

**EFFECTS OF SELECTED FIRMS CHARACTERISTICS ON CAPITAL  
STRUCTURE DECISIONS OF FIRMS LISTED AT THE NAIROBI  
SECURITIES EXCHANGE IN KENYA**

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## DECLARATION

This Research Project is my original work and has not been presented in any other university for grading or evaluation

Signature.....Date.....

D61/77153/2015

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### Supervisor

This research project has been presented for examination with my approval as the university supervisor

Sign..... Date.....

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## **DEDICATION**

I would like to dedicate this research work to the Almighty God for giving my good health & the zeal, my parent's dad and mum Mr. Julius Musau Mathuku & Mrs. Esther Musau who are my pillars and source of great inspiration towards my education and general success in life, to my brothers & sisters relatives and all friends' Catherine Kiragu, Dr. Mwiti, Dr. Kathambi, Njeru Eric, Sally, Irene Marion ,Peter Kimathi, Patrick Nyabuto, Ruth Njenga, Daniel Mwakio, Grace Ndegwa, Okok Phoebe, Agnes Kyengo, Joccylyn, Edgar, Prime rose Mbuthia, & Martin Kithinji, Thanks for the encouragement to see me through God bless you all.

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## **ACRONYMS & ABBREVIATIONS**

CS Capital Structure

CSM Capital Structure Management

EVA Economic Value Added

FRA Financial Reporting and Analysis

NPV Net Present Value

NGOs Non-Governmental Organization

ROI Return On Equity

ROI Return on Venture

ROCE Return On Capital Employed

ROA Return On Asset

SMEs Small and Medium Scale Enterprises

SPSS Statistical Package For Social Science

WACC Weighted Average Cost Of Capital

WCM Working Capital Management

## ABSTRACT

Capital structure choice remain amid crucial significant besides the vital choices intended by a corporate since they have a high consequence on the value and the cost of the company. Therefore this study main focus was to examine the effects of selected firm characteristics on the capital structure decisions of companies registered at the Nairobi Stock exchange markets. In summary wealth organization of a company constitutes composition of debt, equity and a mixture of havens which a company uses to run its day to day activities .In order for the researcher to understand the literature on choice of the capital structure, a number of capital structure theories where considered which include Pecking order theory, trade off theory, agency theory and signaling theory. The study also reviewed the work of other researchers on firm characteristics on firm characteristics and the wealth composition. The research relied on published statements of the listed firms at the NSE and the capital markets authority. The collected data was analyzed with the help of the SPSS software version 23 and presented with the help of frequency distributions, computation of mean and standard deviation. The association between the two research variables, independent and the dependent variable a regression model was used which revealed the following results on the variables relationship. Firm size showed greatest consequence on the company choice of capital structure among the listed firms in the NSE followed by asset structure, profitability and liquidity. Further the regression model also generated adjusted R squared value of 0.692 that is to mean 69.2% of the selection of financing option can be well illustrated by research variables. The findings from the study indicated an affirmative correlation among companies size besides the financing option. The findings also revealed an affirmative association among assets structure against the source of financing. The findings from the research also showed that there is undesirable association among the firms gain and source of financing of the firms listed at the NSE while a negative relationship among liquidity and the principal investment was exhibited in the research findings. This leads to a conclusion that rise in company size resulted to a rise in the investment structure of a firm therefore increase in demand to increase the capital base by seeking more financing. The study also found out that an increase in asset structure resulted in an increase in capital structure while an increase in profitability levels resulted in decrease in capital structure, increase in in liquidity levels led to a decrease in capital structure of the firms listed at the NSE. Therefore the study further recommended that firms should understand the specific characteristics that influence choice of a capital structure in order to opt for the best financing option. The study also further recommends that a similar study should be carried out every three to five years to find out the significant of firm characteristics on choice of capital structure of firms listed at the NSE

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of study

Capital structure is one of the most widely researched subjects in applied finance. Extensive research for the last 50 years has yielded very little or no fruits and so little conclusive guidance for managers on management of these firms has been reached. It is paramount to understand the effects of certain firm specific characteristics on capital structure choice based on either profitability or returns on investments, returns on assets or returns on equity. In as much as the stewards who are the managers of these corporations attempt to influence performance at their functional levels be it either in marketing, finance or operations, there still remains a gap in understanding the combined effects of the firms specific characteristics in more holistic view.

Goddard, Tavakoli and Wilson (2005) founded on manufacturing, strategic management, accountancy and finance approaches used the following firm characteristics such as; firm size, market power, firm leverage, as firm short term liquidity in an attempt to investigate their effect on capital structure. Several studies have been conducted in areas of financial performance but were restricted to one or two variables under investigation. Fama and Jensen (1983); Lipton and Lorsch (1992) and Chogii (2009) sought to explain effects of corporate governance on a firm's performance. Ondieki (2010) investigated the relationships of capital structure to financial performance.

Capital structure for small scale firms is constrained by various factors such as inadequate access of long-term credits, high levels of borrowing and interest charges on loans. The undeveloped capital market forces push the investors to strictly rely on

personal savings and support from friends and relatives to start up their business. (Mwangi, 2010). Due to inadequate access to the long-term financing by financial institutions, the small scale sectors opt to heavily rely on short term financing plans due to easy of accessibility, hence the choice of capital structure is a challenge to these firms. Therefore, this research aims to find the effects of selected firms characteristics on choice of capital structure among firms listed at the Nairobi stock exchange in Nairobi Kenya

### **1.1.1 Firms Characteristics**

Abor and Biekpe (2005), researched on financing of small scale firms in the economy and they realized that more than 50% of the company's possessions are run by use of debt hence there is need to closely understand the relationship between liquidity ratio and the firms size, growth against the level of risk. Therefore with this unique features of SMEs operating in different environments, it is true that there is an existence of a gap that needs to be researched on, to understand better the impact of selected firm's characteristics on choice of financing option among the companies listed at the Nairobi securities exchange markets in Kenya.

