THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND PERFORMANCE OF FIRMS IN THE CONSTRUCTION AND ALLIED SECTOR, KENYA

BY

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UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

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A Project Report Submitted to the Chandaria School of Business in Partial Fulfilment of the Requirement for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY

SPRING 2015
STUDENT DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution, or university other than the United States International University in Nairobi for academic credit.

Signed: ___________________________  Date: ________________

Milka Waruguru Kimondo (633855)

The project has been presented for examination with my approval as the appointed Supervisor.

Signed: ___________________________  Date: ________________

Scott Bellows

Signed: ___________________________  Date: ________________

Dean, Chandaria School of Business
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ACKNOWLEDGMENT

I acknowledge God for the fact that I am alive and well. I also acknowledge my parents for sponsoring my education, Scott Bellows for accepting to be my supervisor and helping me complete this project for partial fulfilment of my Masters in Business Administration.
DEDICATION

I dedicate this to my son, my inspiration.
ABSTRACT

The purpose of this study was to determine the relationship between capital structure and the firm’s performance on five companies in the construction and allied sector listed on the Nairobi Stock Exchange.

The study aimed at determining the relationship between return on assets (ROA) and capital structure, relationship between return on equity (ROE) and capital structure and relationship between gross profit margin and capital structure.

The study employed a quantitative research method in gathering, analyzing, interpretation, and presentation of information. The researcher adapted a descriptive research design which helped in looking at the strength of relationship between return on assets, return on equity and gross profit margin and capital structure of construction and allied companies. The study utilized secondary data that was obtained from the financial statements of the companies. The sample size was 5 construction and allied companies.

From the findings of the study, company size contributes immensely to the return on assets. When a company is large in size, it highly attracts many operations hence stimulate the generation of income which enhances the return on assets. The study also found that when a company has more assets, the tendency of borrowing funds reduces hence records lower leverage. The study reveals that there is a relationship between return on assets (ROA), profit, debts and total assets. The study showed that there is a strong negative relationship between return on assets and debts.

This study found no relationship between debts and return on equity but there was a negative indication. The study also found no relationship between profit and debts, but there was a strong positive relationship between total equity and profit. The study found a negative relationship between long term debts and return on equity. It is explained that when a company has so much debts, it incurs a lot of expenses (debt expense) in settling debts.
obligations. These expenses reduce the profits which would enhance the return on equity of shareholders.

The study found that there is a strong relationship between gross profit margin and total equity. The study also found out that there is no relationship between gross profit margin and debts. The study further found that for equity and debt finances, a positive relationship existed but a negative relationship between debt financing and performance. The study found that total equity has a strong positive relationship with gross profit margin while debts have a negative relationship with the same gross profit margin.

The study concludes that total debts have a significant negative impact on manufacturing companies’ performance. The study found out that capital structure has a significant influence on a firm’s performance. The study concludes that there is a negative relationship between debt equity ratio and return on equity. It is concluded from the study that the successful selection and use of the debt-to-equity ratio is one of the key elements of firms’ financial strategy.

The study recommends the manufacturing companies to use the pecking order theory to balance their capital structure. This would enhance the companies’ return on assets, return on equity and gross profit margin.
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CHAPTER ONE

1.0 INTRODUCTION
1.1 Background of the Study

In the field of finance, capital structure is refers to the way a corporation finance its assets through some combination of equity or debt. Equity capital refers to funds put up and owned by the shareholders, this kind of capital is mainly of two types, contributed capital; which are funds that were originally invested in the business, and retained earnings which represent profits from past years that have been reserved by the company (Muhoro, 2013).

Capital Structure of a firm is the mix of different securities issued by the firm to finance its operations. Mix of financing methods used by a firm is called the firm’s capital structure. Loosely Speaking, capital structure refers to the proportions of debt and equity that make up the liability owners’ equity side of firm’s balance sheet often refers to the use of debt in a firm’s capital structure as leverage (Frank and Gayol 2003). The choice of a firm’s capital structure is a marketing problem. It is essentially concerned with how the decides to divide its cash flows into two broad components , fixed component that is earmarked to meet the obligations toward debt capital and a residual component that belongs to equity shareholders (Nirajini and Priya, 2013).

The importance of financing decisions cannot be over emphasized since many of the factors that contribute to business failure can be addressed using strategies and financial decisions that drive growth and the achievement of organizational objectives (Salazar, Soto and Mosqueda, 2012). Maina and Kondongo (2013) assert that financial factor is the main cause of financial distress. Bad financial decisions lead to corporate failure. The biggest problem management and investors face is whether there is an optimal capital structure. The objective of all financing decisions is wealth maximization and the immediate way of measuring the quality of any financing decision is to examine the effect of such a decision on the firm’s performance (Mwangi, Makau, and Kosimbei, 2014).
Drobetz and Fix (2003) assert that current changing environment cause rating companies in terms of the credit partly to their capital structure. Strategic planning required the firms to select effective resources to attain the goal of shareholders wealth maximization. Pouraghajan and Malekian (2012) found that one of the most crucial objectives financial managers should consider to optimize shareholders’ wealth is determination of the best combination of financial resources for the company.

Modigliani and Miller (1958) raised the issue of how Capital structure theory relates to a firm’s performance. The authors confirmed that under very restrictive conditions of ideal capital market, shareholders’ similar views, tax-free economy with nil transaction costs, capital structure was unsuitable in determining firm value. The study done by Modigliani and Miller’s (1963) revealed that management in 1963 preferred debt financing as a result of a tax shield. The latter findings disagreed with the conventional approach which opted for the best capital structure. Shoaib (2011) asserted that to maximize a firm’s value effectively and achieve the best capital structure, the firm may have to to obtain a couple of debts and issue some equity until they meet an accurate combination.

Modigliani and Miller (1963) showed that their model was not effective if tax was considered. They demonstrated that the existence of tax subsidies on interest payments caused the value of the firm to be enhanced when equity is traded off for debt. Hitt, Hoskisson, and Harrison (1991) and Jensen (1986) researches showed less interest on how a firm’s performance is determined by capital structure and more interested on governance of a firm. Mainly on how capital structure changes affect a firm’s governance which will automatically affect decision making and strategic planning and thus it’s overall performance. Kihumba, (2004) in his study offers a great advice to the extent that attention has to be paid when determining what a firm's optimum capital structure is. Authors believe that firms may fail to economize the utilization of their funds when operating under unplanned capital structure. Consequently, it is being increasingly realized that a company should plan its capital structure to maximize the use of funds and to be able to adapt more easily to the changing conditions (Muhoro, 2013).
The idea of Performance is a contentious issue in finance mainly because of its multi-dimensional meanings (Prahalathan, and Ranjany, 2011). Performance can be look at from two angles: organizational and financial (the two being interrelated); variables that entail productivity, customer, return, growth and satisfaction are used to assess performance of an organization. Chakravarthy (1986) found that financial performance, demonstrated in profit maximization, maximizing return on assets and maximizing shareholder return, is based on the firm’s efficiency. The evaluation of financial performance, according to Louri and Barbosa (2005), is based on the earnings per share (EP), return on investment (ROI) residual income, earnings ratio (ER), dividend yield (DY), market capitalization (MC) and growth in sales (Tudose, 2012). Contrary, Prahalathan and Ranjany (2011) found that financial performance is a biased measure of how well a firm can use its’ assets from its’ main business to create revenues. Kihumba, (2004) asserts that financial performance measures like liquidity and profitability among others presented a current position of a firm.

Vernimmen (2009) found out that the measurement of company performance is relied on the information initiated in the tools employed and the measurement system. The author argued that the traditional signs used in financial evaluation to measure performance have been the return on investment, leverage, receivables turnover ratio, liquidity, capital efficiency, inventory turnover and cash flow. Performance measurement of a company is more often than not related to how well an organization can use its revenue and expenses, shareholder equity, assets and liability. Hossan (2010) asserts that financial ratio analysis is among the best tools of performance evaluation of any organization. These may include income (RI), return on investment (ROE), dividend yield, residual earning per share (EPS), price earnings ratio, market capitalization, growth in sales, and many more (Barbosa, 2005)

The correlation between profitability and capital structure, according to Abor (2008), has been given substantial consideration in the finance literature. Capital structure decision is vital since the profitability of an enterprise is directly affected by such decision (Abor, 2008). A study regarding the effects of capital structure on profitability would have a great impact in helping firms understand potential problems in performance and capital structure.
Ebaid (2009) examined the capital structure and performance of firms, basically the aim was to check the relationship between debt level and financial performance of companies (listed at Egyptian stock exchange during the period of 1997 to 2005). By utilizing the three measure of performance gross profit margin, (ROE) return on equity and (ROA) return on assets. He found that there is negative significant influence of short term debt (STD) and the Total debt (TD) on the financial performance measured by the return on asset (ROA) but no significant relationship fond between long term debt (LTD) and this measure of financial performance (Taani, 2013).

In a study done on 1170 companies listed in Bursa Malaysia stock exchange for a nine year period from 2002 to 2010 to examine the role of capital structure on firm’s performance, Ahmad, Abdullah and Roslan (2012) used two measures of capital structure; Debt to Equity Ratio and Debt to Asset Ratio. These accounting measures were used to establish the correlation between capital structure and firm performance using; Return on Equity, Return on Capital, and finally Return on Assets. Findings of this study showed that capital structure negatively affects the firm’s performance. A similar research was carried out by Taani (2013) on the impact of capital structure on performance of firms listed on the Tehran stock exchange for a 6 year period from 2001 to 2006, on a sample of 100 firms showed that there was a relationship between total debt and return on assets and mainly between short term debts and return on assets which was positive. Further the research also showed that return on assets had a negative relationship with long term debts.

