakuru town. Descriptive statistics and multiple regression models were used. The finding revealed that capital structure had a negative effect on firm profitability but positive effect on sales growth. Magara (2012) did a study on capital structure and its determinants at Nairobi Securities Exchange. The study sought to find determinants of capital structure. It was established that from the period 2007 to 2011, there was a positive significant relationship between the size, tangibility and growth rate and degree of leverage of the firm. Siro (2011) did a study on capital structure on firms listed at Nairobi Stock Exchange to examine the relationship between capital structure and financial performance. The study identified a strong positive relationship between leverage and return on equity, liquidity, return on investment existed. Mwangi (2010) examined the relationship between capital structure and financial performance of firms listed in NSE and found out that there was a strong positive relationship between leverage and return on equity and return on investment.

2.5 Summary of Literature Review

Due to lack of common agreement on what constitutes an optimal capital structure, it is significant to examine the effects of capital structure on the firms' performance. Several studies were conducted in European countries to find out the balancing cost and benefit of debt financing. They found contradictory results; Gleason (2000) supported a negative impact of leverage on the profitability of the firm while Roden and Lewellen (1995) found a significant positive association between profitability and total debt as a percentage of the total buyout-financing package in their study on leveraged buyouts. Clearly, these results are mixed and therefore not conclusive. Similar studies can be replicated in Kenya because it is an emerging economy given that most of the studies have been conducted in developed countries. Also,

Kenya has a unique and a diverse culture. Motivated by this gap, this study therefore seeks to examine the effect of capital structure on financial performance of firms listed under manufacturing, construction and allied sector at Nairobi Securities Exchange. The study attempt to answer this question; does capital structure have an effect on financial performance of firms listed under manufacturing, construction and allied sector at the Nairobi Securities Exchange?

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section provide the research methodology used in this study. It outlined the research design, target population, sample size and techniques, data collection instruments and procedures and data analysis.

3.2 Research Design

The study applied descriptive research design because the design involves collection of data in order to answer questions concerning the current status of the subjects in the study. It determines and reports the way phenomenon are and attempts to describe such phenomenon as possible behaviour, attitudes, values and characteristics (Kraemer, 1991). Descriptive research design is concerned with finding out “what is” and can either be quantitative or qualitative since it involves gathering data that describes events and then organizes, tabulates, depicts and describe the data collection (Iraya & Musyoka, 2013).

3.3 Study Population

The population for this study was 14 firms listed at the NSE as at 31st December 2013 under manufacturing, construction and allied sector (Appendix 1). The NSE 20 Share Index tracks only 20 of the highest market capitalization companies across each industry listed on the Kenyan Securities Market. Its justification is that it is updated every day after the markets have closed and by looking at it, a person can understand the adjustments capital structures by checking the individual stock prices.

3.4 Data Collection

The study used secondary data and utilized panel data which consist of time series and cross sections. The data for all the variables in the study was extracted from published annual reports and financial statements of the listed companies in the NSE covering the period from 2010 to 2013. Data was obtained from the NSE hand books for the period of reference. Data extracted include the statement of comprehensive income, financial position and notes to the accounts using document review guide.

3.5 Data Analysis

The data was analyzed using descriptive statistics, correlation analysis and panel multiple regression analysis. The data was run through Statistical Package Social Science (SPSS) version 22. Multiple regressions are most appropriate for studies involving two or more independent variables (Nachmias and Nachmias, 1996). Panel data methodology was used which involved

pooling of observation on cross-sections of firms over several times periods. A general model for panel data that allows the study to estimate panel data with great flexibility and formulate the difference in the behavior of the cross-section elements was adopted. The relationship between debt and profitability performance was estimated using the following regression model:

$$\mathbf{ROE}_{at} = \beta_1 + \beta_2\mathbf{SDA}_{at} + \beta_3\mathbf{LDA}_{at} + \beta_4\mathbf{REV}_{it} + e$$

3.5.1 Operationalization of the Variables

Variable used for the analysis included profitability and leverage ratios. Performance used was accounting-based measure; profitability measures as the ratio of earnings before interest and taxes (EBIT) to Equity. The leverage ratios used included:

- a) Short-term debt to the total capital
- b) Long-term debt to total capital and
- c) Total debt to total capital

Revenue was included as control variable.

\mathbf{ROE}_{at} = Earning divided by Equity for a firm in time t

\mathbf{SDA}_{at} = short-term debt divided by the market value capital for a firm in time t

\mathbf{LDA}_{at} = long-term debt divided by the market value capital for a firm in time t

\mathbf{REV}_{at} = the log of revenue for a firm in time t

e = Error term

3.5.2 Test of Significance

The model helped in determining if there was an effect of capital structure on financial performance of manufacturing, construction and allied firms. The data collected was subject to the analysis tools SPSS version 22.0. The data was collected from the secondary sources and analyzed; the ANOVA test was used to determine the effect independent variables has on the dependent variable in a regression analysis. ANOVA provides a statistical test of whether or not the means of several groups are equal. ANOVAs are useful in comparing (testing) three or more means (groups or variables) for statistical significance.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presented the analysis and the findings of the study. The discussion was segmented into four sections: Section 4.2 described the descriptive analysis of the data and variables of the study. Section 4.3 illustrated the correlation analysis which disclosed the strength of the relationship between the variables. In section 4.4, regression analysis was done in order to present the main findings of the study. Finally section 4.5 Discussion on the findings

4.2 Descriptive Statistics

Descriptive statistics were computed so as to help in making inferential to the nature of the relationship between the variables. The study used average, medium and range.

