THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF FIRMS LISTED UNDER MANUFACTURING, CONSTRUCTION AND ALLIED SECTOR AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

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

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DEDICATION

This research project is dedicated to my loving husband Mr. Langat Kevin and daughter Kylie Talia Chebet for their patience and continuous support. Thank you so much!

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LIST OF ABBREVIATIONS AND ACRONYMS

CMA - Capital Markets Authority

D/E - Debt/equity ratio

MM - Modigliani and Miller

NPV - Net Present Value

NSE - Nairobi Securities Exchange

ROA - Return on Assets

ROE - Return on Equity

SMEs - Small and Medium Enterprises

ABSTRACT

Capital structure plays a remarkable function in firm's financial performance give that it is utilized efficiently and in an effective manner at its optimal level. However, the question of what constitute an optimal financing structure remains unanswered and a controversial issue in corporate finance. The aim of this research is to determine the relationship between capital structure and financial performance of companies listed under Manufacturing, Construction and Allied Sector at the Nairobi Securities Exchange. The Modigliani and Miller, Pecking Order and the Trade-off theories formed the theoretical foundation of the study. This research used a descriptive study design and targeted fifteen listed firms in the Manufacturing, Construction and Allied sector at the NSE as at 31st December 2016. This study employed secondary data, which was collected using a data collection sheet for the period 2012 to 2016. To analyze data, the research used descriptive statistics and regression analysis using the Statistical Package for Social Sciences. The study found that the ratio of debt to equity had an insignificant effect on return on assets while liquidity had a positive and significant effect on return on assets ratio. Further, the firm size and growth had an insignificant and positive relation with the return on assets of the listed manufacturing, construction and allied firms. The study concluded that it is only liquidity, which affects the financial performance of the listed man manufacturing, construction and allied firms while capital structure, firm size and growth have no significant effect on financial performance of manufacturing, construction and allied firms quoted at the NSE. The study recommended that the management of construction and manufacturing firms should institute proper liquidity management techniques to ensure they hold optimal liquidity levels. Additionally, the firms should ensure that they hold optimal levels of debt since high debt may affect other goals of the firm.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The shift to liberated markets, together with the rise of diverse financial markets has given the foundation for the corporate level to optimally establish their capital structure (Salawu, 2007). The most critical issue of every firm is the choice of an optimal structure. The company's capital structure directly affects tax advantage and financial risk which can be described as the possibility of financial loss due to uncertainty about its extent (Baxter, 1976). Leverage of the firm is among the key determinants of the decision made by management and they influence the shareholders return on equity, risk of the equity holders and shareholders intrinsic value of their stocks.

The existing theories on capital structure explain whether the combination of debt and equity matters, and if it does, what might be the optimal capital structure. In their seminal paper, Modigliani and Miller (1958) posited that to minimize the cost of capitaland to maximize the capital gains attributed to the shareholders; a firm needs to have an optimal capital structure which can be achieved by balancing debt and equity financing. Over the years, several theories on this topic have been established by researchers and different academic scholars. The theories include; the theory of irrelevance by Modigliani and Miller (1958) which suggests that cost of obtaining capital is unrelated to the type of funds that a company uses and there isn'tany optimal capital structure in existence, therefore, the company's financing structure is not relevant or does not influence the firms value. Subsequently, modifications were done by Modigliani and Miller (1963) on their former model of capital structure

irrelevance theory in relation to their acceptance that corporate tax and the tax deductibility of interest payment exist.

What is seen to be more and more common in Kenya is the issuance of debt finance through the capital market. Listed companies at NSE are accumulating massive debts in their capital structure as a way of raising fresh finance to funds operations and execute development projects through capital market (Anyanzwa, 2015). Various firms use debt to leverage their capital to increase profitability levels. However, ability of debt finance to improve performance or enhance profits varies from one firm to another depending on prevailing economic conditions (Maher & Andersson, 1999). It is evident that listed firms are increasing debt capital in their capital structure and the need to investigate whether debt financing has an effect on the performance motivated this study. Moreover, lack of common agreement on what constitutes an optimal capital structure motivated this research study.

1.1.1 Capital Structure

Capital structure can be described as a mix between equity and debt, which a company requires to finance the assets of the firm (Damodaran, 2001). The firm's arrangement to finance its investments is by merging of common stock, preferred stock and debt. An optimal financing structure has such a mix of common stock, preferred stock and debt which will capitalize on shareholder's wealth or market price per share that is obtained at minimal costs. An entities capital structure also represents the short and long term financing proportions. As such, equity and debt form the major source of financing business entities (Pandey, 2009).

Debt comprises of funds obtained externally from commercial banks and floating of corporate bonds and draws a fixed return or coupon. Debt is categorized as short term

or long term. Debt holders normally possess minimal control over the firm, and they don't arbitrate how an entity operates though the entities can earn a fixed rate of return which is to be paid for the finance and when it is due, called interest (Kochhar, 1997).Despite the performance or profitability of the business, the bond issuer has a lawful responsibility to pay the coupon and the principal when they fall due. Equity is the capital granted by the shareholders of the entity and signifies dividend payment which represents an ownership of interest allowed to be part of the profit of a business (Brockington, 1990).The company may retain some or all of its profits for financing growth of its operations, therefore, not mandatory to pay dividends to its shareholders. Equity represents a residual claim; this means that they are paid after debt holders. Consequently, they bear most of the risk and have larger influence over decisions (Kochhar, 1997).

The most significant area in strategic decision making of a firm is financing decision. To increase the firm value, market price of shares and security can be amplified by the sound capital structure (Damodaran, 2001). The management should make financing decisions which maximize the value of the company through operating decisions (Van Horne, 1989). To guarantee that an organisation remains a going concern and it can fund its' investment capital structure of any business entity should thus be properly managed. Thus, the manner in which a firm combines its equity and debt financing mix, determines value of the firm as indicated by Ross et al. (2009).

1.1.2 Financial Performance

Financial performance entails of carrying out financial activities in an orderly manner to achieve the financial objectives of an entity over a specific time period (Metcalf & Titard, 1976). The value of the firm and its financial performance in normally

measured using financial ratios (Prahalathan & Ranjany, 2011). To establish the elements of excellent performance of an entity through performance indicators with a view to evaluate its achievements remains an essential task for all firms. Financially, all organizations attempt to utilize its' resources effectively to achieve a high performance level. A performance indicator should be measurable, appropriate and specific to the institution in order to be useful (Oakland, 1989).Therefore, financial performance is the outcome of any of many different activities undertaken by an organization.