Different studies conducted have produced varied findings on this issue of capital structure and firms performance. The study answers this question; "is capital structure of companies in the construction and allied sector has an impact on their financial performance?" Examination in the research is done by use of accounting measures as; gross profit margin, return on equity (ROE) and return on asset (ROA), as criteria to analyze firm’s performance.
Construction and Allied Sector in Kenya

Over the years the Construction and allied companies have continued to play a critical role in Kenya’s economic growth. Kenyan construction industry has experienced exponential growth due to government and private developers increase in investments in both infrastructure and housing. The construction boom is still expected to grow mainly due to the huge deficit experienced in infrastructure which includes rail, roads and ports (Muhoro, 2013).

The construction sector accounts for 5 per cent of Kenya’s GDP and employs at least one million people. Secondly, the rapid growth in population, has tremendously led to a soaring demand for housing in most parts of the country, which also presents a major opportunity for growth as private developers rush to keep up with this demand. Despite the recent slowdown in the world economy, the Kenyan construction sector has remained buoyant as reflected in the increased investment in both commercial and residential buildings over the past few years Waithaka (2011).

According to data from the Kenya National Bureau of Statistics, the construction sector grew by 10.7 per cent in 2011 boosted by massive road construction projects and increased activity in the real estate sector. Growth in the construction industry is mirrored in cement consumption which has been rising significantly over the last few years. Going forward, the construction and allied companies sector is still expected to grow further due to expected huge infrastructural projects such as Lamu port construction, Nairobi modern transport system, as well as rehabilitation of airports and roads across the country.

1.2 Problem Statement

The relationship between capital structure and financial performance is one 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 long time (Pratheepkanth, 2011).
Research done by Ebaid (2009) stated that a lot of research has been done to establish a relationship between capital structure and firm performance but this research has mainly been done in developed and developing countries and not many in the emerging or underdeveloped countries. He stated that we cannot make these results apply in emerging economies, therefore further research that focuses in these emerging economies like Kenya, Rwanda, Burundi, Sudan, Ethiopia, Ghana and so many other African countries needs to be done. Eldomiaty (2007) stated that the capital markets in these countries are not efficient compared to the ones in the developed nations due to poor information breakdown and lack of information. Thus financing decisions are not done with complete confidence due to these irregularities in information and because of these reasons it is important to analyze carefully the capital structure balance and its relationship with the firm performance with a focus on the Kenyan economy which is an upcoming economy.

The businesses in the East African Region, specifically Uganda and Kenya, are always on the look out to increase the debt finance in their capital structure, in anticipation of improving their performance. The principle of increasing risk indicates that, with increased debt the potential for a decrease in gain is higher than the potential for an increase in gain and yet some firms use more debt than others and still perform better (Nannyonjo, 2001 and Wagacha (2001)

The government and the private sector have invested heavily in creating an enabling environment for doing business in Kenya and, indeed, some companies have performed exceedingly well as a result. More than a few organizations, nevertheless, are experiencing decreasing performance and a number of them have even been removed from the list of Nairobi Securities Exchange (NSE) in the last decade (Mwangi, Makau, and Kosimbei, 2014). Significant efforts to revitalize the ailing and shutting down organizations have focused on financial reorganization. However practitioners and managers still lack sufficient guidance for achieving best financing decisions (Kibet, Kibet, Tenei and Mutwol, 2011) yet several problems experienced by the organizations put under statutory management were basically ascribed to financing (Chebii, Kipchumba and Wasike, 2011). This state of affairs
has led investors to loose wealth and confidence in the stock market. Studies on the correlation between organizational decisions and more than a few financing performance have formed mixed outcomes. It is against this background that this research was performed.

1.3 Purpose of Study

The purpose of this study is to determine the relationship between capital structure and the firm’s performance on five companies in the construction and allied sector listed on the Nairobi Stock Exchange.

1.4 Research Questions

1.4.1 Is there a relationship between Return on Assets and capital structure variables?
1.4.2 Is there a relationship between Return on Equity and capital structure variables?
1.4.3 Is there a relationship between Gross Profit Margin and capital structure variables?

1.5 Significance of the Study

The study is done, so as fill the knowledge gap concerning the relationship between capital structure and a firm’s performance. Help the stakeholders; management, investors, stockholders and banks, make wise decisions on the company and investing decisions on stocks which have a positive correlation between capital structure and a firm’s performance.

1.5.1 Top Management

The research will help the top management to be able to make the right decisions on the optimal balance of debt and equity to be able to maximize the firm’s returns. This research will help managers in making informed decisions on the balance of capital structure so as to get the maximum benefit from the strategies they choose.
1.5.2 Stockholders and Investors

The research will help the stockholders and investors in determining when to buy or sell the stock and gain the maximum return they can by understanding the trend in the relationship, when the firm’s performance is high is it when the debt to equity ratio is low or high? It helps the plan for good dividends that year or no dividends paid in another year, also helps them determine if they can invest in the company for a short time or for long time if the capital structure decision is poor or good respectively.

1.5.3 Banks

The research will help, the banks, in determining whether to add more loans to the institution or not. This research will help determine the bankable institutions versus the rest of the institutions. If they can repay or not in terms of with this additional debt will the bank be able to make enough to honour their debt.

1.5.4 Researchers and Academicians

In addition to contributing to the body of knowledge, the research will help upcoming researchers and scholars to pursue more and come up with a greater understanding on the relationship between capital structure and firms performances. Further, by considering the impact of capital structure decisions on the overall profitability of firms, researcher and scholars will be able to have a firm ground on offering advice on the basis of such findings to business which many of them operate in highly complex and competitive business environment.

1.6 Scope of the Study

The study focuses on companies listed on the NSE, but limited to the five companies under the construction and allied industry sector, for the past five years, 2008 to 2012. The financial documents (income statement balance sheet, statement of cash flows and equity) were used to show the capital structure and firms performance, by considering the net profit and
earnings per share, and the top management. The companies’ corporate headquarters are located in the Nairobi area and its environs. The research was done considering a time frame of five years 2008-2013.

1.7 Definition of Terms
1.7.1 Capital Structure

Capital structure is the group of all long-term debt, common equity, preferred equity and short term liability (Fabozzi and Modigliani, 1996).

1.7.2 Leverage

Leverage according to Achim (2010) is the ratio of an organization's loan capital (debt) to the value of its common shares (equity) gearing.

1.7.3 Return on Equity – ROE

Return on Equity is defined as the amount of net income achieved as a percentage of shareholders equity (Ahmad, Abdullah and Roslan, 2012).

1.7.4 Return on Assets – ROA

Return on Assets, according to Helfert (2003) is an pointer of how profitable an organization is comparative to its total assets.

1.7.5 Gross profit margin (GP Margin)

Gross profit margin is defined as a financial measure used to check the financial health of a company by confirming the amount of money available from revenues after accounting for the cost of goods sold (Kyereboah and Coleman, 2007).

1.8 Chapter Summary

In chapter one, the background of the study and the research objectives have been clearly discussed. This study seeks to show whether there is a relationship between capital structure and a firm’s performance.
A definition of study as well as justification for the study has also been included. It is acceptable that the study is useful to investors, management, policy regulators, and future researchers and also contributes to the general body of knowledge. Chapter two addresses the literature review of the study. Chapter three covered extensively on research methodology, chapter four covered the analysis and chapter five had the findings, conclusions and recommendations.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

Chapter two is about literature review of capital structure and firm performance. Part 2.2 is about the relationship between capital structure and return on assets. Part 2.3 is the relationship between capital structure and return on equity. Part 2.4 deals with the relationship between gross profit margin and capital structure. Part 2.5 is the summary of the whole chapter.

2.2 Capital Structure and Return on Assets

2.2.1 Return on Assets

Most business enterprises frequently use return on assets (ROA) as a measure of organizational performance. According to Frank and Gayol (2003) return on asset is defined as net income (income available to common stockholders), divided by the book value of total assets. It is a widely accepted measure of financial performance, and it has been cited in various finance studies (Lislevand, 2012). In banks and other commercial institutions, Rosenborg (2009) found the measure reflects the ability of an organization’s to deploy its assets profitably.

Return on assets is a financial measure that measures how profitable a firm is in relation to its total assets (Zeitun and Tian, 2007). This measure gives tells how efficient management is at using assets to generate income. To calculate ROA, a company's annual earnings are divided by total assets. It is displayed as a percentage after calculation. Return on investment is another term that is used to refer to ROA. Interest expense is added back into net income by some investors when performing this calculation because they would like to use operating returns before cost of borrowing (Khatab, Masood, Zaman and Saleem, 2011).
Wyman (2010) believes that ROA is considered a more reliable profitability indicator than other profitability measures like return on equity. This is in terms of efficiency performance, since it is adjusted for the leverage effect (ROA= ROE/ leverage).

Hossan (2010) found that ROA tells the investor how well a company uses its assets to generate income. A higher ROA denotes a higher level of management performance. A rising ROA, for instance, may initially appear good, but turn out to be unimpressive if other companies in its industry have been posting higher returns and greater improvements in ROA. The ROA ratio may thus be more useful when compared to the risk free rate of return. Technically, a company should produce an ROA higher than the risk free rate of return to be rewarded for the additional risks involved in operating the business (Frank & Gayol, 2003). Achim (2010) affirms that if a company’s ROA is equal or even less than the risk free rate, investors should think twice as they would be better off just purchasing a bond with a guaranteed yield.