One of the firms specific characteristics that is constantly associated with choice of capital structure is the firms size, which is commonly measured by either natural logarithm of assets, sales or employees, larger firms are associated with having more potential of diversification to enjoy the economies of scale in the market although this firms are considered to be more formalized than the large scale sectors. The features discussed in this context are focused towards ensuring operational efficiency with an aim to generate superior performance (Penrose, 1959), however other scholars like, Leibenstein (1976), argues that firms size affects performance as a result of formal

procedure and market inefficiencies while larger firms can attract exemplary human resources that contribute positively to the choice of a capital structure.

Liquidity is a ratio between current assets of the firm and the total current liabilities obligations within a period of one year or normal operating cycle of the firm whichever is greater is greater. Therefore for any firm to enjoy the economies of scale efficiently, it should be able to meet the short-term liabilities from its creditors as well as the ability to repay their shorter term debts. The degree to which an asset can be sold or bought in the market should be optimal for the firm. Although a high liquidity ratio predicts that the firm has a lot of idle capital due to lack of proper managerial skills to put the cash in circulation while a low liquidity ratio shows that the firm cannot meet its short-term obligations when they should be honored.

The assets structure of a firm is the proportion of different types of assets held by a firm as they are reflected in the balance sheet. For example, a large manufacturing company or public utility is likely to have proportionately large fixed assets, while retail companies are likely to have proportionately large current assets, such as debtors and stock. a company's asset structure aids to regulate how funds are generated specifically in case of long and short term debts outstanding. Most of small scale firms suffer from the financial crisis due to absence of strong capital position since this firms are controlled by the owners and their limited capital access to equity markets. According to Brigham and Ehrhardt (2013), the current capital structure came into existence in 1958, when Modigliani and Miller published an article. Myers and Majluf (1984) stated that firms need to know how to choose their financing decisions and the answer is that, we rarely have the know-how on the choice of debt, equity and the securities as well. According to pecking order theory, Myers (1984)

proposed that there is no definition of an optimal capital structure although the debt ratio results from the hierarchical financing overtime and therefore the management of SMEs have the preference between internal financing before the external option. The aspect of small scale financing behavior has been clearly explained by other scholars who have been heavily relying on agency theory which argues that investors require time and resources to manage their investments in the market which is either through debt or equity.

Financial leverage of a firm is the degree to which a firm uses income securities such as debt and preferred equity and therefore, when there is an increase on either the debt of the company it sends a signal that the company is highly depending on external funding which only benefits the debt providers that the firm and therefore such a scenario may lead the company to financial solvency as a result of the restrictive covenants imposed by the credit reference bureau on defaulters. Liquidity level differs from one firm to another due to higher levels of variability in the earnings which shows when the bankruptcy level increases it is expected that the firms with high income variability have lower leverage (Titman and Wessel, 1998). The firms which have high levels of operational risks are able to reduce instability revenue level through decrease in liability level which leads to a decrease in the association of the companies operational and control hazard. Small scale firms with high levels of volatility operate to accumulate petty cash in peak seasons in order to avoid running short of investment funds in the long run.

### **1.1.2 Capital structure**

Basically financing choice of a company constitutes use of debt, equity and mixture of havens used by a company in order to finance its operations (Bray & Maug 1999). A

firm's value is referred to as the addition liability worthiness compared to the value of the equity. (Ross et al, 2009). This gives the bottom reason as to why a firm should focus on maximizing its value as well as the stockholders interest in order to be able to establish the ratio that maximizes the shareholders' interests (Ross et al 2009).

According to Myers & Majluf (1984), any sector in the economy has an influence on the choice of a source of financing due to either its form and the composition of the assets that determine the decision on the financing needs compared to the companies' ability avail security to the creditors . The business that operate on tangible assets get financing from debt quickly than ones on intangible assets because of the growth opportunities available and experiences in the markets. Modigliani & Miller theorem (1958), forms a foundation of current capital structure although it is obviously looked into as a pure theory outcome because it avoids many important factors that are crucial in capital structure process. According to this theory as argued by Modigliani & Miller theorem argues in the case of a perfect market different firms will choose different financing operations and therefore this will be irrelevant in determining the value hence it gives a clear reason to enable the researcher to investigate and establish the reason why capital structure is of necessity in management of companies business's in the economy as well as the effects on firms value associated with the choice of a particular capital structure apart from the bankruptcy costs, taxes, a agency costs and information asymmetry in a business. Therefore this research can be researched more to identify whether there are effects of selected firms characteristics on the choice of an optimal capital structure that can help a firm to maximize firms value in the market (Modigliani & Miller 1958).

### **1.1.3 Firms Characteristics And Capital Structure**

Donaldson & Davis (1991) argued that managers of organizations opt to fund their business investments by the use of the firm's accumulated income rather than borrowed funds irrespective of the size of the firm, through issuing of securities to the public in order to raise capital for business operations. When the external funds are needed, the firm will first exhaust the safest way which is securities and debts before opting for the last option that is equity, Myers (1977, 1984) this is the hierarchical pecking order of preferred sources by business firms funding.

Myers and Majluf (1984) assumed the existence of the debt to equity ratio that can be measured through alternating between debt and equity with an aim to maximize the value of the firm, for example issues like the trade of cost and debt benefits in order to decide an optimal level of leverage. In reality, the two major sources of firms financing are debt and equity. The issue of Debt financing has the benefits of tax shield because corporations are exempted to pay taxes on interest expenses while it also has its disadvantages of bankruptcy costs. The aspect of tax increases with the increase in debt financing until to the point where the additional benefits diminish as the additional costs increases. When a firm is at threshold point at which the costs gets started and at this point a firm trades off between expenses and benefits of debt financing. In order for the firm to optimize the two things a decision has to be made on how to finance from debt and equity.

Ross (1978) suggested that the composition of debt and equity sometimes signals the external users based on some assumptions that unlike outsiders, the internal users understand the position of the firm better than externals. Managers of firms prefer usage of the equity financing option than debt because debt financing signifies that



chances of them losing their job is high in case the business becomes insolvent or goes to liquidation as a result of inability to clear the outstanding debts, although the investors have a different look of the firms position in relation to debt.