Financial statements therefore provide useful information on how well a firm is doing (Ross, Westerfield & Jaffe, 2003). There are five main indicators (ratios) of financial performance: Short term solvency (this is the capacity to honor short-term commitments that fall due), Activity (indicates the firm's capability to manage its investments in assets). Financial leverage (indicates the level of reliance on debt financing), Profitability (indicates the level of how profitable a firm is), and Value (indicates the worth of the firm) (Pandey, 2009).

Financial ratios are standard measures of evaluating financial performance of firms and help to sum up large amounts of accounting figures and to make objective understanding of the organizations performance. Ratios are possible to be classified under four broad classifications depending on items used: liquidity, leverage, profitability, and activity ratios. Mishkin and Eakins (2012) identified three measures of firm performance: Return on Assets (defined as the proportion of net income to total assets), Return on Equity (defined as the proportion of net income to equity holders' capital) and the net interest margin ratio. However, return on equity and return on assets are major financial measures of an entities performance (Tharmila & Arulvel, 2013).

1.1.3 Capital Structure and Financial performance

Titan and Zeitun (2007) argued that capital structure and performance's relationship has got many researchers' attention in finance. The options a firm has in investment is determined on its' performance and also debt equity which affects the decisions regarding capital structure specifically debt maturity structure. Certainly, scholarly researchers have made an effort to examine financing structure to establish if optimal financial structure exists. The level at which the firms cost of capital is lowered and firms performance is maximized is referred to an optimal financing structure. According to earlier studies, the cost of capital is affected by a financial structure, which eventually influences a firm's financial performance and share prices (Miller, 1977).

Maximization of a firm's market value is an ultimate goal (Modigliani & Miller, 1958, 1963; Miller, 1977). Over the past years through the irrelevance theory, the most matter of notable turning point has been the connection between capital structure and performance of business entities. The Modigliani& Miller (1958) irrelevancy theory states that an entity's financing structure and its value are unrelated. However, Modigliani & Miller (1963) postulated that, the value of a firm shares and the levels of long-term leverage used in its financing structure are positively related in the presence of income tax paid by the corporation and financing costs.

The pecking order theory presupposes that retained earnings remain the most preferred source of investments financing, then leverage and equity remains the least preferred or issued as a last remedy. The respective costs of various financing options are reflected by the order of preference. In a case where cash flows are weak, less profitable companies with positive NPV investment projects will be willing to utilize

external funds. Consequently, debt usage will affect profitability negatively. Myers and Majluf (1984) and Fama and French (2002) both revealed an adverse relationship between profitability of an entity and leverage. The pecking order theory therefore, approximates that the levels of debt of a firm will negatively affect its performance of firms financial terms.

Additionally, Jensen and Meckling (1976) advanced that debt influences the quality of the investment opportunities that are undertaken by the management by forcing managers to invest in the projects, which add value to the shareholders. This in return reduces agency and other related costs hence improves financial performance of the firms. An inappropriate combination of debt financing may influence the performance and continued existence of any organisation therefore; the financing decision of any institution is important to both the firm's management and creditors. As a result, a critical decision for any company is an appropriate capital structure.

1.1.4 Manufacturing, Construction and Allied Firms Listed in the Sector of the Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) is a leading African Exchange, based in East Africa − one of the fastest-growing economies in Sub-Saharan Africa. Founded in 1954, NSE has a six decade heritage in listing equity and debt securities. It offers a world class trading facility for local and international investors looking to gain exposure to Kenya and Africa's economic growth. It has 10 companies listed under manufacturing and 5 companies listed under construction and allied sector (NSE, 2016).The manufacturing and construction sector normally finances their investmentthrough local borrowing due to the well developed financing structure by financial institutions within Kenya. Majority of the manufacturing firms in Kenya

preferring sourcing funds from commercial banks compared to other source of financing and equity.

For various reasons debt remains the key source of financing among manufacturing and also construction firms. Most manufacturing firms in Kenya are family owned hence prefer borrowing and debt financing due to the fear of losing control of their firms to outsiders. Additionally, in Kenya debt financing is easily understood by manufacturing and construction firms and relatively cheaper to obtain in comparison to equity and preference shares. The decision whether to take debt finance or equity financing has remained within the confines of boards of directors but financial analysts have argued in support and considers debt finance as appropriate for increasing firm value provided they are acquired at appropriate market rate and proceeds utilized in a good way (Anyanzwa, 2015).

Listed companies at the Nairobi Security Exchange are evenly increasing debt financing on their capital structure as they seek for more capital to fund business operations and implement determined development projects. The reports from the capital market authority (CMA) indicate that a sum of 988 million was raised by the listed firms at Nairobi Securities Exchange between 2004 and 2014 through right issue (Anyanzwa, 2015).

1.2 Research Problem

Capital structure plays a remarkable function in firm's financial performance give that it is utilized efficiently and in an effective manner at its optimal level. However, the question of what constitute an optimal financing structure remains unanswered and a controversial issue in corporate finance (Marsh, 1982). A crucial decision for any business organization is a suitable capital structure.

In Kenya, the manufacturing and construction sectors play key roles in the Kenyan's economy through employment and production. The manufacturing and construction sector are capital intensive in nature and normally require high capital, this is due to the fact that the overall credit to the manufacturing sector increased by approximately more than Ksh.50 million in 2015 (Economic Survey 2016). Therefore, it is necessary to analyze their optimal capital mix in order to establish gains from their investments. Additionally, the manufacturing and construction sectors performance was favourable in 2015 due to the good macroeconomic environment except for the cost of borrowing that somewhat curtailed the availability of cheap credit to fund the sector's activities. This call for a need to instituting an optimal capital structure since it's necessary for growth and the sectors performance financially hence the motivation of this study.

The issue of capital structure has been addressed by several studies. In their study, Hung, Hui and Chan (2002) explored financing structure and firms performance in financial term among property and construction industry from Hong Kong and established that high debt is negatively correlated to profit margins but positively correlated to assets. Titan and Zeitun (2007) observed that firm's capital structure had a negative and significant on entities financial performance and borrowing unreasonably lead to bankruptcy cost due high debt levels. Locally, Yabs (2015) analyzed the impact of capital structure on performance of quoted firms at NSE and observed that debt financing had a positive effect on return on assets and also the return on equity. Chepkemoi (2013) analyzed the impact of SMES financing structure and its effects on their financial performance and established that the mix of debt and equity employed by SMEs inversely affects their profitability but positively influences their sales growth.