Table1: Return On Equity

Year	2010	2011	2012	2013
TOTAL EQUITY	22,852,659	25,344,781	32,155,537	33,414,903
PROFIT	154,607,000	115,087,000	194,270,000	201,982,000
A.T.E	11426329.5	12672390.5	16077768.5	16707451.5
A.P.T	77303500	57543500	97135000	100991000
ROE	6.765383407	4.540855966	6.041572249	6.044668153

Source: Research Data

Table 1 above illustrated the computation of return on equity ratio. The ratio was computed by dividing the yearly average profit after tax by yearly average total equity. From the table above it was deduced that the listed companies had the highest return on equity during the year 2010 with return on equity averaging to 6.7654. The least return on equity was experienced in 2011. This could be attributed to dynamic prevailing economic conditions.

Table 2: Current Debt to Total capital

Year	2010	2011	2012	2013
CURRENT DEBT	440,261,500	406,260,000	471,443,000	478,210,000
TOTAL CAPITAL	34,990,149.5	35,106,505	44,813,794	44,241,154
A.C.D	220130750	203130000	235721500	239105000
A.T.C	17495074.75	17553252.5	22406897	22120577
CD/TC	12.58244124	11.57221432	10.52004211	10.80916651

Source: Research Data 2014

Table 2 above illustrated the computation of current debt to total capital ratio. This ratio was computed by dividing average yearly current debt by yearly average total capital. From the table above it was found out that the highest current debt ratio to total capital was observed in 2010 with a ratio of 12.58244. The least current debt ratio was found to be 10.5200 observed in 2012.

Table 3: Long Term Debt to Total Capital ratio

Year	2010	2011	2012	2013
LONG TERM DEBT	28,909,000	36,792,000	21,991,000	17,382,000
TOTAL CAPITAL	34,990,149.5	35,106,505.0	44,813,794.0	44,241,154.0
LTD/TC	0.826203958	1.048010903	0.490719442	0.392892102

Source: Research Data 2014

Table 3 above illustrated the calculation of long term debt to total capital ratio. It was calculated by dividing yearly long-term debt to total capital. It was observed that the highest ratio was found in 2011 with a ratio of 1.0480109. The least ratio was found in 2013 with a ratio of 0.39289.

4.3 Correlation Analysis

Table 4: Correlation Analysis

		ROE	CD/TC	LD/TC
ROE	Pearson Correlation	1	.222	-.518
	Sig. (2-tailed)		.778	.482
	N	4	4	4
CD/TC	Pearson Correlation	.222	1	.686
	Sig. (2-tailed)	.778		.314
	N	4	4	4
LD/TC	Pearson Correlation	-.518	.686	1
	Sig. (2-tailed)	.482	.314	
	N	4	4	4

Source: Research Data 2014

The correlation analysis table above provided that short-term debt was positively correlated to return on equity. Long-term debt was negatively correlated to return on equity. The table also indicated that for the 4 years under consideration, there was a weak negative correlation between return on equity and long-term debt with a correlation of -0.518. The study found out that there was a correlation of 0.778 between return on equity and current debt ratio. However the level of influence on usage for any of the two was found to be significant as it affects return on equity and so does the financial performance.

4.4 Regression Analysis

Table 5: Regression coefficients

Model	Coefficients ^a						
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	-4.019	4.529		-.887	.538	-61.571	53.533
CD/TC	1.105	.450	1.088	2.455	.246	-4.613	6.823
LD/TC	-3.908	1.370	-1.264	-2.852	.215	-21.322	13.505

Source: Research Data 2014

The study sought to establish a linear regression function of the variables with return on equity as the dependent variable. From the above table the study established the following regression equation: $ROE = - 4.019 + 1.105CD - 3.908LD$

From the above equation the study found that holding current debt and long-term debt of the listed firms under study to constant zero, ROE (performance) of the firm would be - 4.019. A factor increase in total current debt would lead to an increase in financial performance (ROE) by factor of 1.105 and also a unit decrease in long-term debt lead to a decrease in firm performance (ROE) by - 3.908. These findings showed that there's a positive relationship between return on equity (ROE) and current debt. It also showed that there was a negative relationship between return on equity and long-term debt. This observation of negative relationship between long-term debt and return on equity may be due to the fact that investors in long term tend to focus on future growth through dividends and not capital gains. Thus the long the debt usage by the firm the greater the return on equity due to debt tax shield. Current debt had a positive relationship with return on equity due to the fact that current debts have immediate impact and are repaid with ease and thereby carry less risk thus a factor increase in total current debt would lead to an increase in financial performance (ROE) by factor of 1.105

Table 6 : Regression Model summary

Regression

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.947 ^a	.896	.688	.52294345	.896	4.302	2	1	.323	2.859

a. Predictors: (Constant), LD/TC, CD/TC

b. Dependent Variable: ROE

Source: Research Data 2014

Table 6 above illustrated the regression summary. The adjusted R² was found to be 0.688 which means that there was 68.8% variation in return on equity (ROE) due to changes in total long term debt (LTD) and current debt of the listed firms. The correlation coefficient tells us the strength of relationship between the variable. The study found that the correlation coefficient was 0.947 thus there was a strong positive relationship between long-term debt, current debt and the firm performance as measured by return on equity. The R² equally confirmed that there was a high correlation between the return on equity and debt variable with 89.6% of the return on equity changes depending on the changes in current debt.