#### **1.1.4 Firms listed at the Nairobi Securities Exchange market in Kenya**

Currently in Kenya there is only one securities exchange which is Nairobi Securities Exchange (NSE) that was founded back in 1954 through incorporation into a company as voluntary organization of stock brokers. This market facilitates exchange in firms trade securities that are given by the companies listed in the NSE market in Kenya.

More current information on the way debt and equity influences the firms value tends to be minimal. Although Changes on a company's financing has influence towards the management structure which also influences the decision of a firm on how to make strategic choices and the business general performance (Jensen, 1989). Currently, the major issue of capital structure is how to solve the conflict among the business owners and managers of firms on the control of the company resources (Jensen, 1989). Which is topic of great debate and known as agency theory or agency problems. One of the key issues in firm's specific characteristics impact on capital structure is the firm's necessity on the financial structure. Most of the SMES are currently not able to maximize their value due to the inability of the owners and managers to decide on the best optimal financial structure, hence if a research is done on the capital structure decisions then it becomes easy to proof the relevance of renowned theories of capital structure. According to Phlaktis et.al (2010), from previous notable research papers on capital structure decisions, it has been identified that majority of these firms use high leverage levels as the economic status grow hence leading to increase in income,

which lead to high debt maturity dates as the economy of a country becomes more stable due to decreases in interest rates and inflation

## **1.2 Research Problem**

According to Baral (2004), the choice of financing option of a company is subjective to dynamics within the firm and outside the firm. Research from other empirical papers has shown that there are six firm specific characteristics which determine investment composition of a company that include profitability, asset structure, liquidity firm size as well as the economic factors such as interest rates, inflation etc. Therefore the researcher will put these factors in consideration to examine effects of the firm's selected characteristics on capital structure of the firms listed at the NSE. (Harris & Raviv, 1991; Hutchinson & Hunter, 1995; Wald, 1999; 20014; Baral, 20014; Hall et al., 2004; Drobetz et al., 2007; Eriotis, Vasiliou & Ventoura-Neontoura-Neokosmidi, 2007).

Several researchers abroad have studied the capital structures decisions and financial performance of SMEs such as Myers and Majluf (1984), researched on the impacts of Asymmetry evidence on a firm's choice on source of funding with help of descriptive research method among 324 agribusiness firms sampled and the findings of the study showed that in presence of asymmetry information a firm would go for internal financing and opt the debt financing once it has exhausted the internal funds and the last option would be to issue new equity.

Rajan and Zingales (2005), researched on firms in the G7 states to investigate if the size of the firm determines capital structure with a sample size of 21 business selected in each category for small and large scale firms where selected as the sample of the investigation to easy comparison of the outcome from the two samples, whereby it

was found out that large scale firms are more diversified and have few chances of default. The findings of the two researchers are in agreement to the concepts of the tradeoff theory which states that, large scale firms should seek alternative financing through loans due to the fact that they are more diversified, which justifies the fact that the firm size and leverage have a close relationship

From previous studies to find out the impacts of capital choice on performance return of pharmaceuticals industries in Kenya, Adekunle (2010), investigated the firm's debt ratio against the capital structure using the assets return against retained earnings as the performance tool. The outcomes of the study found out that firms debt ratio influences negatively the firms measure of performance. The un- explored area in this study was that there was no consideration of firm's specific characteristics in the analysis and also the effect on capital structure decision of small scale firms. Kaumbuthu (2011), did a research to examine the association between capital structure and return on equity for industrial related sectors between 2004-2008 periods. The capital structure is characterized by the debt equity ratio while the decision relies on the return on equity. During this analysis the researcher used regression analysis method which revealing a decreasing impact on debt ratio and return on equity

Muia (2011), researched the association of financing choice and the agency costs of small scale firms where there is a significant impact has been identified to exist as a result of companies specific features such as firm's size, non-duality, leverage and growth. In conclusion, it is evident that there is no sufficient study that has been done to test the impact of selected firm characteristics on choice of financing of firms listed in NSE in Kenya. This has led to existence of a gap in the SMEs sector that this study

will address this gap and it provides a rationale to seek the solutions for questions such as what are the effects of selected firm characteristics on choice of capital Structure of firms listed at the NSE in Kenya. Thus the researcher will sought to close the knowledge gap by seeking responses to the following query; what are the impacts of selected company's characteristics on choice of financing of firms listed at the Nse.

### **1.3 Objective of the Study**

The main objective of the research was to investigate the effects of selected firms characteristics on the capital structure decisions of companies listed at the Nairobi stock exchange in Kenya

### **1.4 Value Of The Study**

The research results will help to build more knowledge and understanding of capital structure due to the fact that there is a mixer of various models (Roman et al., 2000; Nguyen and Ramachandran, 2006; Mac et al, 2006). This study adopted the various models with an objective to support projections and establish the know-how on key determinants of financing choice against the effects of firm's selected firms characteristics of Companies listed in NSE in Kenya.

This study will be beneficial to academicians in finance and accounting field especially those in small scale firms, such as private institutions, retail and wholesale traders as they will constitute both practical field knowledge and the research findings to form a firm foundation for a future research on understanding the impact of firms specific characteristics on choice of a capital structure.

Business consultants with an interest in gaining knowledge on the effects of selected firm characteristics on choice of financing option which benefits from this research as

they conduct their consultancy services to clients through effective advisory for ease of running business both in the local markets and international level since this research paper will be published for knowledge sharing.

Corporate managers; The basic fundamental objective of financial management decision is to ensure that they maximize shareholders wealth through the issue of shares therefore this research paper will help managers in those corporates in making financing decisions that are in line with the fundamental objectives as it will show the resultant effect of using debt in financing projects based on the firms characteristics to get a balanced capital structure. In order to enable the researcher overcome the dynamics of the financial management practices on the financial performance this research paper objective is to find out the effects of selected firm characteristics on the capital structure choice of firms listed in NSE in Kenya.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section generally outlines overall assessment of capital structure and its determinants and the theoretical relationship between firms' specific characteristics and capital structure decision. The chapter also brings out the several arguments on the best perspectives that aim in understanding of firm's specific characteristics and capital structure decisions. The second level helps to identify each characteristic and theories that explains it, finally an explore on review of the available research papers that researched on outstanding factors that show relationship between firms specific characteristics and the firms performance. At the end of the chapter the study will expose the existing gaps that can be explored for research.