The above studies have been carried at both international and local level. However, the studies concentrate on all listed firms in their specific localities. Additionally, the study provides contradictory results of the studies, which this study intends to, interrogate further in an attempt to resolve the conflicts. Also, Kenya's capital market is not well developed in comparison to first world countries where most of the studies have been carried out. This study was thus motivated by this empirical gap and aimed as answering the question: What is the relationship between capital structure and financial performance of firms listed in the manufacturing, construction and allied sector of the NSE?

1.3 Research Objective

To determine the relationship between capital structure and financial performance of companies listed under Manufacturing, Construction and Allied Sector at the Nairobi Securities Exchange.

1.4 Value of the Study

The result of the research intends to add to current body of knowledge on financing decisions and its' association with financial performance. Firm's shareholders and management, will been lightened by this research on the mix of debt and equity applied by firms and its effect on listed entities financial performance thus help them make informed financing decisions about debt capital that would enhance their firm's financial performance. It will also provide corporate financial managers with information that will guide them in establishing an optimal capital structure that is of use and resourceful to the firm.

In conclusion with this study, the regulatory organizations that are involved in promoting investments such as Capital Markets Authorities in Kenya, will be provided information to assist in analyzing and harnessing financial resources relevant to business and form policies that foster investments in developing countries. To academicians and future researchers, the study can serve as a basis for future investigation and research through the provision additional literature on this particular topic.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The section seeks to preview relevant theories under theoretical review, empirical literature, and conceptualization and research gaps. The theoretical review discusses the theories related to the study while the empirical review looks at literature derived from various research works by other researchers. Lastly, this chapter offer a summary in regard to this sections discussed.

2.2 Theoretical Review

Under this part, the research explored three theories among them; the Modigliani and Miller, Pecking Order and the Trade-off theories

2.2.1 Modigliani and Miller Theory

In 1963, Modigliani and Miller amended the irrelevance preposition of capital structure whose initial assumption was that firms financing decision does not influence the firm's value. Based on the theory, there exists an assumption that the utilization of debt finance provides a tax shield and firms had an option for an all-debt financing structure in reference to this assertion. Brigham and Ehrhardt (2005), on the other hand, challenged the MM theory and argued the model is true theoretically, but in practice the model dope not hold since when debt is used bankruptcy costs arise. MM preposition theory argues that firms with greater debt ratio are more favorable; however, this may lead to costs of financial distress since borrowing increases an interest tax shield. When commitments to suppliers of funds are broken down or honored with difficulties, such would lead to financial distress, thus, bankruptcy.

The MM theory supports the use of debt in the capital structure since interest charges are tax deductable and will reduce the financing costs and enhance the value of the firm. Therefore, maximizing debt component in the financing structure can achieve the firm's value hence its financial performance. In consideration to the assumption that in perfect market leverage doesn't influence the firm's value, this study intends to interrogate the same since the Kenyan market is not perfect. Also, in relation to the existence of corporate tax and the tax deductibility of interest payment, this study also seeks to interrogate if a firm will shield more of its profits from tax by raising its leverage through replacing equity with debt in its capital structure. If so, how will this affect a firm's financial performance?

2.2.2 Pecking Order Theory

Myers (1984), in his pecking order theory, hypothesized that entities would first use internally generates funds. The theory also argues that dividend policy is often inclined to investment opportunities available to the firms. In addition, unanticipated variations in investment opportunities and profitability imply that internally generated funds can be more expensive. Therefore, profitable and cash flow sufficient firms will tend to use less debt. Gachoki (2005) tested this theory and found that no relationship exists between debt and internal funds deficit. Gachoki (2005) concluded that a firm capital structure inhibits the past and the present net cash flows.

According to this theory, preference for increasing funds directs the managers in the concept of asymmetric information between insiders who are the managers and outsiders who are the investors. Internally generated funds are link to an organisations investments choice by cost of transactions and information asymmetry while the financial market imperfections are central (Booth et al, 2001). The theory also

predicts that firms would use a financing structure that minimizes the associated costs. Those firms will therefore choose debt rather than equity and retained earnings will be preferred to external financing. The effect of information asymmetries is minimal on firms that must rely on external funds because they prefer debt to equity (Myers & Majluf, 1984). Thus, to enhance financial performance firms would consider capitalizing new projects using internally generated funds and then consider debt sources of financing and equity as the final financing sources.

2.2.3 The Trade-Off Theory

This theory emanated from Myers (1984). The trade of theory supports that through balancing the benefits and costs of equity firms can achieve an optimal cost of capital. As a consequence, to stabilize on the costs and payback of each source, a firm decides on how much leverage and equity financing to incorporate in their financial structure. Debt capital results to benefits such as tax shied though high debt levels in the capital structure can result to bankruptcy and agency expenses. Agency expenses results from divergence of interest among the different firm stakeholders and because information asymmetry (Jensen & Meckling, 1976).

According to the trade off theory, benefits associated with debt capital outweigh borrowing costs. This is because interest payments are tax deductible which is an advantage of the use of debt but also the discipline enforced on the management. According to Brigham & Ehrhardt (2005), the theory also proposes that value of firms is equivalent or equal to unlevered firms value plus the tax shield advantage and expected financial distress costs. The likelihood of bankruptcy is low and insignificant when a firm has less or nil debt financing. Baxter (1976) suggested that the additional risk premium is usually demanded by the creditors when there is a high probability of

bankruptcy due to comprehensive use of debt. He further added that debt financing should be used by firms when the tax benefit is outweighs the cost of debt. The tax benefits lessen as the debt financing rises due to the increase in the anticipated bankruptcy related costs.

This theory further presupposes that a financing structure, which is optimal, is attained at the meeting point of marginal tax shield benefit and the marginal bankruptcy-related costs. Consequently, where there is a possibility of bankruptcy cost and financial distress, bankruptcy cost becomes significant hence firms would chose debt to equity. Firms with greater debt ratios have more real assets whereas firms that depend more on equity capital have intangible assets because they are subject to lose of value in case of insolvency (Myers 1984). This theory supports that; to improve financial performance firms should evaluate both the benefits and costs of debt usage to determine an equivalence of the incremental costs and incremental benefits through an optimal debt structure (debt tax shields against costs of bankruptcy).