On the other hand, Carpentier (2006) had found a contrast result. The findings had no evidence of a significant relationship between the change in debt and change in value. Besides that, the only significant coefficient is profitability and size, which are positively related to changes in value in each sample. However, growth is insignificant to changes in value. However, Abor (2007) found significantly negative relationship between all the measures of capital structure and firm performance (ROA) in the case of Ghana. In the sample from South Africa, the outcome between return on asset and short-term debt is significantly positive related. Thus, it points out that short-term debt is comparatively less expensive. Hence, low interest rate is as a result of increased short-term liability that leads to low profit levels. For fixed liability and total debt, the result revealed significantly negative relationship with Return on Assets. Thus, it showed fixed liability has higher cost and this can cause low return on asset. Thus, this result supports the earlier empirical research by Abor (2007). Above and beyond that, company size has significant positive result while sales growth has significantly negative correlation with Return on Assets (Abor, 2007).
A firm’s capital structure was found to have a significant impact on the firm’s performance measures in both accounting, ROA and ROE (Zeitun & Tian, 2007). This supports the Myers (2001) argument, that firms with high short term debt to total asset have a high growth rate and high performance. The results show that high performance is associated with a high tax rate indicates that profitable firms pay a high tax rate. Based on study by Kyereboah and Coleman (2007) and Abor (2007), found a negative relationship between the ratio of long-term debt to total assets and return on equity. This is explained by the fact that long-term debts are relatively more expensive and hence result in low profitability.

2.2.2 Return on Assets and Leverage

Capital structure, according to Boodhoo (2009) affects the performance of an organization. Huang and Song (2006), assert that more profitable firms will have less debt because retained profits are available for financing growth opportunities. These firms build their equity relative to their debt. Jensen, Solberg, and Zorn (2002), in their study found a negative relationship between return on assets and leverage. Jensen, Solberg, and Zorn (2002), in their study found a negative relationship between return on assets and leverage. Gleason, Mathur, and Mathur (2000) examined the relationship between performance and leverage by using return on asset. To concur with the result of Jensen et al, (2002), Gleason’s result indicated that total debt has a significant, negative influence on performance. Two implications can be drawn from the result. First, even in the presence of control variables, capital structure has a significant influence on a firm’s performance. Second, the study found that most business enterprises use more debt in their capital structure than would be appropriate. Overleveraging, according to Gleason et al, (2000) negatively affects firm performance. Agarwal and Elston (2001) on the other hand found that capital structure is not the only determinant of organizational performance. They assert that firm size also influences organizational performance. Chen, Firth, and Zhang (2008), in their study observed that the benefits of increased access to capital, and monitoring of firms by banks do not seem to be realized in either higher profitability or stronger growth. They, however, found that profitability of the firm is positively influence by sales and growth in sales.
According to Champion (1999), the use of debt or leverage is a way to improve performance of the firm. Besides that, Abor (2007) found that there is a positive relationship between short-term debt and return on assets in South Africa. He argued that this is attributed to the fact that short-term debt is cheaper than the long-term debt. Mesquita and Lara (2003) also found similar results in their study on Brazilian companies.

Study by Jermias (2008), showed that leverage and performance is significantly negative, and firm size also negatively and significantly related to performance. The results indicate that competitive intensity and business strategy do affect the leverage performance relationship such that it is less negative for cost leaders than for product differentiations. The results are consistent with the view that debt financing and debt covenants not only offer cost leaders the benefit of tax advantages, but also accord increased efficiency due to constraints imposed by debt holders.

Abdul (2012) carried out a similar research to establish the correlation between the performance of firms and capital structure decisions in Pakistan. As measured by Return on Assets, Abdul, established that financial leverage has a significant negative correlation with company performance. In a different study, Javed and Akhtar (2012) investigated the association between financial performance and capital structure. The authors came to a conclusion that there is a positive correlation between financial performance, size and growth of the firms and financial leverage. Focusing on the Karachi Stock Exchange in Pakistan, the study used regression and correlation analyses on financial data. The outcomes of the study concur with the agency theory. This study, however, secluded the other financing decisions and only paid attention on financial leverage (Mwangi, Makau, and Kosimbei, 2014).

Ebaid (2009) in a research to study the impact of capital structure on the firm performance, he used debt ratio to stand-in for capital structure while return on asset was used as a measure of company’s performance. Ordinary Least Squares method was used in the study to do estimation. The study suggests that debt ratio has a considerable negative impact on the firm’s financial performance. The research, however, did not regard other financing decisions
in the analysis, together with the mediating effect of internal cash flow available (Chechet & Olayiwola, 2014).

2.3 Capital Structure and Return on Equity
2.3.1 Return on Equity

Return on equity (ROE) is a frequently used variable in judging top management performance, and for making executive compensation decisions (Acheampong, 2000). ROE is used as a measure to judge performance and calculate the average return on equity (AROE) in firms over specified time periods. ROE is defined as net income (income available to common stockholders) divided by stockholders equity (Boodhoo, 2009). The coefficient of variation (CV) gives us the risk per unit of average return (Khatab, Masood, Zaman, & Saleem, 2011). San and Heng (2011) have studied the relationship between return on equity (ROE), financial leverage and size of firms in the restaurant industry. Research results suggest that at least during the test period firm size had a more dominant effect on ROE of restaurant firms than debt use, larger firms earning significantly higher equity returns (Seppa, 2008).

The return on equity is one of the main indicators that a company annually publishes. Along with the turnover, EBITDA and the operating margin, it is the basis of the annual financial reports, presenting a great importance for the stakeholders of the company. The return on equity points out the efficiency of using the own capital of the company; that’s why its level is important primarily for shareholders, who may thus determine whether the remuneration they get rewards the risk assumed. Managers, in turn, will be motivated to achieve an appropriate level of this rate so as to maintain their positions and to achieve the company's performance criteria (Cîrciumaru, Siminica, & Marcu, 2008).

Return on equity (ROE) is the total net income calculated as a percentage of shareholders equity. ROE, according to Khatab et. al, (2011) evaluates an organization’s profitability by enlightening how much profit a firm creates with the money shareholders have invested. Lesáková (2007) asserts that ROE measures the effectiveness with which the organization
makes use of owners’ capital. Return on equity is a ballpark figure of the earnings of invested equity capital, or on the other hand, the percentage returns to owners on their investment in the company. ROE is shown as a percentage and calculated as:

\[
\text{Return on Equity} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}
\]

Min Tsung Cheng (2009) studied the relative effects of debt and equity financing on the operating performance. Findings in this study show that apart from high cash flow firm, debt finance and debt financing have significantly negative consequence for operating performance. Hence, these findings suggest that it is dangerous for firms to rely or depend entirely on either debt or equity for raising capital but it is much safer and better to raise finance by both methods, with each working together, at the same time. Thus, this finding suggests firms to try whenever possible to raise finance by using both methods simultaneously, with the advantages of the one method offsetting the difficulties of the other and vice versa.

Analysts have resorted to the use of derived ratios from a firm's financial statements as indices of how well a firm is doing. The most popular of such indices is return on equity (ROE) (Teitelbaum, 1996). Acheampong, (2000) believes that it is widely used as a comparative measure of profitability and financial performance of firms in industrialized countries. For example, ROE is used widely by investors in appraising common stock purchases and by corporate planners in evaluating corporate performance.

### 2.3.2 Return on Equity and Leverage

A study to establish the correlation between return on equity and capital structure for industrial and allied sectors in the Nairobi Securities Exchange was carried out by Kaumbuthu (2011) throughout the period 2004 to 2008. While performance is focused on ROE, capital structure is substituted by debt equity ratio. The regression analysis was applied and the findings revealed a negative correlation between debt equity ratio and Return on Equity. The research paid attention on one sector of the firms quoted on Nairobi Securities
Exchange. It also paid attention to only one aspect of financing decisions (Mwangi, Makau, and Kosimbei, 2014).

The return on equity points out the remuneration of the shareholders, by the payment of dividends or by other forms of remuneration. For this reason, this ratio expresses the degree to which the managers have succeeded to meet the company's main objective, i.e. maximizing the wealth of its shareholders. In these circumstances, it may be stated that the efforts of the enterprise should be primarily targeted to ensure high returns for equity providers (shareholders), in order to increase their wealth (Achim, 2010).

The analysis of the return on equity (ROE) is necessary for many considerations: the indicator shows the degree of allocating the funds of shareholders in the current business and the efficiency of using these capitals in the business; indicator reflects the return of shareholders’ capital, representing a measure of the company’s capacity to remunerate the shareholders. In the internal analysis, many companies use a variety of systems of indicators and standards, which divides into components the impact of decisions affecting the operational performance, the total revenues or the shareholders' expectations (Helfert, 2003).

Studied by Mesquita and Lara (2003) found long term debt is not significantly related to ROE and it has negative sign, showing potential inverse relationship. Result of short term debt presented positive sign thus, this also suggest that short term debt become a common practice among the most profitable companies. Furthermore, short run fund arises due the easiness of sourcing the fund from financial institutions. Further, Phillips and Sipahioglu (2004) had examined on the relationship between capital structure and corporate performance and found that there is no significant relationship between debt level and financial performance. It is clear from the descriptive statistics that the sample includes organizations operating with relatively high levels of debt, which are not associated with higher levels of performance. This result is contrasts with earlier research by Modigliani and Miller (1963). Within the sample, it indicates that borrowing does not necessarily lead to higher performance as stated in asymmetric information theory, but could actually contribute to low performance as stated in agency theory. This analysis suggests that the firms with higher
levels of debt in their capital structure do not perform better than firms with lower levels of debt (Modigliani & Miller, 1963).