#### **2.2 Theoretical Review**

Theoretical perspectives are outlined that support in explaining the small scale financing decisions. Bradley & Kim (1984), argued that an ideal capital is a situation where the combination of debt and equity creates a financial structure from a firm that aims at maximizing the potential value for the owners. Different scholars have explored capital structure based on the two major perspectives that is the traditional view which composes of the Modigliani and Miller(1958) (mm) without corporate taxes, Modigliani and Miller (1966) (MM) with corporate taxes as well as the modern theories of capital structure which explains the factors that affect capital structure because different researchers were not satisfied with the use of debt by firms therefore they had to get a justification of the wide use of debt in business operations

which led to advancement in corporate usage of debt. This now forms the interest of the researcher and the following theories are discussed below.

### **2.2.1 Pecking Order Theory**

This concept was first projected by Donaldson & Davis (1961) and he argued that managers of organizations opt to fund their business investments through use of retained earnings other than external funding irrespective of the firms size through issuing of securities to the public in order to raise capital for business operations. When the external funds are needed, the firm will first exhaust the safest way which is securities and debts before opting for the last option that is equity.

Cosh and Hughes (1994) argued that within the overall theory, small scale firms when are compared to large scale firms will opt to depend on shorter debt such as trade credit and use of overdrafts. They also argued that this theory needs to be refined in order to provide information on ability of assessing the risk level of the business when a source of financing is picked.

According to Myers (1984); Myers and Majluf (1984), pecking order theory argues, that firms first exhaust their internal funds as supported by the assumption that there is no equilibrium point for debt to equity ratio and any other available mechanisms before going for external funding as this will help to control the management of the firm although it was also argued that some business firms use equity as a source of financing before they have utilized the internal mechanisms. This theory also raised concerns on the effects of investment structure on the capability of companies to raise internal funds and how to start and select new investments options. According to the theory, only those firms that are anticipating to earn huge profits for growth will be in need of external financing if the internal sources are not enough for its operations

financing, this is in line with the conclusions by Hutchinson (2003), who argued that firms with less earnings opt to go for external funds in the event that these firms are faced by investment opportunities in the long run.

The capital structure of firms is also assumed to be driven by the information asymmetry because there is a close relationship on how the pecking order theory works in management (Newman et al., 2011) and this is highly considered by Myers and Majluf (1984) when they were developing the theory since the available stocks are subject to undervaluation due to the fact that managers of these firms have more information of firms than the investors as they oversee the business on daily basis, hence the leverage level is high when also the information asymmetry is due to high levels of risk. Pecking order theory is of importance to SMEs because most of information costs.

According to Jordan, Lowe and Taylor (1998), The main reason why SMEs stick to the pecking order is to ensure that they can control and retain the firms performance without being affected by adverse selection and moral hazards according to (Cosh and Hughes (1994) and Frank and Goyal (2003) that can be avoided by ensuring that you provide the collateral security required by the financial institutions which can be avoided by ensuring that you service the collateral required by the financial institutions.

### **2.2.2 Trade Off Theory**

This theory agrees with the arguments of the pecking order theory, Myers and Majluf (1984) who believed in the assumption that for a firm to have an optimal capital structure it has to get its financing from equity once it has exhausted the debt source in order to ensure that the total worth of the firm is maximized, for example issues



like the trade of cost and debt benefits in order to decide an optimal level of leverage. In reality, the two main causes of funding are debt and equity. Debt financing has the benefits of tax shield because corporations are exempted to pay taxes on interest expenses while it also has its disadvantages of bankruptcy costs. The aspect of tax increases with the increase in debt financing until to the point where the additional benefits diminish as the additional costs increases. When a firm is at threshold point, that is; the point at which the costs gets started and the firm trades off between costs and benefits of debt financing. In order for the firm to optimize the two things, a decision has to be made on how to finance from debt and equity.

Harris and Raviv (1991) argued that debt financing has both advantages and its disadvantages because as the leverage increases, the tax shield will go in favor of the firms benefits as on the other side the bankruptcy costs increases in order for the trade-off between debt and equity happens to capitalize the company's net worth. Whenever there is an opportunity of investment in the market, a firm can take advantage from the debts, as the same time the leverage increases, bankruptcy costs and volatility also increases. The tradeoff concept on investment choice indicates that a value maximizing firm equalizes benefits of debt and costs of debt to decide on optimal level of leverage. Tradeoff theory suggests that a firm moves back or forward optimal leverage when corporations set their capital structure , they take idea from tradeoff theory of capital structure hence it is concluded that this theory gives the idea of how much debt finance to select keeping the balance of costs and benefits.

### **2.2.3 Agency Theory**

Fama and Miller (1972), are known scholars and pioneers of a research on the possibility of the functions of managers and the shareholders in running business firms. Modigliani and Miller (1958), Jensen and Meckling (1976), originated with the agency theory that argues on issues of the Agency costs. The findings of their study was that agency costs evolves from a conflict of firm's managers and the shareholders. For example, in the case where managers are interested in investing in projects that have a negative NPV, or even firms making unnecessary acquisitions through paying huge funds on supplies in order to increase the firms size and market reputation other than maximizing the wealth of shareholders because managers get highly paid from the big companies. In conclusion, managers try to operate firms in their interest rather than taking into consideration of increasing the share capital of shareholders as well as maximizing the firm's total value in general.

The biggest problem of agency cost of equity occurs due to the fact that managers are more encouraged and focused to pick more risky opportunities in the market in order to satisfy the interest of the shareholders (Harris and Raviv, 1991) since they not solitary recipient to acquire the earnings from the company. In order to control and evaluate managers in organizations and reduce the shareholders conflict, it is advisable to employ the debt component (Jensen, 1986). This reduces the free cash flow of the managers since there is an additional debt that needs to be serviced within a certain timeframe.