2.3 Determinants of Financial Performance

A firms' financial performance could be affected by different variables and may be viewed from factors related to the firm internal and external determinants from diverse visions and in different ways. This research study will focus on firms' specific determinants exploit variables such as capital structure (debt to equity ratio), liquidity, size and growth opportunities.

2.3.1 Capital Structure

Abor (2005) outlined capital structure as a firm's funding profile that is determined by a mix of equity and debt. Abor (2005) further added that a firm can select among several alternative sources of capital with different mix of securities. Jaffe, Ross & Westerfield (2009) presented the pie model, which gives the relationship between firm value and various providers of funds, they also identified that the amount of debt a firm prefers relative to equity defines its financing decisions. According to Ross et al (2009) a strategic capital structure choice has many implications on the firm, therefore, it should be well managed to ensure that the ultimate interest of the shareholder and other stakeholders of the company are served.

Aquino (2010) established that the ratio of debt to equity has an effect on entities financial performance. As such, because of the agency and monitoring costs associated with each source of finance, there needs to be a clear criterion on how firm are to mix equity and debt in their capital mix. According to Oguna (2014), the level of debt used by the firm has an effect on its financial regardless of whether it is short or long term. However, long-term sources of debt negatively and significantly affects the return on equality due to conditions associated with long term debt. This therefore means that usage of long-term debt needs to be restricted as it may come with some conditions, which may not be favourable to the financial performance of involved firms.

Capital structure decisions are of great importance to managers since it has an impact on profitability and ultimately on the shareholders returns and risks, which affects the firm's market share (Rajan & Zingales, 1995). To come up with optimal capital structure financial managers should chose a combination of equity and debt which

benefits the company shareholders and its stakeholders including employees, customers, creditors and the society as a whole. Corporations therefore, can change their capital structure by amending the market value and the cost of capital (Abor, 2005).

2.3.2 Liquidity

The main element of the firm's performance is the firm's liquidity. The variation between assets and liabilities incurrent in the subsequent period is the liquidity gap (Mazur, 2007). A deficit is a positive difference between assets and liabilities at any given time. According to Storey (1994), liquidity ratios are described as numerous balance sheet ratios that should explain major liquidity patterns. Proper low cost funding should be availed by the assurance of the firms within a short period of time as reflected by these ratios (Storey, 1994). This will possibly require firms to hold a portfolio of assets that can be traded off straightforwardly for cash or treasury bills.

Liquidity indicates the capability of the organization to encounter recurring financial obligations. Firm's liquidity is essential for organizations which enables them avoid default on its financial responsibilities and, successfully, avoid experiencing financial crisis (Damodaran, 2001). Upholding acceptable liquidity is more essential to the corporate goals. Low liquid organization levels can result in increasing financial costs and affect its capacity to settle its financial obligations (Pettit & Singer, 2005). When external sources of funds are insufficient, an organization can finance its activities and investments using its liquid assets. Increased levels of liquidity permit an organization transact with unexpected eventualities and achieve its responsibilities during times of low earnings (Onsomu, 2003).

Consistent to the trade off theory, firms that have proper liquidity adopt external financing due to the ability to repay the debt and also benefit from tax shields, hence resulting in liquidity and leverage having a direct relationship. On the contrary, pecking order theory argues that when financing new investments, the more liquid entities prefer to use the retained earnings as compared to external funding, resulting in liquidity and leverage to have a negative relationship (Myers, 1984). Kester (2006) did a study on the evolution of the distributions of size and performance, conditioned on liquidity constraints and age. The findings were that liquidity problems had an insignificant effect on firms' financial performance in any given year. Credit shortages constrain firm's growth due to limited investment opportunities and largely assuming that lack of financial resources reduces the possibilities for long term development and financial performance.

2.3.3 Firm size

Maher & Anderson (1999) argued that firm size positively affects the financial performance of firms because of increasing output of reduction of expenditure on unit cost of functional efficiencies. Large firms enable investors to promptly respond to changes in market conditions by effectively diversifying their assumed risks. Baxter (1976) and Tudose (2012) argued that large firms possess monopoly power that allows them to price their products above the economic costs accrued in the production so as to maximize profit. In conditions of investment performance, Ahmad (2011) considers that business risks could be reduced by the ability of large companies to diversify their investment portfolios. The analysis of Grace and Timme (1992) that unlike smaller companies, larger companies contain the resources that draw and maintain managerial talent due to their ability to take advantage of the benefits associated with economies of scale.

The size of the organization affects both the profitability and liquidity of firms. Broader market share is acquired by larger firms which make them posses more competitive power in contrast to small firms. Moreover, larger firms have better opportunities to work in the fields that seek high capital requirements as they have huge resources. This scenario provides a chance for them to work in higher profit environments with less competition (Yabs, 2015). Smaller organizations are deemed to be more profitable since they have high liquid assets compared to big organizations in the short term. Big organizations organisations on the other hand can borrow funds at a low interest rate which in turn generates a higher market capitalization rate (Kester, 1986).

2.3.4 Growth Opportunities

The measurement of growth opportunities is in terms of the assets in place representing the portion of a firm's worth (Myers, 1977).When the proportion of the firm's worth is lower, recounted by the assets available to the firm, the growth opportunity of the firm is greater (Myers, 1977). The firms with growth opportunities have the advantage of new product lines, capitalizing on more development projects, acquiring other firms in the same business line, renovate and replacement of tangible assets. In addition, Abor (2005) postulate that the growth of a firm, positively affects firms performance in financial terms. Financial performance is seen to be higher in firms with low growth opportunity and lower in firms with average growth opportunities (Myers, 1977).

The firm's future financial performance is influenced by growth (Rajan, 1995). Higher growth also means an increase in future prospect for investors. A firm's economic growth propels it to a better position in the market hence a good

competitive advantage against its competitors. Growth prospect may be viewed as an asset that adds the company's value, but growth is not collateralized and is not a taxable income. Citing the pecking order theory, firms may utilize internal finances as its initial funding base instead of borrowing externally to fund its operations (Watson &Head, 2007). Rising of external finance is costly due to information asymmetry which might hamper future growth prospect and also reduce future earnings.