Empirical studies were performed by Abor (2007) on twenty two sampled firms which were listed in the Ghana. He found short term liability has significantly positive correlation with Return on Equity. He asserts that short term liability ought to be less costly leading to high amounts of profit levels. The findings also reveal that profitability increases with the company size and sales growth. For fixed liability, the result demonstrates a significantly negative correlation. The study thus means that the more the fixed liability, the less the profitability due to high costs. For total liability, the result shows a significantly positive correlation. This shows that, an increase in the liability position is related to an increase in profitability thus, the higher the liability the higher the returns. Both the findings show positive correlation between the size of an organization and sales growth. These findings support the findings of Hadlock and James (2002) where profitable firms use more debt.

Madan (2007) examined the role of financing decision in the overall performance of companies. The study concluded that while leverage seems to be working well for few categories of companies, it is affecting some others negatively. Thus, firms that have been moderately geared have been able to generate a good return on equity. Companies that are moderately geared, in the range of gearing ratio of 50 percent until 85 percent, have been able to generate a good ROE. Hence, low-paced companies and very highly geared companies need to work on improving their ROE by either increasing or reducing their debt-equity mix respectively (Ahmad, Abdullah, & Roslan, 2012).

It was found by Carpentier (2006), that maximizing wealth for the shareholders require perfect combination of debt and equity and that cost of capital is negatively correlated and therefore to be reduced to minimum level. Furthermore, Ong and Teh (2011), investigated on the capital structure and firm performance of construction companies for a period of four years (2005-2008) in Malaysia. Return on equity was used to proxy the corporate performance while Long term debt to capital, debt to capital, debt to equity market value, debt to asset, long term debt to common equity, debt to common equity were used as proxies
as the independent variables. The result shows that there is relationship between capital structure and corporate performance. In Jordan, Zeitun and Tian (2007) conducted a study on capital structure and corporate performance on 167 Jordanian Firms between 1989 and 2003. They found a significantly negative relationship between capital structure and corporate performance (Chechet & Olayiwola, 2014).

2.4 Capital Structure and Gross Profit Margin

2.4.1 Gross Profit Margin

The Gross Operating Margin is a measure of profitability. It is an indicator of the efficiency of the operation of production (Puwanenthiren, 2011). A firm with a fairly higher percentage of gross margin is well on the way to higher percentage of operating profit. The gross operating margin is influenced by rate of change in cost of production and rate of change in selling price. A stable or declining trend in the rate of change in cost of production would help a firm to achieve a higher gross operating margin (Chechet & Olayiwola, 2014). On the other hand, an increasing trend in cost of production would cause a reduction in gross operating margin. The variability in sales may also affect gross operating margin. If the sales revenue is fairly stable, then the firm's profit would be stable. Such stability paves the way either for going in for a higher level of debt or for lessening the proportion of debt in the capital structure (Kinsman & Newman, 1999).

Net profit measure how much amount earned by the firms. A low profit margin indicate that larger risk decline in sales will reduce profit and at the end in a net loss. Net profit margin provide the information to the firms pricing policies that cost structure and production efficiency. Different product mixes strategies use because the net profit margin to different among different companies (Agarwal & Elston, 2001). Net profit margin is indicating that how efficient a firms is and how it well control its costs. The larger the margin is the more effective the firms are in converting income into actual earning. Net profit margin is usually used to firms compare expense over time. To compare the net profit margin between firms in the same industry might have low meaning. That not effect by the firms that it is not efficient than other company. The operating profit margin gives the opportunity that the business
owner a lot of important information about the company profitability, so particularly with regard to control cost. It indicates that how much cash is thrown off after the most of the expense are achieve. A large profit margin means that the firms has good cost control and or that sales are improving faster than costs, which is the optimal situation for the firms (Chiou, Cheg, & Wu, 2006).

Korajczyk and Levy (2003) assert that gross profit margin reveals the percentage of a firm’s sales revenue would be left after taking away the cost of goods sold. This is vital as it helps to establish whether the organization would still have sufficient funds to cover operating costs such as lease payments, advertising, employee benefits, and many more. An organization’s gross profit margin may also be viewed as a measurement of production efficiency. A firm with a gross profit margin more than that of its competitors, or the industry average, is believed to be more efficient and is for that reason preferred (Nirajini & Priya, 2013).

2.4.2 Gross Profit Margin and Capital Structure

Profit margin is a way of measuring how well a company is doing, regardless of size of the organizations. The capital structure is how a firm finances its overall operations and growth by using different sources of funds (Taani, 2013). The successful selection and use of the debt-to-equity ratio is one of the key elements of firms’ financial strategy. The profit margin is a key element to determine the capital structure. The firms may have their retained earnings to increase their capital structure (Pandey, 2009).

The profitability is the key element to determine the capital structure. The firms may have their retained earnings to increase their capital structure. Capital structure is an important topic in corporate finance for practitioners and academic researchers. A number of capital structure theories have been proposed in the recent years to explain the variation in debt ratios across firms (Yogendrarajah & Thanabalasingam, 2010). Although much theoretical work has been done since Modigliani and Miller (1958), no consistent predictions have been reached of the relationship between profitability and capital structure. Tax-based models
suggest that profitable firms should borrow more, ceteris paribus, as they have greater needs to shield income from corporate tax. However, pecking order theory suggests firms will use retained earnings first as investment funds and then move to bonds and new equity only if necessary. In this case, profitable firms tend to have less debt. Agency-based models also give us conflicting predictions. On the one hand Jensen (1986) defines debt as a discipline device to ensure that managers pay out profits rather than build empires. For firms with free cash flow, or high profitability, high debt can restrain management discretion. On the other hand Chang (1999) shows that the optimal contract between the corporate inside and outside investors can be interpreted as a combination of debt and equity, and profitable firms tend to use less debt.

A research to examine the effect of capital structure choice on the performance of companies in Egypt was carried out by Ebaid (Ebaid, 2009). Gross profit margin was used to evaluate performance. Short-term liability to asset ratio, fixed liability to asset ratio, and total liability to total assets were used as capital structure. To establish the correlation between the leverage level and performance, multiple regression analysis was used. The study revealed that capital structure has little or no effect on an organization’s performance. These findings are contradictory to other empirical studies such as Hadlock and James (2002), which established a positive correlation between choice of capital structure and financial leverage. Other studies confirmed a negative correlation such as Booth, Aivazian, Demirguc-Kunt, and Maksimov (2001) and Gleason et al. (2000) a whereby higher firm performance is related to lower equity capital ratio.

Oke and Afolabi (2011), investigated the impact of capital structure on industrial performance in Nigeria taking five quoted firms into account with debt financing equity financing and debt/equity financing as proxies for capital structure while profit efficiency a surrogate for performance. Oke and Afolabi (2011) further found that for equity and debt equity finances, a positive relationship existed but a negative relationship between debt financing and performance.
Profit margin broadly indicates both a company’s competitive position in an industry, and the industry’s characteristics in terms of the strength of competition, pricing flexibility, demand-supply scenario, and regulation (Chechet & Olayiwola, 2014). A company’s profit performance is a good indicator of its fundamental health and competitive position. Profit margin, observed over a period of time, also indicates whether a company can sustain its present cash accruals. A profitable company exhibits the ability to generate internal equity capital, attract external capital, and withstand business adversity. From a rating point of view, the profit after tax (PAT) margin, that is, the ratio of PAT to operating income is the most important profitability ratio. Although other ratios such as operating profit before depreciation, interest, and tax (OPBDIT) to operating income, or operating profit before tax (OPBT) to operating income, are also evaluated, these ratios tend to be influenced by industry specific characteristics, and hence, do not lend themselves to comparison across industries. A high PAT margin offsets, to some extent, the effect of business risk and the corresponding financial risk. However, when used in evaluating low value added industries such as trading, the PAT margin also tends to have industry specific characteristics. This is appropriately factored in while analyzing such industries (CRISIL, 2012).

In contrast to theoretical studies, most empirical studies show that Capital structure is negatively related to profitability. Friend and Lang (1988), obtain such findings from US firms. Kester (1986) finds that Capital structure is negatively related to profitability in both the US and Japan. Wald (1999) even claims that “profitability has the largest single effect on debt/asset ratios.” In this study, profitability will be defined as earnings before interest and tax (EBIT) scaled by Net Sales. Quite a large strand of theoretical and empirical research has focused on the area of determinants of capital structure. Titman and Wessels (1988) investigated that the determinants of capital structure choice using data from United States from 1974 to 1982. They reported that debt levels are negatively related to the “uniqueness” of a firm’s line of business. They found out that firms can potentially impose high costs on their customers, workers, and suppliers in the event of liquidation have lower debt ratios. They conclude that transaction costs may be an important determinant of capital structure choice.
Gau and Wang (2003) in their study investigated were amongst the first to apply the theory of capital structure directly to real estate investment decisions at the project level. Based on a sample of 1,423 apartment and commercial property transactions in Vancouver between 1971 and 1985, they observed that the level of debt employed in a property acquisition is directly related to the cost of the investment and inversely to the size of its depreciation tax shield, expected costs of financial distress and market interest rates.

Jean (2004) developed a preliminary study to explore the determinants of capital structure of Chinese-listed companies using firm-level panel data. The findings reflect the transitional nature of the Chinese corporate environment. Different financial authors suggest that some of the ideas from contemporary finance theory of capital structure are transferable to China in that certain firm-specific issues that are pertinent for explaining capital structure in developed economies are also key in China. However, neither the trade-off model nor the Pecking order hypothesis derived from the Western settings provides convincing explanations for the capital choices of the Chinese firms. The capital choice decision of Chinese firms seems to follow a ‘‘new Pecking order’’—retained profit, equity, and long-term debt. These important institutional distinctions and financial restrictions in the banking sector in China are the issues influencing companies’ leverage decision and they are in any case as important as the firm-specific factors (Nirajini & Priya, 2013).