The best solutions to agency cost is quite expensive for small and medium firms because it increases the in between costs of transaction shareholders and the SMEs (Jensen and Meckling, 1976). Since SMEs are not subjected to mandatory disclosure

of their financial records to the public like in the case of the public owned firms and therefore this helps reduce the agency costs (Vasilescu, 2010). Stieglitz and Weiss (1981) have highlighted that the choice optimal level of financing to firms is purely influenced by the agency problems which come up as a result of the moral hazards and information asymmetry which is referred to as credit rationing.

#### **2.2.4 Signaling theory**

Ross (1978) discussed on this concept and recommended that the capital structure of a firm shows the position of the firm to external users based on some assumptions that unlike outsiders, the internal users understand the position of the firm better than externals. Managers of firms prefer usage of the equity financing option than debt because debt financing signifies that higher chances of them losing their job is high in case the business becomes insolvent or goes to liquidation as a result of inability to clear the outstanding debts, although the investors have a different look on the firms position in relation to debt because they consider the debts as favorable due to the fact that high debts levels signals high quality.

Generally, signaling theory has little impact on the small sectors since these firms are not public and therefore they are not listed in the stock exchange markets hence have no impact on the influence of potential investors in the capital markets. Although these firms need to send signals to the lenders and creditors for financing. Ross (1977), argues that the level of information among the managers and investors debt level shows the possible effects hence this is regarded as a signaling game due to the fact that the liability and the period of the giving out a new sale of shares which signify the performance of the firm that may finally lead to outbreak of moral hazard and selection problems (Akerlof,1970) Although there has been extensive discussions

on the impact of the signaling effect towards the firm's capital structure there are a number of opinions that have been highlighted by scholars especially on its significance in order to determine the leverage. In conclusion, it is advisable that a debt equity ratio should be balanced between the demands of the firm and speculations of the investors, general public on the prospect of the firm's future performance.

### **2.3 Effects of selected firm characteristics on capital structure decisions**

Different researchers have settled on a common conclusion that capital structure theories have been of great help to managers of firms on making a choice between investments alternatives available to them since, there is a level of ignorance on the effects of selected firm's characteristics impact. Management researchers have developed different theoretical frameworks based on paradigms due to the diversity in strategic management, psychology and sociology in order for them to explain how capital structure on financing decisions are done (Barton and Matthews, 1989; Matthews et al.,1994; Roman et al.,2000)

#### **2.3.1 Size of the firm**

Different theoretical arguments have been put in place in relation to the connection among the scope of the company and its choice of the capital structure. The cost of issuing debt and equity is more witnessed within small scale firms more than the large scale firms as highlighted by Musili (2005), therefore it is suggested that small firms may be more leveraged than large firms hence they opt to finance their operations on short term borrowing other than using the long term method due to the availability of lower secure expenses allied with a substitute. (Titman and Wessel, 1988), which tends to agree with the pecking order theory due to the adverse selection problems.

The size of a firm can be established by comparing the level of sales against the natural logarithm of the total assets (Deesomsak et al...,2004), that is the firms total turnover (Rajan and Zingales, 1995) as well as the natural logarithm of employees (Amenberger et al...,2013). Small scale firms are encouraged to have low leverage ratios because they can be easily liquidated when they are faced by financial distress. The agency theory experts argue that it is necessary to ensure that a business is able to relate closely the size of the firm and level of debt. According to Ortiz-Molina and Pena's (2008), they found out that the size of a firm has a positive effect on the ability of the firm to breakeven and therefore this limits the financing period of SMEs by the financial institutions so that they can have a control on the risk involved on lending.

### **2.3.2 Profitability**

Profitability is the ration between firm's profits before the tax against the sales turnover (Ortqvist et al..., 2006). The key factor determining choice of a suitable capital structure for firms is the level of a firm's profitability. Due to the fact that when a firm is making huge profits, it finances its operations using internal funds and it will only opt to use external funds when there is need for additional funds (Charkraborty, 2010). A profitable firm uses less debt than unprofitable firm as argued by Kemsley and Nissim (2002), a firm with financial distress has less operations to high cost of debt which is not the case of the large scale firms that can take advantage of external funding from banks including the less profitable firms in the markets (Riportella and Martinez, 2003). The level of profitability of a firm has an inverse effect the level of the debt ratio which agrees with the arguments of the pecking order theory (Zarebski and Dimovski, 2012). Rationally, the managers and owners of small scale firms prefer to manage their firms (Hamilton and Fox, 1998). Therefore, there are less chances of excessive investment. Majority of this firms do

not support debt financing (Vos et al., 2007) but instead they opt to use internal financing for example use of retained earnings other than external sources of financing business operations.

In contrast, Omondi (1996) in his research found out that Kenyan firms tend to borrow more when their profits are high due to the reason that huge profits act as an incentive to a firm to invest more it also acts as a security to borrow more for business expansion.

Therefore his finding indicates that most of the firms do not agree with the pecking order theory findings on decision making in choosing their source of financing. However, Odinga (2003) found out that there exists a connection amongst the leverage and productivity of firms since the profitable firms tend to finance their operations from retained earnings and they borrow less due to fear of conflicts on payment of the debts since they believe that equity is more safe because the investors do not demand required rate of return.

### **2.3.3 Assets Structure**

The level to which firms assets are tangible raises from the firm's ability to maintain a greater liquidation value. This is because the fixed assets including property plant and equipment do not depreciate their value even in times of financial crisis and therefore this gives heavy capital demanding firms to maintain their high levels of debt at lower costs because there is no threat to bondholders. Myers (1984) asserts that firms holding valuable Intangible assets create difficulties in accessing credit than firms holding tangible assets. Tangible assets have a decreasing effect on the financial leverage due to the risk involved on the operating leverage (Hutchinson and Hunter, 1995)

From a theoretical view, in terms of maturity, the pecking order theory argues that the level of presence is relatively related to short term debt financing and shows a positive impact on the long term financing (Barros et al., 2013).

In the Kenyan context, the view on firms with tangible assets tend to borrow more is commended by Kamere (1987) and Omondi (1996). This translates that majority of firms in Kenya prefer debt financing than equity financing and this tends to agree with the pecking order hypothesis since the theory argues that large scale firms prefer debt financing than equity due to the fact that it is more secure with less agency costs associated with it, although the agency cost theory argues that any asset used as security to acquire funding can be of great help to regulate and control managers and hinder them from the problem of moving all the firms value from debt holders to the shareholders of the firms.