2.4 Empirical Studies

Marsh (1982) studied whether there is an optimal financing structure and assessed whether firms attempt to make adjustment to attain it. Using probit and logit analysis, 748 cash issues of equity and cited debt prepared by firms in the United Kingdom in the period 1959 to 1970 were analysed, with an arbitrary verification sample of 110 issues during the period 1971-1974. The study found that firms tend to make preferences of financing instruments as if they had in mind target debt ratios. This finding is supports the optimal capital structure existence as per trade-off theory. However, what formulates an optimal financing structure was not addressed in the study or if the same factors would be the significant ones or otherwise across different industries.

Jordan, Zeitun and Tian (2007) established that capital structure negatively impacted firm performance. The study covered a sample of 168 firms with data covering the period 1989 to the year 2003. The findings show that different mixes of debt and equity in different proportions lead to different levels of returns on equity and assets. As firms continue applying debt, their profitability increases until a point where it remains constant and then starts declining.

Ebaid (2009) did a research study on firms in Egypt on effects of choice of financing structure. The study results revealed that financial performance is negatively influenced by debt (short term and total) but there wasn't any significant relationship with long term debt. Tiflow and Sayilir (2015) examined capital structure and firm performance so as to establish if there exists any relationship. This study was conducted for the period between 2008 to 2013 on 130 manufacturing firms listed on Borsa, Istanbul and panel data analysis was used. The methodology used was multiple regression analysis. In conclusion, the study established that debt financing is significantly and negatively associated with financial performance of firms.

A study by Pouraghajan and Malekian (2012) assessed the relation firm's performance and its capital structure for firms quoted at Tehran Stock Exchange. 400 companies were used as a sample for a test in 12 industrial sectors for the period between 2006 and 2010. The study measured the firm's financial performance was determined using both return on equity and also return on assets ratios. The findings established that the ratio of debt had a considerable negative relationship to firm's financial performance. Further, it was suggested that managers can raise the performance in financial terms in their companies and hence the level of the profitability by lowering the debt ratio.

Sheikh and Wang (2012) explored the effect of financing structure and non-financial companies performance at the Karachi Stock Exchange. The study collected data from 2004 -2009. Panel econometric techniques methodology was applied that is both fixed and random effects, joint ordinary least squares. The sample was 240 firms drawn from eight different industrial clusters for example fuel and energy, sugar and allied among others. The findings indicated established that the measures of capital

structure among them short-term debt, long-term debt and overall debt were negatively related to financial performance.

Onsomu (2003) regressed debt/equity against the value of firms trading at the Nairobi Securities Exchange using 22 companies (excluding the finance and investment sector) for the period 1993 to 2001. The study failed to establish a considerable association between debt balance and the value of firms. This corresponds with the MM debt irrelevance prepositions. Mwangi (2010) analyzed the impact of firm financing decisions on financial performance of all listed firms at the NSE. The findings of the study were established that leverage strongly and positively affects the firms return on investment and equity.

A research carried out by Kaumbuthu (2011) explored capital structure in relation to financial performance for industrial and the allied firms listed at the NSE during the between 2004 and 2008. Financing structure decision was measured through the ratio of debt to equity whereas financial performance was determined through ROE. The results of the research paper observed that the financing structure determined via the ratio of debt to equity negatively affected the NSE firm's financial performance

Musiega (2013) explored the association between the financing mix adopted by firms and their effect on financial performance by sampling 30 quoted companies at NSE using 5 years data from 2007 - 2011. The findings established a significant correlation between total assets and debt (long-term) of the sampled companies. However, the correlation between long term debt and ROE was insignificant and weak. Chepkemoi (2013) assessed the impact of capital structure decisions and financial performance of SMEs. The study samples295 small-scale businesses in Nakuru town and the findings

revealed capital structure negatively affects firm's profitability but shows positive effect on sales growth.

2.5 Conceptual Framework

This study sought to investigate the relationship between capital structure and financial performance. The independent variable was capital structure while the dependent variable was financial performance. According to the tradeoff theory interest payments are tax deductible which is an advantage of the use of debt and also the discipline enforced on the management thus capital structure enhances firm value. Liquidity, firm growth and size were also incorporated as control variables. The research study conceptual framework is represented by the figure below:

Figure 2.1 Conceptual Model

Independent Variable   **Dependent Variable**

Capital Structure
- Debt/equity ratio

Financial Performance
- Return on Assets

Control variables
- Liquidity
- Firm size
- Growth opportunities
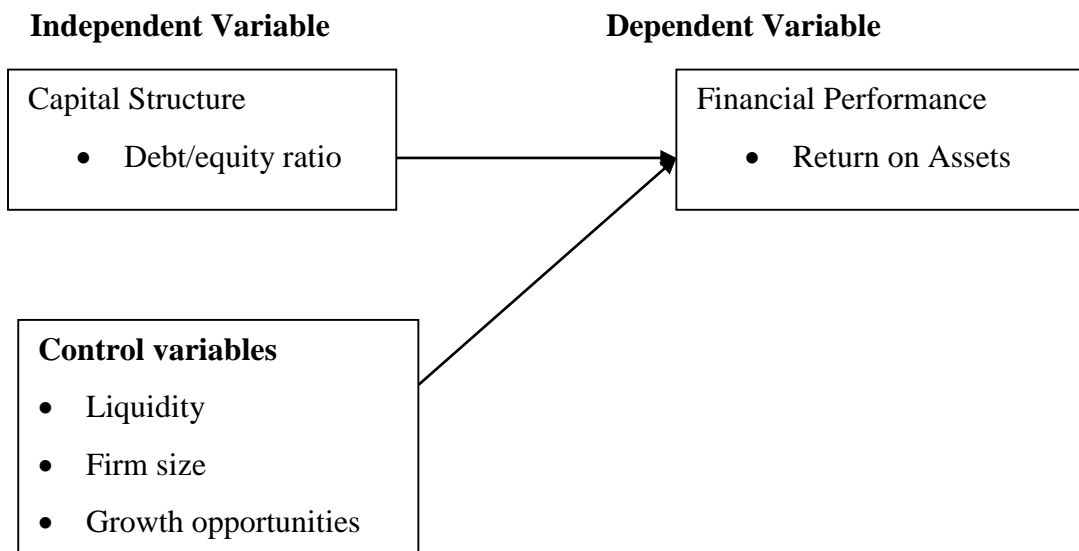
Source: Researcher (2017)

2.6 Summary of Literature Review

Capital structure theories have been well documented since the milestone research by Modigliani and Miller (1958) and continue to generate interest in the theory of

finance. These theories have been criticized and supported by many scholars and provide mixed results on the various studies carried out as presented in the empirical review.