In the study of Yogendrarajah and Thanabalasingam (2010), the effect of profit margins on capital structure on listed manufacturing companies on Colombo Stock Exchange was examined. The study found out that company’s profit margin did not strongly related to capital structure. The study also confirmed that in manufacturing firms of Sri Lanka, profit margin of the companies was not significant in bringing about any changes in their capital structure. The capital structure of the companies was established by other factors such as equity financing, working capital and debt capital. The study, further, showed that most companies that finance their investment activities by retained earnings are more profitable than those that finance their activities through borrowed capital. The reason for this was that,
if firms finance their operations from borrowed capital then they will have to impose interest costs then the financial burden to be on them (Samuel, Huang, & Frank, 2000).

2.5 Chapter Summary

Under literature review, the study has discussed the effect of capital structure on organizational performance with regards to return on assets (ROA), return on equity (ROE) and gross profit margin. Chapter three is the research methodology.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the manner in which the study was conducted. The chapter explores the alternative methods and procedures the researcher will use in exploring the study to find solutions to the research questions raised in chapter one. The research design is discussed in part 3.2. The study in part 3.3 reveals the population of the study, sample and sampling techniques. In Part 3.4, the study shows the research models while in part 3.5, the study shows the data collection methods. The data analysis methods is revealed in part 3.6 and lastly the summary of the whole chapter is in part 3.7

3.2 Research Design

A research design, according to Cooper and Schindler (2000) is a plan and structure of examination that provide answers to research questions. According to Babbie and Mouton (2004), research design is the outline plan or scheme that is used to generate solutions to the research problems.

Descriptive survey approach was the research design used in this study. Descriptive survey is a process of collecting data from members of a population in order to determine the current status of the subject under study with respect to one or more variables. The major emphasis of a descriptive study was to determine the frequency of occurrence or the extent to which variables are related. This design was found suitable because the study required an accurate examination of the effects of capital structure on profitability. The study used secondary data that was obtained from financial statements of construction and allied companies on Nairobi Securities Exchange.
3.3 Population and Sampling Design

3.3.1 Population

A population is the total collection of elements in which references have to be drawn (Cooper and Schindler, 2003). On the other hand, Mugenda and Mugenda (2003), define target population as the focal point the researcher wants to take a broad view of the result of the study. The population used in this study was five companies which are listed under the construction and allied sector of main investment market segment of the NSE. The researcher considered five years from 2008 to 2012.

3.3.2 Sampling Design

3.3.2.1 Sampling Frame

Cooper et al (2003), asset that a sampling frame is a list of elements from which the sample is actually drawn from. It is closely related to the population. The sampling frame was obtained from the list of construction and allied companies registered at Nairobi Securities Exchange and had been trading for the past ten years. This guaranteed that the sampling frame was present, inclusive and relevant for the accomplishment of the study objectives.

3.3.2.2 Sampling Technique

From the total population of the NSE listed companies, companies were selected in a stratified manner, only those in the construction and allied sector in order to better understand the characteristics of the homogeneous subsets. The next part of the selection required that all companies were listed on the NSE for the period of 2008-2012. An integral part of this study is to perform a longitudinal study over a five year period in order to identify any existing relationships between capital structure and firm’s performance for these firms in that period. For this reason any company listed for less than ten years was deleted from the sample.
3.3.2.3 Sample Size

The sample size is a smaller set of the larger population. In most cases, researchers work with a sample of subjects rather than the full population in situations where the population is large. Sample size is collected group of people or units you want to use to represent the population. The sample, according to Cooper et al (2003), must be cautiously selected to be representative of the population. For this study, the sample size was five firms of the companies listed on the NSE in a particular industry i.e. construction and allied namely Bamburi cement, E.A Cables, E.A Portland cement, Athi River Mining and Crown Berger.

3.4 Data Collection Methods

In this study, secondary data was utilized. This data was obtained on previous companies’ performance for the period under study (2008-2012) available at the NSE offices as well as press publications, company reports on performance and financial statements of the five companies. The secondary data provided Net Income, Shareholder's Equity, book values of total assets as well as gross profits of the companies. Further, from this values,

3.5 Research Procedure

Chief Finance Officers (CFOs) in the respective firms or an equivalent were identified and approached. CFOs are charged with ensuring that a companies’ stocks trade well in the market and it is shielded from liquidity problems, this makes them suitable in giving the most updated and authoritative data on dividend policies and market share price dynamics of their respective companies. The researcher also collected financial reports of listed companies from Capital Market Authority of Kenya.

Data collected passed through several stages before analysis and these include; compiling, sorting, editing and coding in order to have the required accuracy, quality and completeness. Variables extracted from these reports were current liability, non-current liability, gross profit and equity. From these, return of assets (ROA) and return on capital was calculated.
3.6 Data Analysis

The financial performance of the firm has been analyzed using the technique of ratio analysis. Conducting comparisons using ratios avoids the problem of comparing companies of different sizes (firer et al 2004). Ratios were grouped into the following five categories: financial efficiency, solvency, liquidity, profitability and debt capacity.

The data that was derived from the reports was further analysed using SPSS (version 20). The data was manipulated using correlation analysis. Microsoft Excel analysis was used to compute profitability and the firm’s future viability. Pearson correlation coefficient was then used to establish the relationship between the independent variables (capital structure components) and the dependent variable (firm performance). A Graphical analysis was conducted to determine the contribution of capital structure to firm performance.

3.7 Chapter Summary

This chapter deals with research methodologies that will help the researcher in gathering and analyzing data in respect to the research questions highlighted in the first chapter. This chapter is organized in a manner that it has various elements. It begins with the introduction of the study methodology, research design, population and sampling design, data collection methods, research procedure, and finally the data analysis. The methodologies used will also facilitate the presentation of the research findings for easier understanding and use in the subsequent chapters.

The next chapter is about the findings of the whole research paper.
4.0 RESULTS AND FINDINGS

4.1 Introduction

Chapter four depicts results and findings. In section 4.2, the study displays the results of the relationship between return on assets (ROA) and capital structure. In section 4.3, the study reveals the relationship between return on equity (ROE) and capital structure while in section 4.4, the study illustrates the relationship between gross profit margin and capital structure. In section 4.5, the chapter is summarized.

4.2 Relationship between Return on Assets and Capital Structure

4.2.1 Total Assets

The relationship between return on asset and capital structure is illustrated in this section. Figure 4.1 displays the total assets of all the five manufacturing companies (Athi River Mining, Bamburi Cement, Crown Berger, East African Portland Cement, and East African Cables) for the period of five years starting from 2009 through 2013.

From the figure, Bamburi cement has been leading with the value of total assets followed by Arthi River Mining. Crown Berger was the company with the least value of total assets followed by the value of assets of East African Cement.

The information in the figure reveals that the value of assets of all companies has been increasing from year 2009 through 2013. The study implies that all companies have been investing more in their assets, hence symbolises organizational growth.
Figure 4.1: Total Assets

4.2.2 Amount Borrowed

Total debts are amount of money borrowed by a company to finance its operations. Figure 4.2 below reveals the total amount borrowed by each company from year 2009 to 2013. From the figure, Athi River Mining Company reported the highest debts compared to the rest. This was followed by East African Portland limited, Bamburi Cement limited and East African Cement. Crown Berger had the least debts compared to all other companies.

Figure 4.2: Amount Borrowed
4.2.3 Profit Earned

Figure 4.3 below illustrates the profit earned for the manufacturing companies. From the figure, Bamburi Cement limited had reported the highest amount of profit compared to other companies, even though the profit had been declining year by year from 2009 to 2013.

Eat African Portland limited reported a fluctuating profits. In 2009, 2011 and 2013, the company reported profit but in 2010 and 2011, the company reported losses. Crown Berger, East African Company and Athi River Mining limited reported steady and increasing profits from 2009 through 2013.

Figure 4.3: Profit Earned

4.2.4 Return on Assets (ROA)

Figure 4.4 represents return on assets of various manufacturing companies. From the figure, Bamburi Cement reported the highest return on assets in 2009 through 2012. East African Portland limited reported a fluctuating return on assets from positive return on assets to negative return on assets. Athi River Mining, Crown Berger and East African Cables reported a relatively stable return on assets.
4.2.5 Descriptive Statistics of Total Assets and Profits

Table 4.1 displays the descriptive statistics between total assets and profits for the companies in the manufacturing industry. From the table, the standard deviation was used as a statistical measure to study the relationship between total assets and profits from the years 2009 through 2013.

The study reveals that as the standard deviation for total assets increased through the years, the standard deviation for the profits decreased. The study implies that as the assets of the companies increased, the profits decreased. This shows that the companies are financing most of their assets using debts hence most of their money go out as interest charges.

**Table 4.1: Descriptive Statistics of Total Assets and Profits**

<table>
<thead>
<tr>
<th>Average assets</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Average profits</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets for 2009</td>
<td>5</td>
<td>12,024,010.25</td>
<td>Profit for 2009</td>
<td>5</td>
<td>2,875,864.04</td>
</tr>
<tr>
<td>Total assets for 2010</td>
<td>5</td>
<td>12,421,791.13</td>
<td>Profit for 2010</td>
<td>5</td>
<td>2,301,625.78</td>
</tr>
<tr>
<td>Total assets for 2011</td>
<td>5</td>
<td>12,634,108.40</td>
<td>Profit for 2011</td>
<td>5</td>
<td>2,413,293.86</td>
</tr>
<tr>
<td>Total assets for 2012</td>
<td>5</td>
<td>16,635,021.65</td>
<td>Profit for 2012</td>
<td>5</td>
<td>2,199,133.96</td>
</tr>
<tr>
<td>Total assets for 2013</td>
<td>5</td>
<td>16,608,304.00</td>
<td>Profit for 2013</td>
<td>5</td>
<td>1,386,284.26</td>
</tr>
</tbody>
</table>
4.2.6 Correlations of Profits, Total Assets and Debts

Table 4.2 displays the relationships of profits with total assets and debts. From the table, profit correlates with total assets at \((r=0.813^{**}, p<0.001, N=5)\) and debts at \((r=0.174, p>0.05, N=5)\). The table shows that there is a strong relationship between profit and total assets. The information reveals that the profits are significantly related to total assets. On the other side, the table shows that there is no relationship between profits and total debts.