#### **2.3.4 Information asymmetry**

The main assumption to the validity of MM proposition 1 by Modigliani and Miller (MM) is the similarity on the outcome. This is to mean that all market participants inclusive of firm's managers and shareholders are treated with an assumption that they have same knowledge on the future position of the firm. Myers and Majluf (1984) assumed any willing and potential buyer of a security has no or very limited information about the prospects of the firm's continuity compared to the managers who have full information about the firm and they will only issue security in the market when the prices are higher than the real assessment of the firm's value. Sophisticated investors keenly check on the estimate projected by the firms whenever the management announces their securities into the market because the more the gap

on information asymmetry is, the higher the chances of expectations hence the greater the negative reaction on the release of a new issue to the market.

## **2.4 Empirical Review**

The review on firms' selected characteristics towards the choice of a capital structure in firms conducted by a number of scholars argues that there is a positive relationship that agrees with other research arguments on the assets structure and the leverage position of large scale firms. The research on small scale firms has revealed that although there is no conclusive evidence on the relationship of SMES assets structure and leverage, there is some positive relationship. Although, if a business opts for the long term financing there is always a undesirable association among the two firm's characteristics in the long run and possibly in the case of a short-term. (Van der Wijst and Thurik, 1993; Chittenden et al.,1996; Jordan et al., 1998; Michaels et al.,1999). Due to limited association between the risk and leverage for small scale firms in Kenya, it is argued that there is existence of some positive relationship and not a negative one (Jordan et al., 1999).

The assets structure of a firm has an influence on determining the firm's source of capital and the decision on the optimal source of financing. The point at which a business's assets are fixed should be able to show a higher chances of converting its stock into cash values (Hovakimian et al., 2004). Those business that invest highly on fixed assets are known to have higher financial leverage because they acquire funds at lower interests since the debt is secured with the same asset the firm is purchasing. In situations where the business assets are used as security to financing it helps the firms to reduce the various expenses related to adverse selection and moral hazards, which makes a firm being able to enjoy the benefits of easier access to alternative sources of



financing both debt and external funds. In the case of SMEs availability of collateral security helps firms to be excluded from relevant investments in the markets because these firms can enjoy financing from banks to control the conflict between the entrepreneurs and the financiers. Further evidence on profitability versus leverage agrees with the pecking order theory arguments since it concludes that the leverage of the firms is negatively related to Profitability (Jordan et al., 1998; Michaelas et al., 1999).

Overall, existing evidence in the developed markets asserts the existence of influence of firm specific characteristics on the capital structure decision of firms in the NSE with that of asset structure, firm size, risk and growth being positive. From other critical reviews, it shows that studies of a similar nature are lacking in East African economies, particularly, Kenya. More importantly, none of the studies has reviewed the above mentioned firms specific characteristics such as effect of firms size, profitability and risk on choice of the best source of financing. This study therefore sets out to investigate the effects of firm's specific characteristics (Size, profitability, asset structure and liquidity) on the capital structure choice of firms listed at the NSE in Kenya.

Booth et...al (2001) analyzed small scale firms financing choices in developing countries, only to find out that there is a similarity on the determinants of capital structure decisions in both countries. From previous studies on capital structure in Kenya, for example a survey conducted by Kamere (1987) whereby he wanted to find out the factors that they consider to be of great importance in their operations and among them was the level of interest rates and firm's asset structure

From other empirical studies on the capital structure choice, many researchers tend to have put most of their concentration on large scale firms listed at NSE for both developed and developing countries, because these firms can get financing from national and international markets. Therefore it is not advisable to base judgments on this results for all the existing types of business

Kaijage and Elly (2014) studied the effects of corporate characteristics on the best source of financing for SMEs and DTMs and the study found out that size and growth positively influence choice of financing of the DTMs in Kenya. Liquidity, profitability and tangibility of assets negatively influence capital structure of the DTMs. From the study, it was concluded that the findings of the study agreed with the arguments of pecking order theory as well as the signaling theory on choice of a firm's source of financing. Rafiu and Akinlolu (2013), researched on the determinants of non-financial firms in order to establish whether profitability, asset structure and the firm's size shows a positive relationship as a result of long term and the total debt. As well as whether the growth opportunities are negatively associated with total debt. In his study he concluded that there is close relationship and the factors are key determinants on a firm's position.

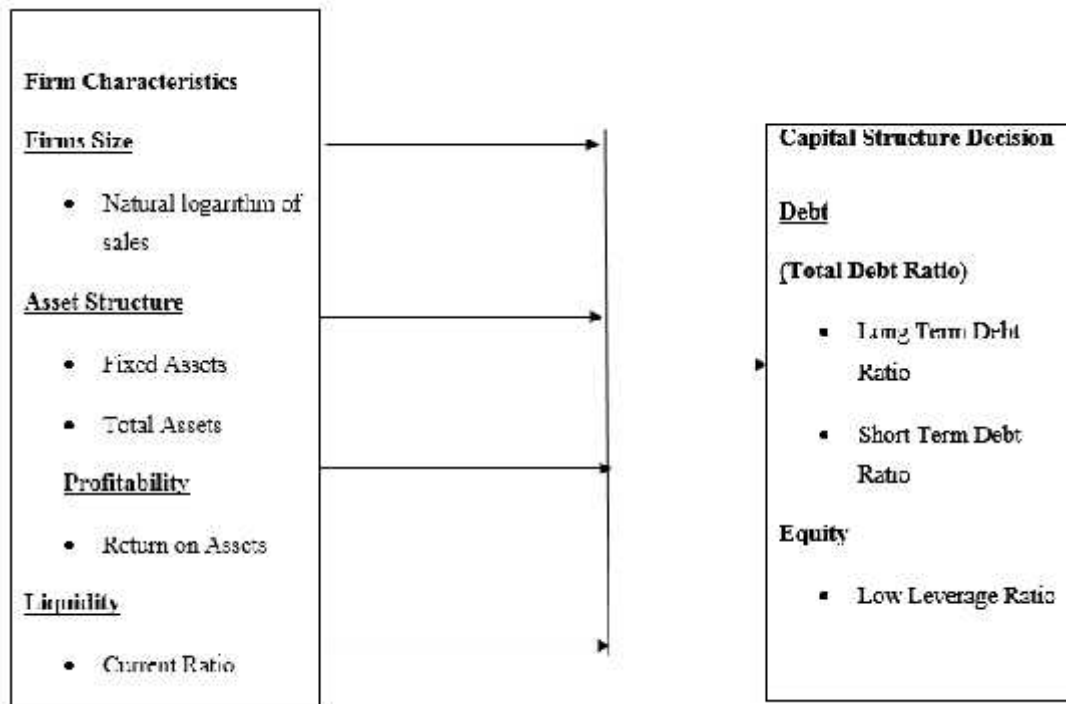
Odinga (2003), researched the major determinants of financing variations among of SMEs listed at the Nairobi Securities & exchange Markets whereby he regressed assets tangibility, profitability growth opportunities, business risk, non-debt tax shield and firms size against leverage. The findings of the study were that only the profitability and non-debt shield tested significant with profitability being negatively related to the leverage