Modigliani and Miller having confirmed the capital structure irrelevance theory several opinions have since been forwarded by other scholars on the relevancy of their assumptions and if it does hold in the real world. It is in the face of this that other theories have also sprung in corporate finance over the year that is; the trade off and pecking order theory were proposed and are based on tax benefits, asymmetric information, bankruptcy cost and agency cost which are associated with debt use. Due to lack of common agreement on what constitutes an optimal capital structure, it is imperative to assess the effects that capital structure has on financial performance of firms.

Additionally, the chapter has also reviewed several studies on capital structure and financial performance of firms. The results of a paper by Marsh (1982)on whether an optimal capital structure exists, agrees with the approach of optimal structure as advanced by the trade-off theory however, the question of what drives the optimal structure was not addressed. Global Studies by Tian and Zeitun(2007), Ebaid (2009), Tiflow and Sayilir (2015), Pouraghajan and Malekian (2012) revealed that capital structure has negatively impacts firms' financial performance. Locally, studies done by Mwangi (2010),Musiega (2013) and Yabs (2015) found a positive effect between capital structure and firms financial performance. Therefore, the studies showed that, capital structure and firm's financial performance relationship varies based on the industry and the country in which the study has been carried out. Thus, the findings may not be generalized to Manufacturing, Construction and Allied firms quoted at NSE.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The methodology chapter lays down the approach for conducting this research. The chapter presents research design, the population, technique of data collection and lastly data analysis.

3.2 Research Design

This research used a descriptive study design. A descriptive research design is a powerful type of quantitative analysis (Kothari, 2004). The descriptive design was selected since it allowed the researcher describe study phenomena, establish the relationship and explain the data collected in order to examine the similarities and differences with our frame of reference within a specific period of time. The descriptive research design helped to establish how capital structure affects financial performance of the study population elements.

3.3 Population of the Study

All objects or elements in any field of investigation form the universe or population (Kothari, 2004). The population under this study comprised of fifteen listed firms in the Manufacturing, Construction and Allied sector at the NSE as at 31st December 2016 for the 5-year period 2012 to 2016. NSE register formed the population frame (See Appendix I). The study carried out a census of the 15 firms.

3.4 Data Collection

This study entirely employed secondary data, which was collected using a data collection sheet. The data was retrieved from published financial reports of the listed

Manufacturing, Construction and Allied firms for the period 2012 to 2016. The financial report was obtained from the Nairobi Securities Exchange, firm's publications and websites.

3.5 Diagnostic Tests

The study undertook several diagnostics test among the normality test, which were tested using the skewness and kurtosis. Multicollinearity was tested using the variance inflation factors (VIF) while autocorrelation was tested using the Durbin Watson test.

3.6 Data Analysis

To analyze data, the research used descriptive statistics and regression analysis using the Statistical Package for Social Sciences. Descriptive statistics was used to summarize the collected data using the mean, standard deviation and the coefficient of variation. Multivariate regression and correlation analysis was also used to find out the relationship between dependent variable and independent variables.

3.6.1 Analytical Model

The regression model used is presented below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where,

Y = Financial performance

X_1 = Capital structure

X_2 = Liquidity

X_3 = Firm size

X_4 = Firm growth

β_0 = intercept

$\beta_1 - \beta_4$ = Regression coefficients

ε = Error term

3.6.2 Operationalisation of Variables

The study considered capital structure as the independent variable while financial performance will be considered as the dependent variable. Liquidity, firm size and growth will be considered the dependent variable. Table 3.1 shows the variables operationalisation

Table 3.1 Operationalisation of Variables

Variable	Description	Supporting literature	Measurement
Financial performance	Financial performance is a measure of the change of the financial state of an organization	Pandey (2009), Tharmila and Arulvel, (2013)	Return on Assets (ROA)
Capital structure	Capital structure is described as the mix between equity and debt that a company requires to finance the assets of the firm	Ross et al. (2009), Damodaran, (2001)	Debt/equity ratio (D/E)
Liquidity	Liquidity indicates the capability of the organization to encounter recurring financial obligations	Pettit and Singer (2005), Kester (2006)	Current ratio
Firm size	Firm size measures the growth of the firm in terms of its assets	Ahmad (2011), Tudose (2012)	Natural log of assets
Firm growth	Growth opportunities is in terms of the assets represents the portion of a firm's worth	Abor (2005), Watson & Head (2007)	Sales growth ratio

3.6.3 Test of Significance

The study employed the F test and the t-test to test the statistical significance. T-test was used to establish the significance of individual variables. The F test was used to test the statistical significance of regression model. Additionally, Correlation analysis was employed to establish the strength and direction of the relationship between the dependent variable and each of the independent variables and multicollinearity.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the results of the analysed data and contains the response rate, the summary statistics, and the results of correlation and regression analysis.

4.2 Response Rate

The study targeted 15 companies listed under the Manufacturing, Construction and Allied sector at the NSE. Complete data was however obtained from 13 firms making up a response rate of 86.67%. There was no complete data from the Flame Tree Group Holdings Ltd since it was listed in 2013 while A. Baumann & Company Ltd had been delisted from the exchange. The 86.67% response was considered adequate.

4.3 Descriptive Statistics

Table 4.1 Descriptive Statistics

	ROA (Ratio)	D/E (Ratio)	Liquidity (Ratio)	Firm size (Ln)	Firm growth (Ratio)
N	65	65	65	65	65
Mean	.06645	.74622	1.70666	7.04903	.07289
Std. Deviation	.142511	1.1144	1.614138	.582726	.333647
Skewness	-.942	2.458	3.270	-.231	4.357
Kurtosis	3.358	3.720	2.933	-1.260	2.354
Minimum	-.503	.000	.136	5.969	-.577
Maximum	.385	5.686	10.089	7.949	2.244

Source: Research Findings

Table 4.1 depicts the summary statistics results. The table indicates that the mean performance of the firms quoted under the Manufacturing, Construction and Allied sector at the NSE was 0.066 with minimum and maximum values of -0.503 and 0.385 respectively. The table also indicates that the average debt to equity ratio of the firm was 0.746 with maximum value of 0.000, which indicates that some firms did not use debt financing and minimum value of 5.686 and indication that some of the firms were highly levered.