Table 4.2: Correlations between Profits, Total Assets and Debts

<table>
<thead>
<tr>
<th>PROFIT</th>
<th>TOTAL ASSETS</th>
<th>DEBTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.813^{**}</td>
<td>0.174</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.407</td>
</tr>
<tr>
<td>N</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

4.2.7 Regression

A regression analysis entails various techniques for modelling and analyzing a number of variables, when the focus is on the relationship between a dependent variable and one or more independent variables. A regression analysis, in particular, helps one understand how the distinctive value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed.

4.2.8 Model Summary

To forecast the value of a variable based on the value of another variable, model summary is utilized. In this case, the independent variable or the predictor variable is used to predict the other variable's value. The dependent variable or outcome variable is the variable being predicted.

The \(R\) and \(R^2\) value is provided in Table 4.3. The \(R\) value, according to the study is 0.917, and it represents the simple correlation and, therefore, indicates a high degree of correlation.
The R^2 value indicated how much of the dependent variable (profits) can be explained by the independent variable, (debts and total assets). In this case, 84% could be explained.

**Table 4.3: Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.917^a</td>
<td>.840</td>
<td>.826</td>
<td>878935.75090</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), DEBTS, TOTAL_ASSETS

The ANOVA in Table 4.4 predicts that the regression model foretells the result variable significantly well. This is made known at the "Regression" row and at the Sig. column. This shows the statistical importance of the regression model that is used. P in this case is 0.00 and it is less than 0.01. This reveals that the model utilized is highly good enough in foretelling the dependent variable.

**Table 4.4: ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>2</td>
<td>44759196015156.300</td>
<td>57.939</td>
<td>.000^b</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>22</td>
<td>772528054208.765</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>24</td>
<td>10651400922905.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: PROFIT
b. Predictors: (Constant), DEBTS, TOTAL_ASSETS

Coefficients in Table 4.5 presents the information on each interpreter variable. This presented with the information required to foretell the correlation between profits, debts and total assets.

It is well demonstrated that both the profits and predictors play significant role to the model (by looking at the Sig. column). By looking at the B column under the Unstandardized Coefficients column, the regression equation is brought forward as:

Profits = -128987.808 + (0.182) (total assets) + (-0.328) (debts).
From the analysis, it is crystal clear that total assets and debts have a significant relationship with profits. The analysis illustrates that total assets positively relate to profits while debts negatively relates to profits.

**Table 4.5: Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-128987.808</td>
<td>288890.748</td>
<td>-.446</td>
<td>.660</td>
</tr>
<tr>
<td>TOTAL_ASSETS</td>
<td>.182</td>
<td>.017</td>
<td>1.148</td>
<td>10.570</td>
</tr>
<tr>
<td>DEBTS</td>
<td>-.328</td>
<td>.066</td>
<td>-.539</td>
<td>-4.963</td>
</tr>
</tbody>
</table>

*a. Dependent Variable: PROFIT*

**4.2.9 Correlations between ROA, Profits, Debts and Total Assets**

Table 4.6 demonstrates the correlations between ROA, profits, debts, and total assets. From the results, it is clear that there is a strong relationship between ROA and debts (r=0.676**, p<0.01, N=5). On the other hand, there is no relationship between ROA, profits and total assets.

**Table 4.6: Correlations of ROA, Profits, Debts and Total Assets**

<table>
<thead>
<tr>
<th></th>
<th>PROFIT</th>
<th>DEBTS</th>
<th>TOTAL ASSETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>Pearson Correlation</td>
<td>.063</td>
<td>.676**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.766</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).**

**4.2.10 Coefficients**

Table 4.7 illustrates the relationship between return on assets and debts. Looking at the table, there is a high relationship between debts and return on assets (ROA).
From the table, return on assets (ROA) = 0.012 + (5.213E-08) (Debts).

### Table 4.7: Coefficients of ROA and Debts

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>.012</td>
<td>.061</td>
<td>.205</td>
<td>.839</td>
</tr>
<tr>
<td>DEBTS</td>
<td>5.213E-08</td>
<td>.000</td>
<td>.676</td>
<td>4.398</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROA

#### 4.3 Relationship between Return on Equity and Capital Structure

Figure 4.5 depicts the total equity of manufacturing companies (Athi River Mining, Bamburi Cement, Crown Berger, East Africa Portland, and East Africa Cables).

From the figure, Bamburi Cement limited (BCL) has the highest amount of equity compared to other companies. This is followed by Athi River Mining (ARM), East Africa Portland limited (EAPL), East Africa Cables limited (EACL), and finally Crown Berger limited. All of the companies’ equity has been increasing from 2009 through 2013 with Bamburi Cement having the highest rate of increase and Crown Berger having the least rate of equity increase.

![Figure 4.5: Total Equity](image)
4.3.1 Return on Equity (ROE)

Figure 4.5 below represents return on equity (ROE) of manufacturing companies. From the figure, Bamburi Cement had the highest return on equity in the year 2009. This was followed by East Africa Portland limited, East Africa Cables limited, Athi River Mining, and finally, Crown Berger.


Athi River Mining took the lead of return on equity in 2012. This was followed by Bamburi, East Africa Cables, Crown Berger and lastly East Africa Portland limited. In 2013, East Africa Portland had the highest return on equity, followed by Athi River Mining, Crown Berger, East Africa Cables, and lastly Bamburi Cement.

![Figure 4.6: Return on Equity](image-url)

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4.3.2 Descriptive statistics of Return on Equity

Table 4.8 demonstrates the relationship between total equity and profits for manufacturing companies for the year 2009 through 2013. From the table, it is well shown that as the total equity goes up, the profits go down. This illustrates that too much equity diminishes the returns as the shareholders demand dividends.

Table 4.8: Descriptive statistics of Return on Equity

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th></th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total equity for 2009</td>
<td>5</td>
<td>6733981.0000</td>
<td>Profit for 2009</td>
<td>5</td>
<td>1968840.0000</td>
</tr>
<tr>
<td>Total equity for 2010</td>
<td>5</td>
<td>7080542.8000</td>
<td>Profit for 2010</td>
<td>5</td>
<td>1279898.8000</td>
</tr>
<tr>
<td>Total equity for 2011</td>
<td>5</td>
<td>7973046.8000</td>
<td>Profit for 2011</td>
<td>5</td>
<td>1598263.8000</td>
</tr>
<tr>
<td>Total equity for 2012</td>
<td>5</td>
<td>9384428.2000</td>
<td>Profit for 2012</td>
<td>5</td>
<td>1176677.0000</td>
</tr>
<tr>
<td>Total equity for 2013</td>
<td>5</td>
<td>10250448.2000</td>
<td>Profit for 2013</td>
<td>5</td>
<td>1481846.2000</td>
</tr>
</tbody>
</table>

Table 4.9 shows the correlations between profit, total equity and debts. As illustrated, the table shows that profits correlates with total equity at \( r=0.879^{**}, p<0.01, N=5 \). This demonstrates a strong relationship between profit and total equity. Even though the mean in table 4.8 above shows that the more the equity the less the returns, this correlation refutes the argument and states that the more the equity the more the returns. This is because payment of dividends is not mandatory.

On the other side, the table demonstrates that profit correlates with debts at \( r=0.174, p>0.05, N=5 \). This implies that there is no relationship between profits and debts as the p-value is greater than 0.05. This shows that more debts encourages more interest expenses hence reduces the profits.
Table 4.9: Correlations of Profit, Total Equity and Debts

<table>
<thead>
<tr>
<th></th>
<th>TOTAL_EQUITY</th>
<th>DEBTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROFIT</td>
<td>Pearson Correlation</td>
<td>.879**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

The R and R² values are provided in Table 4.10. The R value, according to the study, is 0.879, which represents the simple correlation and, therefore, indicates a high degree of correlation. The R² value indicated how much of the dependent variable (profits) can be explained by the independent variable, (total equity). In this case, 77.2% could be explained.

Table 4.10: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.879a</td>
<td>.772</td>
<td>.762</td>
<td>1026695.51342</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), TOTAL_EQUITY

The ANOVA in Table 4.11 shows the statistical importance of the regression model that is used. The significance (P), in this case is 0.000 and it is less than 0.01. This shows that the model used is statistically good enough in foretelling the dependent variable.

Table 4.11: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1</td>
<td>82269624645531.40</td>
<td>78.047</td>
<td>.000b</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>23</td>
<td>1054103677277.130</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>24</td>
<td>106514009222905.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: PROFIT

b. Predictors: (Constant), TOTAL_EQUITY
Table 4.12 foretells the correlation between total equity in manufacturing and their profits. From the table, there is a significant correlation between total equity and profit.