In summary, this study was carried out with an objective of examining the effects of firm's specific characteristics on the best source of financing of firms listed in the Nairobi securities & exchange market in Kenya. Although literature on capital structure determinants is abundant it is true that a gap exist in the major determinants of the capital structure decisions in order for the managers to be able to control the cash flow of funds of firms and make wise decisions

## 2.5 Conceptual Framework

### Independent variables

### Dependent Variables



Source: Author 2017

### Independent variables

Return on assets which is the firms profit is a gain that is recognized once the quantity of profits after a commercial action is more than the company's spending, operational costs and taxes in order to continue the business activity. The measure of profitability

is working revenue proportion profit, incomes before interest and against the total assets.

Firms size, in reality large firms seems to be more spread and they have highly steady money inflow, the probability of evasions for large companies is fewer related to small scale firms hence the aspect of financial crisis is considered to be less for larger firms, therefore the size of a firm is normally calculated by normal logarithm of entire assets

Assets structure is the composition of tangible assets such as land, building, equipment's and they have an element of debt capacity, and the measurement instrument on value of the assets is through use of the ratio of net fixed assets to total assets.

Dependent variables

Debt ratio is the percentage of business possessions that are specified through assessment to the obligation. That is the whole debt distributed by the total possessions, long-term debt ratio indicates percentage of a company's total assets which is financed from the longterm. This is normally calculated as a stretched debt distributed by total possessions whereby the short-term debt comprises of any repayments incurred by a company within a period of one year. This show the ability of a firm to honor its short-term financial liabilities.

Managers of business entities make a decision on the best source of financing by looking at the debt to equity ratio since its well-known that business that use more debt than equity have a great influence ratio on choice of financing choice which might lead increase in development rates while a less investment arrangement leads

to lower chances of expansion, therefore it is the duty of the administration to examine an ideal combination of debt and equity i.e. the optimal capital structure in order to make a choice on the best source of financing for the firms listed at the NSE in Kenya

## **2.6 Summary of Literature Review**

The Empirical review shows evidences of a positive relationship which is theoretically accepted on the choice of financing option of different firms listed at the NSE, looking at the assets structure and the leverage of those firms. Due to the fact that there is no a conclusive agreement on research findings by scholars on small scale firms there is some element of positive relationship between the assets structure, leverage as well as the long-term debt although similar research shows a negative association of short-term debt (Jordan et al.,1998; Michaelas et al.,1999)

Research findings on the relationship between the firms size operating within a given environment, confirms that there is a similar variance in the same direction with the firms leverage, long-term financing, external financing. Although some firms show a negative output of the short-term liabilities and size of the firm. Generally, from existing evidence in the developed markets agree that firms specific characteristics has an influence on the type of capital structure a firm is going to adopt with those of asset structure, firm size, risk and growth being of greater positive influence. Further, critical review shows that studies of a similar nature are lacking in the east African economies, particularly Kenya. More importantly, none of the studies reviewed above examined the company's specific features such as size, company's productivity and risk on selection of a capital structure. The study objective is to examine the effect of

firms selected characteristics such as company's scope, profitability, assets structure and liquidity on the best financing option.

<b>Author</b>	<b>Focus of study</b>	<b>Methodology</b>	<b>Findings</b>	<b>Study gap</b>
Van der Wijst and Thurik, (1993)	The review on firms' selected characteristics towards the choice of a capital structure in small scale firms	Descriptive research design	There is no conclusive evidence on the relationship of SMES assets structure and leverage,	The study focused on the SMES in Kenya
Hovakimian.,et (2004)	The causes of target capital structure. the case of dual debt and equity concerns	Descriptive research design	The assets structure of a firm has an influence on determining the firm's source of capital and the decision on the optimal source of financing	The study did not focus on other firm characteristics other than asset structure
Booth et al (2001)	Small scale financing Choices in developing	Descriptive research	The asset structure of the SMEs has	The study focused the

	countries	design	an influence on the SMEs	SMEs in developing countries
Kaijage and Elly (2014)	Effects of corporate characteristics on the best source of financing for SMEs and DTM'S	Descriptive research design	The study found out that size and growth positively influence choice of financing of the DTMs in Kenya. Liquidity, profitability and tangibility of assets negatively influence capital structure of the DTMs.	The study focused on asset tangibility and did not focus on factors such as logarithm of sales, liquidity and profitability

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The section outlines details of the exploration procedure which stood in this research. It explains in details the investigation plan, sampling technique, the target population, data collection procedures and the data analysis method that were used, in order to get proper and maximum information related to the question in study. That is, the effects of selected firms' characteristics on choice of financing option of firms listed at the NSE in Kenya.

#### **3.2 Research design**

According to Orodho (2008), Research design is the overall method that an individual uses to integrate the variables of the study in a logical manner to help answer the research problem identified in a certain area of study. The research was carried out by employing secondary quantitative data from firms listed at the NSE. Descriptive research design was adopted to study the relationship among the two variables, that is, how various independent variable i.e. ( $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ , variables are manipulated in order to examine how a dependent variable is affected within a relatively controlled environment

#### **3.3 Population**

For the purposes of the study, the research concentrated on firms listed at the NSEs markets in Kenya covering the period between 2006-2015. The study was limited to all the firms listed in the NSE, ranging from agricultural sector, automobiles and accessories, banking, commercial and services, construction, energy and petroleum,



insurance investment services and industrial sectors, because of greater availability and reliability of data from the 9 categories of the firms listed at the NSE.