The table also indicates that the average liquidity of the firms was 1.70666 and minimum and maximum values of 0.136 and 10.089while the average size was 7.04903 with minimum and maximum values of 5.969 and 7.949 respectively. The table further indicates that the average growth rate was .07289 and a minimum value of -0.577, which indicates that some firms had a negative growth, and a maximum value of 2.244 respectively. Finally, all the skewness and kurtosis value where within the range of 1 and 4 which indicates that the variables were normally distributed hence the assumption of normality was not violated.

4.4 Correlation Analysis

Table 4.2 Correlations

	ROA	D/E	Liquidity	Firm size	Firm growth
ROA	1				
D/E	-.090	1			
Liquidity	.299*	-.295*	1		
Firm size	.066	.275*	-.334**	1	
Firm growth	.189	-.010	.054	-.018	1

*. Correlation is significant at the 0.05 level (2-tailed).

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

Source: Research findings

Table 4.2 shows the results of correlation analysis. The table shows a negative correlation exists between the return on assets ratio and the debt to equity ratio. The table also indicates the existence of a positive collection between the ROA ratio and liquidity, firm size and growth of firms quoted under the Manufacturing, Construction and Allied sector at the NSE. In addition, the table indicates that all the correlation values are less than 0.7, which indicates that there is no multicollinearity among the variables of this research.

4.5 Regression Analysis

This consists of the model summary, analysis of variance (ANOVA) and a summary of the regression coefficients.

4.5.1 Model Summary

Table 4.3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.390ᵃ	.152	.096	.135527	1.726

a. Predictors: (Constant), Firm growth, D/E, Firm size, Liquidity

b. Dependent Variable: ROA

Source: Research Findings

Table 4.3 indicates that the R square value is 0.152, which implies that 15.2% of the variation in financial performance of firms quoted under the Manufacturing, Construction and Allied sector is explained by the growth and size of firms, debt to equity levels and liquidity levels. The remaining 84.8% is caused by other factors, which have not been considered by the research. The Durbin Watson statistics value is

1.726, which is greater than 1.5 and less than 2.5 thus an indication there is no autocorrelation among the variables.

4.5.2 ANOVA

Table 4.4 Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.198	4	.049	2.692	.039[b]
1	Residual	1.102	60	.018		
	Total	1.300	64			

a. Dependent Variable: ROA

b. Predictors: (Constant), Firm growth, D/E, Firm size, Liquidity

Source: Research Findings

Table 4.4 shows the analysis of variance (ANOVA) results. The table indicates that the F-statistics value is 2.692 and the significance value is 0.039 which is small than the p value of 0.05. This implies that the regression equation is significant and a good predictor of the relationship between capital structure and financial performance of the studied firms.

4.5.3 Regression Coefficients

Table 4.5 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.322	.227		-1.421	.160		
	D/E	-.005	.016	-.040	-.313	.751	.878	1.139
	Liquidity	.030	.011	.343	2.727	.010	.842	1.188
	Firm size	.048	.031	.195	1.548	.136	.854	1.171
	Firm growth	.074	.051	.174	1.451	.149	.997	1.003

a. Dependent Variable: ROA

Source: Research findings

Table 4.5 depicts a summary of the regression coefficients. The table indicates that there is an insignificant negative relationship between the ratio of debt to equity and return on assets. The table also shows that liquidity has a positive and significant relationship with return on assets of the studied firms. Finally, the table depicts that the firm size and growth has an insignificant and positive relation with the return on assets of the sampled firms. In addition, all the variables had tolerance values above 0.2 and all the variance inflation factors (VIF) were more than 1 and less than 5 which implies that there was no multicollinearity in the independent variables.

4.6 Interpretation of Findings

The findings of the research found an insignificant relationship between the ratio of debt to equity and the return on assets ratio. This implies that capital structure has no significant effect on financial performance of Manufacturing, Construction and Allied firms quoted at the NSE. This findings support the Modigliani and Miller (1963) theory that firms financing decision does not influence the firm's value. In concurrence, Musiega (2013) established that the association between long term debt and ROE was insignificant and weak. However, Jordan, Zeitun and Tian (2007) who reveled that the mix of debt and equity in different proportions lead to different levels of returns on equity and assets. Ebaid (2009) found that debt financing is significantly and negatively associated with financial performance of firms. Onsomu (2003) in Kenya also found a strong positive relationship between leverage and return on investment and equity.

The study also established that liquidity has a positive and significant impact on the return on assets of Manufacturing, Construction and Allied firms quoted at the NSE. This implies that liquidity significantly influences the firm's financial performance. In similarity, Onsomu (2003) established that increased levels of liquidity permit an organization transact with unexpected eventualities and achieve its responsibilities during times of low earnings. Kester (2006) however observed that liquidity problems had an insignificant effect on firms' financial performance in any given year.

The study further revealed that firm size and growth had a positive by an insignificant effect on the return on assets of the Manufacturing, Construction and Allied firms quoted at the NSE. This implies that the size of the firms and its growth opportunities do not affect its findings. This finding however conflicts with Grace and Timme

(1992) who suggests that unlike smaller companies, larger companies contain the resources that draw and maintain managerial talent since they are able to utilize the economies of scale. Tudose (2012) also argued that large firms possess monopoly power that allows them to price their products above the economic costs accrued in the production so as to maximize profit. According to Ahmad (2011) in conditions of investment performance business risks could be reduced by the ability of large companies to diversify their investment portfolios.

The study further revealed that firm growth had a positive but an insignificant effect on the return on assets of the Manufacturing, Construction and Allied firms quoted at the NSE. This implies that the firm's growth opportunities do not affect its findings. This finding however conflicts with Abor (2005) who postulates that growth opportunities, firm size positively affect financial performance. Rajan (1995) posits that the firm's future financial performance is influenced by growth and higher growth means an increase in future prospect for investors. Accordingly, a firm's economic growth propels it to a better position in the market hence a good competitive advantage against its competitors.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the finding of the research, presents the conclusions and the recommendations of the research. The chapter also identifies the limitations of the research and suggests areas, which may need further investigation.

5.2 Summary

This study sought to establish the relationship between capital structure and financial performance of companies listed under Manufacturing, Construction and Allied Sector at the Nairobi Securities Exchange. To ensure the objective is achieved a descriptive design was selected. Capital structure was used as the independent variable while financial performance was used as the response variable. Liquidity, size of the firm and growth opportunities formed the control variables. The study target 15 firms however complete data was obtained from 13 firms generating a response rate of 86.67%, which was considered representative of the sector.