This can further be verified in an equation as follows:

\[
\text{Profits} = -124611.718 + (0.196 \times \text{Total Equity}).
\]

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-124611.718</td>
<td>275731.368</td>
<td>-.452</td>
</tr>
<tr>
<td>TOTAL EQUITY</td>
<td>.196</td>
<td>.022</td>
<td>.879</td>
<td>8.834</td>
</tr>
</tbody>
</table>

a. Dependent Variable: PROFIT

4.3.3 Correlations between Return on Equity, Total Equity, and Debts

Table 4.13 represents the correlations between return on equity (ROE), total equity and debts. From the table, return on equity correlates with total equity at \( (r=0.345, p>0.05, N=5) \). This implies that there is no relationship between ROE and Total Equity. On the other hand, ROE correlates with Debts at \( (r=0.112, p>0.05, N=5) \). The result also implies that there is no relationship between ROE and Debts.

It is well noted from the results in the table that total equity and debts do not whatsoever, affects return on equity.
### Table 4.13: Correlations between Return on Equity (ROE), Total Equity and Debts

<table>
<thead>
<tr>
<th></th>
<th>TOTAL_EQUITY</th>
<th>DEBTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>Pearson Correlation</td>
<td>.345</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.091</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>5</td>
</tr>
</tbody>
</table>

#### 4.4 Relationship between Gross Profit Margin and Capital Structure

##### 4.4.1 Gross Profit Margin

Figure 4.7 shows the gross profit margin of manufacturing companies from the year 2009 through 2013. From the figure, Bamburi Cement has the highest gross profit margin even though it was declining throughout the years. Athi River Mining and Crown Berger had steady rising gross profit margins even though they were below 4 billion shillings. East Africa Portland and East Africa Cables had fluctuating gross profit margins. They were also below 4 billion shillings.

![Figure 4.7: Gross Profit Margin](image)

##### 4.4.2 Relationship between Total Equity, Total Debts and Gross Profit Margin

Figure 4.8 demonstrates the relationship between total equity, total debts and gross profit margin. From the figure, total equity has been the highest and has shown steady increase
from year 2009 through 2013. Gross profit margin was the second in 2009 but decreased in 2010 through 2013. Total debts have shown a steady increase from 2009 through 2013.

![Graph showing the relationship between Total Equity, Total Debts and Gross Profit Margin from 2009 to 2013.]

Figure 4.8: Relationship between Total Equity, Total Debts and Gross Profit Margin

4.4.3 Correlations between Gross Profit Margin, Debts and Total Equity

Table 4.14 illustrates the relationship between gross profit margin, debts and total equity. From the table, gross profit margin correlates with debts at \( r=0.218, p>0.05, N=5 \). This indicates that there is no relationship between gross profit margin and debts. On the other hand, the table shows that gross profit margin correlates with total equity at \( r=0.915^{**}, p<0.01, N=5 \). This indicates a strong relationship between gross profit margin and total equity.
Table 4.14: Correlations of Gross Profit Margin, Debts and Total Equity

<table>
<thead>
<tr>
<th>Gross Profit Margin</th>
<th>DEBTS</th>
<th>TOTAL EQUITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>0.218</td>
<td>.915**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.296</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

The model summary of a regression analysis is depicted in Table 4.15. It is utilized when predicting the value of a variable based on the value of another variable. The R and $R^2$ is provided in the table. The R value, according to the result of the study is 0.917, which represents the simple correlation. It indicates a high degree of correlation. The $R^2$ value indicates how much of the dependent variable (Gross Profit Margin) can be explained by the independent variables; Debts and Total Equity. In this case, 84% can be explained, which is very large.

Table 4.15: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.917a</td>
<td>.840</td>
<td>.826</td>
<td>1546822.23955</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), DEBTS, TOTAL_EQUITY

The ANOVA is depicted in Table 4.16. It signifies that the regression model predicts the dependent variable significantly well. This is revealed when you Look at the "Regression" row and go to the Sig. column. This signified the statistical significance of the regression model that was used. Significance ($P$) in this case is 0.000 and it is less than 0.01. This shows that in general; the model used is significantly good enough in foretelling the outcome variable.
Table 4.16: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>277086015465606.000</td>
<td>2</td>
<td>138543007732803.0</td>
<td>57.903</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>52638498897143.800</td>
<td>22</td>
<td>2392659040779.270</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>329724514362750.000</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: GPM
b. Predictors: (Constant), DEBTS, TOTAL_EQUITY

Coefficients in this case is demonstrated in Table 4.17. This offers the information on each outcome variable. The coefficients offered the information required to foretell the amount of gross profit margin of manufacturing companies basing on amount of debts and equity.

Table 4.17: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>596096.156</td>
<td>499791.008</td>
<td>1.193</td>
<td>.246</td>
</tr>
<tr>
<td>TOTAL_EQUITY</td>
<td>.367</td>
<td>.035</td>
<td>.933</td>
<td>10.454</td>
</tr>
<tr>
<td>DEBTS</td>
<td>-.065</td>
<td>.095</td>
<td>-.061</td>
<td>-.678</td>
</tr>
</tbody>
</table>

a. Dependent Variable: GPM

From the table, it is shown that total equity positively contributes to the amount of gross profit margin. This is shown by a significant relationship between total equity and gross profit margin at 0.000. On the other hand, it is shown that debts negatively contribute to the amount of gross profit margin even though there is no significant relationship between debts and gross profit margin (0.505).
We can see that both the constant and total equity contribute significantly to the model (by looking at the Sig. column). By looking at the B column under the Unstandardized Coefficients column, the regression equation is presented as:

Gross Profit margin = 596096.156 + (0.367) (Total Equity).

4.5 Chapter Summary

The study in this chapter provides the findings with respect to the secondary information as provided for in the construction and allied companies’ financial reports. The first section provided the study findings based on the relationship between return on assets (ROA) and capital structure. The section that followed presented the study findings on the relationship between return on equity (ROE) and capital structure, finally the third section presented findings on gross profit margin and capital structure. Conclusion, summary, discussions and recommendations are provided in the next chapter.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The summary of the study is presented in this chapter present. In part 5.2, the summary of the study is presented. In part 5.3 and 5.4, the study represents the discussion and conclusion respectively. The recommendations are entailed in part 5.5.

5.2 Summary

The purpose of this study was to determine the relationship between capital structure and the firm’s performance on five companies in the construction and allied sector listed on the Nairobi Stock Exchange.

The study aimed at determining the relationship between return on assets (ROA) and capital structure, relationship between return on equity (ROE) and capital structure and relationship between gross profit margin and capital structure.

A quantitative research method was employed to help in gathering, analyzing, interpretation, and presentation of information. The researcher adapted a descriptive research design which helped in looking at the strength of relationship between return on assets, return on equity and gross profit margin and capital structure of construction and allied companies. The secondary data, obtained from the financial statements of the companies, was used in the study. The sample size was 5 construction and allied companies.

From the findings of the study, company size contributes immensely to the return on assets. When a company is large in size, it highly attracts many operations hence stimulate the generation of income which enhances the return on assets. The study also found that when a company has more assets, the tendancy of borrowing funds reduces hence records lower leverage. The study reveals that there is a relationship between return on assets (ROA),
profit, debts and total assets. The study showed that there is a strong negative relationship between return on assets and debts.

This study found no relationship between debts and return on equity but there was a negative indication. The study also found no relationship between profit and debts, but there was a strong positive relationship between total equity and profit. The study found a negative relationship between long term debts and return on equity. It is explained that when a company has so much debts, it incurs a lot of expenses (debt expense) in settling debts obligations. These expenses reduce the profits which would enhance the return on equity of shareholders.

The study found that there is a strong relationship between gross profit margin and total equity. The study also found out that there is no relationship between gross profit margin and debts. The study further found that for equity and debt finances, a positive relationship existed but a negative relationship between debt financing and performance. The study found that total equity has a strong positive relationship with gross profit margin while debts have a negative relationship with the same gross profit margin.

5.3 Discussion
5.3.1 Capital Structure and Return on Assets

Lislevand (2012) asserts that return on assets is a widely accepted measure of financial performance. Frank and Gayol (2003) believed that before calculating return on assets of a certain company, it is necessary to know the amount of its total assets. This study concurs to the latter findings by analysis the total assets of various companies in the manufacturing industry. The study found that some companies like Bamburi Cement had huge total assets compare to other companies like Crown Berger. This amount of the assets, according to the study demonstrated the worthiness of the various companies.

To analyze the companies’ capital structure, the study looked at total fixed debts and total equity of the companies. Looking at the debts of various companies, it was noted that the
companies that had more assets (Bamburi Cement) had less fixed debts but those that had less assets (Athi River Mining) had more debts. To support the finding, Zeitun and Tian (2007) found out that a company’s capital structure has an important effect on its performance. Boodhoo (2009) also found that capital structure affects the performance of an organization.

Gleason, et al., (2000) examined the relationship between performance and leverage by using return on asset and found out that total debt has a significant, negative influence on performance. The study concurs with the findings in the latter statement. The study found a strong negative relationship between debts and company financial performance. The study on the other hand found that total assets positively contribute to the company performance.

On looking at the relationship between return on assets (ROA), Profit, Debts and Total Assets, the study showed that there is a strong relationship between return on assets and debts. From the study there was no relationship between ROA with profit, debts and total assets. Taani (2013) findings support the findings of this study. He found out that there is a positive relationship between short term debts and return on assets. On the other hand, the author found a negative relationship between long term debts and return on assets.

Boodhoo (2009, found that capital structure affects the performance of an organization. Huang and Song (2006), assert that more profitable firms will have less debt because retained profits are available for financing growth opportunities. These firms build their equity relative to their debt. Jensen, Solberg, and Zorn (2002), in their study found a negative relationship between return on assets and leverage. The findings of this study supports this issue. The study found a strong negative relationship between return on assets and long term debts.