Table 7 : Analysis of variance

Analysis of variance was computed so as to establish the reliability of the regression model in analyzing the variables. The findings are shown below

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.005	3	.002	292.716	.003 ^a
	Residual	.000	2	.000		
	Total	.005	5			

a. Predictors: (Constant), LD/TC, CD/TC

b. Dependent Variable: ROE

From the above ANOVA table the P- value for the model was 0.003 which means that the model was statistically significant since the P-value was less than 0.005

4.5 Discussion of Findings

From the finding on the adjusted R ² the study revealed that there was variation of financial performance of listed firms under manufacturing, construction and allied sector at the NSE due to changes in total long term debt and current debt. The study found out that there was a strong positive relationship short term debt and return on equity and a negative relationship between long term debt and return on equity.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presented the summary of key findings, which were set out in order with the study objectives. The objective of the study was: to examine the effect of capital structure on financial performance of firms listed under manufacturing, construction and allied sector at the Nairobi Securities Exchange.

5.2 Summary Of Findings

The main findings of the study was that long-term debt was found to be only significantly related to Return on equity but not Return on Assets as illustrated by table 5. It was also established that long-term debt had a significant negative relationship with Return on Equity, which means the leverage has effect in the long term but not short term.

Table 4 shows that there was a positive relationship between return on equity (ROE) and current debt. It also showed that there was a negative relationship between return on equity and long term debt.

From table 5 the study found that holding long term debt and short term debt to constant zero, ROE (performance) of the firm would be -4.019. A factor decrease in long term debt would lead to an increase in financial performance more so (ROE) by a factor of 3.908. This information showed that there was an inverse relationship between return on equity and long term debt. It also showed that there was a positive relationship between short term debt and return on equity.

The study found that the correlation coefficient was 0.947 thus there was a positive relationship between long-term debt, current debt and the firm performance as measured by return on assets (ROE). The R^2 equally confirmed that there was a high correlation between the return on equity and Long-term debt and current debt with 89.6% of the return on equity changes depending on the changes in long term debt and current debt (table 6)

5.3 Conclusion

Findings of the study on effect of capital structure on financial performance revealed that both current debt and longterm debt affect Return on equity and the thus the firm`s performance. (Table 1, 2 and 3) showed that that Long term debt has a negative significant relationship with return on equity. Which means when a firm uses more of long term debt in financing, its stock price will dwindle. From the findings the study concludes that the firm uses both long term debt and short term or current debt but in varying magnitudes as it depended on the circumstances. The capital structure decision is crucial for any business organization. The decision is important because of the need to maximize returns to various organizational subsidiaries, and also because of the effects of such a decision has on an organization`s or firm`s ability to deal with its competitive environment.

5.4 Recommendations

Firms should use high levels of Long-Term Debt which should be accompanied by a disciplined administration if they are to reduce agency costs and benefit from interest tax shields and thereby improve performance. Capital structure has no immediate or long-term effect on returns to shareholders though returns to the firms as a whole increase in long-term debt level this does not contribute to higher return to equity holders and thus the management should be carefully when making capital structure decisions

5.5 Limitations of the Study

This study was limited because only firms listed under manufacturing, construction and allied sector at the NSE were used as the case study for the entire population. Thus other firms with different characteristics which otherwise could provide different results were not considered. Thus there`s room for little variations in the findings with respect to firms.

5.6 Suggestion For Further Research

To improve on this study, it is suggested that a similar study should be carried out over a long period of time so as to obtain more reliable findings. If possible more firms from different sectors should be included in the sample so as to increase reliability on the results. Capital structure is the useful tool for growth and expansion and the overall financial performance of any firm. Further research can be undertaken considering a bigger sample size so as to produce more

reliable results. Again undertaking the same research would help confirm if the observation would have changed

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APPENDICES

COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE UNDER MANUFACTURING, CONSTRUCTION AND ALLIED SECTOR.

MANUFACTURING AND ALLIED

1. B.O.C Kenya Ltd
2. British American Tobacco Kenya Ltd
3. Carbacid Investments Ltd
4. East African Breweries Ltd
5. Mumias Sugar Co. Ltd
6. Unga Group Ltd
7. Eveready East Africa Ltd
8. Kenya Orchards Ltd
9. A. Baumann Co. Ltd

CONSTRUCTION AND ALLIED

10. Athi River Mining
11. Bamburi Cement Ltd
12. Crown Berger Ltd
13. E. A. Cables Ltd
14. E. A. Portland Cement