The descriptive statistics results revealed that the mean performance of the firms quoted under the Manufacturing, Construction and Allied sector at the NSE was 0.066 while the average debt to equity ratio of the firm was 0.746 respectively. The summary statistics also established that average liquidity of the firms was 1.70666 whereas the average size was 7.04903 while the average growth rate was 0.07289 respectively. The results also indicated that the skewness and kurtosis value where within the range of 1 and 4 hence the assumption of normality was not violated.

The correlation analysis results indicated that that a negative correlation existed between the ratio of debt to equity and the return on assets but the ROA ratio had a positive correlation with liquidity, firm size and growth opportunities. The obtained correlation values were less than 0.7 hence the indication that there was no multicollinearity among the variables of the research.

The R square value was 0.152, which implied that 15.2% of the variation in financial performance was explained by capital structure, liquidity, firm size and growth opportunities. The obtained Durbin Watson statistics value was 1.726 thus an indication there was no autocorrelation among the variables and the F-statistics value was2.692 and the significance value was 0.039< 0.05 which implied that the regression equation is significant. On the regression coefficients, the ratio of debt to equity had an insignificant effect on return on assets while liquidity had a positive and significant effect on return on assets ratio. Further, the firm size and growth had an insignificant and positive relation with the return on assets of the sampled firms.

5.3 Conclusion

The results of the research found an insignificant relationship between the ratio of debt to equity and the return on assets ratio. This leads to the conclusion that capital structure had no significant effect on financial performance of manufacturing, construction and allied firms quoted at the NSE hence levels of debt used by listed manufacturing and construction and allied firms does not affect their performance in financial terms.

The study also established that liquidity had a positive and significant impact on the return on assets of the manufacturing, construction and allied firms quoted at the NSE. This leads to the conclusion that liquidity significantly influences the

performance in financial terms of the manufacturing, construction and allied firms quoted at the NSE.

The study further revealed that firm size had an insignificant effect on financial performance of the manufacturing, construction and allied firms quoted at the NSE. This leads to the conclusion that the size of the listed manufacturing, construction and allied firms does not influence their performance in financial terms.

Finally, the study observed that firm growth had an insignificant effect on the return on assets of the Manufacturing, Construction and Allied firms quoted at the NSE. This leads to the conclusion that growth opportunities of the listed manufacturing, construction and allied firms do not influence the firms performance in financial terms.

5.4 Recommendations

The study concluded that capital structure had no significant effect on financial performance of manufacturing, construction and allied firms. However, the findings had indicated that the relationship was negative hence an indication of an inverse relationship between debt levels and return on assets. The researcher therefore recommends that the management of manufacturing and construction firms should ensure that they hold optimal levels of debt since high debt may affect other goals of the firm.

This research made the conclusion that liquidity significantly influences the financial performance of the manufacturing, construction and allied firms. The study recommends that the management of construction and manufacturing firms should

institute proper liquidity management techniques to ensure they hold optimal liquidity levels.

The study concluded that firm size had an insignificant effect on financial performance of the manufacturing, construction and allied firms. The findings however indicated the relationship was positive thus the recommendation that construction and manufacturing firms should invest more in assets to ensure that they generate adequate sales and achieve economies of scale.

This research made the conclusion that growth opportunities of the listed manufacturing, construction and allied firms do not influence their financial performance. The findings however indicated the relationship was positive thus the recommendation that construction and manufacturing firms should take opportunities that would ensure that their firms are growing in terms of sales and revenue.

5.5 Limitations of the Study

The context of this study was listed manufacturing, construction and allied firms in Kenya. However, there are several other manufacturing firms in Kenya which are privately owned and publicly owned but are not listed. Thus, the findings, conclusions and recommendations are applicable and specific to manufacturing, construction and allied firms whose share are listed and trading at the Kenyan main securities exchange.

This research collected data for a period of 5 years from 2012 to 2016 therefore the findings are limited to the period in which data was collected since firms perform differently in specific years. Additionally, this study relied mainly on secondary data collected by other persons therefore, might contain errors of omission or commission

that the researcher has no control over it. These data is also based on accounting ratios, which are historical in nature and may not reflect the current situation.

The study is also limited to the considered variables, which included capital structure, firm size, growth, and liquidity and the measures applied there in to measure the variables despite the fact that there are other techniques, which can measure the considered variables. Finally, the context of the study is Kenya and the findings and conclusion are based on the considered context.

5.6 Suggestions for Further Research

This study used the debt to equity ratio to measure the concept of capital structure while financial performance was measured using the return on assets ratio. The researcher recommends an investigation of the relationship between capital structure and firm performance using other measures like the debt ratio, long-term debt to equity ratio as measures of capital structure and return on equity, net profit margin as measures of firm performance.

The context of this study was listed manufacturing, construction and allied firms in Kenya using data collected for a period of 5 years. Similar studies can be undertaken for a longer time period while incorporating other unquoted manufacturing firms to determine whether comparable findings will be obtained. In addition, the study recommends a similar study can be carried out using economic measures of performance like the Economic value added (EVA) and other market indicators like the Tobin Q and earnings per share. Additionally, a study on capital structure effects on organisational performance using non-financial measures can also be undertaken.

Finally, the study found that the considered research variables only accounted for 15.2% of the variation in the performance of listed manufacturing, construction and allied firms in financial terms. This means that in addition to the error term there are other factors that influence the studied firms' performance. This research therefore recommends an additional research on such factors.

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APPENDICES

Appendix I: Data Collection Sheet

Company _____

Year	Total Debt	Shareholders' equity	Total Assets	Sales	Net income	Current assets	Current liabilities
2016							
2015							
2014							
2013							
2012							

Appendix II: Manufacturing and Construction Companies Listed at the NSE

Manufacturing & Allied

1. A.Baumann& Co Ltd

2. B.O.C Kenya Ltd

3. British American Tobacco Kenya Ltd

4. Carbacid Investments Ltd

5. East African Breweries Ltd

6. Eveready East Africa Ltd

7. Flame Tree Group Holdings Ltd

8. Kenya Orchards Ltd

9. Mumias Sugar Co. Ltd

10. Unga Group Ltd

Construction & Allied

1. ARM Cement Ltd

2. Bamburi Cement Ltd

3. Crown Paints Kenya Ltd

4. E.A.Cables Ltd

5. E.A.Portland Cement Co. Ltd

Source: Nairobi Security Exchange 2015-2016 Handbook and www.nse.co.ke