The study revealed that ROA tells how well a company uses its assets to generate income. A higher ROA shows a higher level of management performance. A rising ROA, for instance, may initially appear good, but turn out to be unimpressive if other companies in its industry have been posting higher returns and greater improvements in ROA. The ROA ratio may
thus be more useful when compared to the risk free rate of return. Frank and Gayol, (2003) support the study by asserting that a company should produce an ROA higher than the risk free rate of return to be rewarded for the additional risks involved in operating the business. Achim (2010) affirms that if a company’s ROA is equal or even less than the risk free rate, investors should think twice as they would be better off just purchasing a bond with a guaranteed yield.

From the study, it is well known that the use of debt or leverage is a way to improve performance of the firm. Abor (2007) confirmed that there is a positive relationship between short- term debt and return on assets. He argued that this is attributed to the fact that short-term debt is cheaper than the long-term debt. Mesquita and Lara (2003) also found similar results in their study on Brazilian companies.

5.3.2 Capital Structure and Return on Equity

Return on equity (ROE), according to Khatab et. al, (2011), evaluates a company's profitability by enlightening how much money a company can make by utilizing effectively and efficiently the shareholders resources. The relationship between capital structure and return on equity for industrial and allied sectors in the Nairobi Securities Exchange was done by Kaumbuthu (Kaumbuthu, 2011). He found a negative relationship between debts and return on equity. Contrary, this study found no relationship between debts and return on equity. The study also found no relationship between profit and debts, but there was a strong relationship between total equity and profit.

Studied by Mesquita and Lara (2003) found long term debt is not significantly related to return on equity (ROE) and it has negative sign, showing potential inverse relationship. Result of short term debt presented positive sign thus, this also suggest that short term debt become a common practice among the most profitable companies. This study agrees with the findings of Mesquita and Lara. It found that return on equity has a negative relationship with long term debts. It is explained that when a company has so much debts, it incurs a lot of
expenses (debt expense) in settling debts obligations. These expenses reduce the profits which would enhance the return on equity of shareholders.

The finding of Modigliani and Miller (1963) is contravened by the findings of this study. They found that organizations which operate with high debt levels achieve higher performance. This is contrary to the findings of this study. Phillips and Sipahioglu (2004) support the findings of this study. They found that borrowing does not necessarily lead to higher performance as stated in asymmetric information theory, but could actually contribute to low performance as stated in agency theory. This study suggests that the firms with higher levels of debt in their capital structure do not perform better than firms with lower levels of debt.

Abor (2007) shows that short term liabilities are less costly but lead to an increase in profit levels. The findings also reveal profitability increases with size of the company and sales growth. For long term liability, the findings show a significantly negative correlation. Thus, it means that the more the long term liability, the less the profitability. The findings support the results of this research whereby there was a negative correlation between debts and return on equity.

It was found by Carpentier (2006), that maximizing wealth for the shareholders require perfect combination of debt and equity and that cost of capital is negatively correlated and therefore to be reduced to minimum level. The study confirms the findings of Carpentier. The study found that too much debts or too much equity minimizes the wealth of shareholders.

From the study, return on equity shows the remuneration of the shareholders, by the payment of dividends or by other forms of remuneration. For this reason, this ratio expresses the degree to which the managers have succeeded to meet the company’s main objective, i.e. maximizing the wealth of its shareholders. In these circumstances, Achim, (2010) states that the efforts of the enterprise should be primarily targeted to ensure high returns for equity providers (shareholders), in order to increase their wealth.
5.3.3 Capital Structure and Gross Profit Margin

Puwanenthiren (2011) argues that a firm with a fairly higher percentage of gross profit margin is well on the way to higher percentage of operating profit. He found out that the gross operating margin is influenced by rate of change in cost of production and rate of change in selling price. The study found that the gross profit margin is determined by sells and cost of goods sold. The study showed that some companies like Bamburi Cement had the highest gross profit margin because of its sales volume and selling prices.

The study found that there is a strong relationship between gross profit margin and total equity. The study also found out that there is no relationship between gross profit margin and debts. The study on the impact of choice of capital structure on the performance of firms in Egypt was carried out by Ebaid (Ebaid, 2009). The author found that capital structure has little or no impact on a firm’s performance. However, Ebaid’s results are inconsistent with other empirical studies such as Hadlock and James (2002), which revealed a positive relationship between financial leverage and choice of capital structure.

Booth, Aivazian, Demirguc-Kunt, and Maksimov (2001) and Gleason et al. (2000) revealed a negative relationship in their studies. Lower equity capital ratio, according to the authors, is associated with higher firm performance. Oke and Afolabi (2011) further found that for equity and debt equity finances, a positive relationship existed but a negative relationship between debt financing and performance. All these findings support the finding of this study. The study found that gross profit margin is determined by the level of equity and debts in an organization.

The study found that total equity has a strong positive relationship with gross profit margin while debts have a negative relationship with the same gross profit margin. The study reveals that the more the company engages in debts, it reduces the gross profit margin and vise versa. When a company borrows more debts, it pays more interests which reduce the profit that would have been re-invested to earn more gross profit.
The study revealed that gross profit margin shows the percentage of a firm’s sales revenue would be left after taking away the cost of goods sold. This is vital as it helps to establish whether the organization would still have sufficient funds to cover operating costs such as lease payments, advertising, employee benefits, and many more. Nirajini and Priya, (2013) found that an organization’s gross profit margin may also be viewed as a measurement of production efficiency. The authors assert that a firm with a gross profit margin more than that of its competitors, or the industry average, is believed to be more efficient and is for that reason preferred.

It was found from the study that profit margin broadly indicates both a company’s competitive position in an industry, and the industry’s characteristics in terms of the strength of competition, pricing flexibility, demand - supply scenario, and regulation. Chechet and Olayiwola, (2014) supports the study by asserting that a company’s profit performance is a good indicator of its fundamental health and competitive position. They found that profit margin, observed over a period of time, also indicates whether a company can sustain its present cash accruals. A profitable company exhibits the ability to generate internal equity capital, attract external capital, and withstand business adversity.

5.4 Conclusions

5.4.1 Capital Structure and Return on Assets

The study did a test on the impact of capital structure on return on assets. The study concludes that total debts have a significant negative impact on manufacturing companies’ performance. From the study, it is well found that capital structure has a significant influence on a firm’s performance. The study also found that most manufacturing companies use more debt in their capital structure than would be appropriate. It is concluded by the study that a firm’s size influences the access to capital which in turn enhances performance. Athi River Mining and Bamburi Cement for instance are big in size compared to Crown Berger and East African Cables. This influences their access to capital in terms of debts or equity, which are used to generate more income hence that is why they are performing better than others.
5.4.2 Capital Structure and Return on Equity

The study concludes that there is an inverse relationship between return on equity and debt equity ratio. The study found long term debt is not significantly related to return on equity and it has negative sign, showing potential inverse relationship. It found that between long term debts and return on equity there was a negative relation while there was a positive relationship between short term debt and return on equity. On assessing the profitability of manufacturing companies, the study concluded that total equity highly contributes to the profitability building of an organization while too many debts contribute to profitability destruction.

5.4.3 Capital Structure and Gross Profit Margin

The study concludes that a successful choice and use of the debt-to-equity ratio is one of the important elements of a company’s financial strategy. The profit margin is a vital element to establish the capital structure. Large size companies easily access capital markets to get money to fund their operation. The more the capital, the more the operations hence gross profit margin increases. The study concludes that the more the amount of debts a company has, the less the gross profit margin it attains. This is because more of its profits are lost in the operational expenses (interest charges).

5.5 Recommendation

5.5.1 Recommendation for Improvement

5.5.1.1 Capital Structure and Return on Assets

The study recommends the manufacturing companies to use the pecking order theory to balance their capital structure. This would enhance the companies’ return on assets. The study found that too many debts reduce a company’s return on assets, hence companies should utilize the minimum possible amount of debts. Because there is a positive relationship between short term debts and a company’s return on assets, the study recommends companies to utilize the short term debts rather than too much long term debts. The study
found that financial leverage has a significant negative relationship with firm performance as measured by return on assets (ROA) hence it recommends the companies to look for other avenues for sourcing for funds other than to many debts. The companies can opt for equity or plough back their profits.

5.5.1.2 Capital Structure and Return on Equity

The study indicated a positive relationship between equity and profitability and a negative relationship between debts and profitability. This encourages the study to recommend manufacturing companies to use more of equity financing that of debt financing. The study found that long term debts have no significant relationship with return on equity (ROE) and it has negative sign, showing potential inverse relationship. On the other hand, short term debt presented positive sign. The study thus recommends manufacturing companies to opt for short term debt because of the positive contribution to the return on equity.

5.5.1.3 Capital Structure and Gross Profit Margin

The study found out that there is a correlation between capital structure and gross profit margin. It was found that too many debts reduces gross profit margin while equity enhances gross profit margin. The study recommends manufacturing companies to employ pecking order strategy to enhance gross profit margin. Pecking order theory suggests that companies should use retained earnings first as investment funds and then move to bonds and new equity only if necessary.

5.5.2 Recommendation for Further Research

The study aimed at determining the relationship between capital structure and the firm’s performance on five companies in the construction and allied sector listed on the Nairobi Stock Exchange.

The study was only carried on a few selected companies. Further researches should be done on all construction and allied sectors listed on Nairobi Securities Exchange. The study also
recommends future researchers to study the impact of company size, reputation, corporate governance and many more on companies’ performance.
REFERENCES


Frank, Z. M., & Gayol, V. K. (2003). Capital structure decisions: which factors are reliably important? Unpublished working paper, Sauder School of business, the University of British Colombia,: Vancouver.


## Appendix

### DATA SOURCE

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