### **3.4 Data Collection**

The research statistics was sourced from secondary sources from NSE covering the period from 2006-2015. The NSE was ideal for investigation centered on the accessibility, convenience, and consistency of the data to be used. This period is considered long enough to provide sufficient variables to ascertain the strength of the relationship. The secondary data obtained included, audited annual financial statement from NSE and CMA, the daily trading data from NSE handbook i.e. share prices including open and closing prices will be obtained basically from the NSE for 10 years and outstanding shares, profits, total assets, total expenses for the year, long and short term debts outstanding as at the close of the period, the daily market share prices and equity.

The researcher used firms' age since the date of listing, as this is in conformity of Shumway (2001) who asserts the most meaningful measure of age is number of listing a firm has been listing in the NSE. Fama and French (2004), and Chun, Kim, Morck and Yeung (2008), measured firms age in the same way.

### **3.5 Data Analysis**

The findings of the study where tested for reliability and accuracy so as to ensure there is uniformity, consistency and the completeness as well as arranging the data to easy the process of coding and tabulation before it is analyzed. Once the testing of the data was done then entered into statistical package for social sciences (SPSS) statistics for analysis version 23. The statistics was then analyzed by generating descriptive statistics such as percentage and measures of central tendency like mean and standard

deviations. In order to compute the regression analysis of the variables that were measured. Correlation examination was used to see the direction and the effects of firm's specific characteristics on the choice of a capital structure. The research was further analyzed using a multivariate linear regression, coefficients of determination (R squared), ANOVA, and beta coefficients for the model to state how much the model was explained any changes in the dependent variable that is the return on assets. The regression model was used to compute the association among the firms' specific features and the capital structure decision of firms listed at the NSE in Kenya

### 3.5.1 Conceptual Model

The study used the following regression model to conceptualize if selected firm characteristics has effects on the capital structure decisions of companies listed at the NSE, since the study has more than two independent variables.

$$Y = \theta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \mu$$

Where Y: Capital structure,  $\theta_0$ : Constant,  $X_1$ : Firm size;  $X_2$ : Asset Structure,  $X_3$ : Profitability,  $X_4$ : Liquidity,  $X_5$ : Leverage,  $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  are the beta coefficients for the respective independent variables

$\mu$  is the error term in the model

### 3.5.2 Analytical Model

The subsequent regression model was used to examine the data

$$Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + \dots$$

$$Y = \theta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \mu$$

The definition of the variables in the research model is as follows:

Y is the Capital Structure = Debt/Equity

X<sub>1</sub> is Firm Size = Natural Log of Assets

X<sub>3</sub> is Liquidity = Ratio of Current Assets To Current Liabilities

X<sub>4</sub> is Profitability= Ratio of Earnings before Interest & Tax to Total Assets

X<sub>5</sub> is Asset Structure= Fixed Assets/ Total Assets

(0, 1,2,3,4, & 5) are the beta coefficients for the respective independent variables

μ is the error term in the model

### **3.5.3 Test of significance**

The test of significance on my research was done and coefficient of determination (R<sup>2</sup>) applied to find out the effects of selected firms characteristics on choice of a capital structure decisions of companies listed at the NSEs in Nairobi. The hypothesis test was also tested on a predetermined significance level.

## CHAPTER FOUR

### DATA ANALYSIS RESULTS AND INTEPRETATIONS

#### 4.1 Introduction

This section outlines the results of data analysis and findings. The data of listed companies at the NSE was collected from published financial statements and capital markets authority. The data was analyzed using Statistical Package for Social Sciences version 23 software and the findings was presented in descriptive statistics, correlation analysis and partial correlation analysis, and regression analysis. Data was collected from audited financial reports relating to variables such Firm Size, Asset structure, Liquidity and Profitability. 29 of the 53 listed companies at the NSE whose data was readily accessible were analyzed from the year 2006 to 2015.

The study's overall percentage of representation was 55%. According to Mugenda and Mugenda (2003), a response rate of 50% is satisfactory for data exploration and reporting. Therefore the reply rate was satisfactory for data examination and reporting. However, some of the companies were not included in the study because 11 firms where not listed at the NSE as at 1st January 2006 and also 13 companies did not disclose adequate financial data relating to the study's variables over the ten year period (2006 - 2015)

## 4.2 Descriptive statistics

Descriptive statistics of the study were computed and summarized as shown in Table 4.1 Below

**Table 4.1: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Capital structure	290	-.09	3.54	2.0843	.89492
Firm size	290	8.47	16.12	12.3200	1.65627
Asset structure	290	.10	.98	.6853	.09781
Profitability	290	.12	.47	.2582	.11422
Liquidity	290	1.12	21.12	7.1300	4.91973
Valid N (list wise)	290				

The table above shows that the mean of the debt ratio for the 290 observation from the 29 listed firms from the year 2006 to the year 2015 is 2.08, this implied that the average debt ratio of firms listed at the NSE, while a standard deviation of 0.895, implied the variation of debt ratio in the listed firms, the minimum debt ratio is -0.09, which meant that there were firms with a negative debt ratio and the maximum debt ratio is 3.54, which meant that there are listed companies which have a debt ratio. The findings indicated that the scope of the company that is measured by use of logarithm of sales show a mean of 12.32, this implied the average logarithm of sales in the listed firms while the standard deviation of 1.656, indicated the variation of logarithm of sales in the listed firms the minimum logarithm of sales is 8.47, this implied the minimum logarithm of sales in the listed firms and the maximum

logarithm of sales is 16.12, this implied the highest logarithm of sales of listed firms. On asset structure measured by fixed asset the mean is 0.6853, this indicated that the average asset structure of the listed firms while a standard deviation of 0.09781 indicated the variation of asset structure of the listed firms. The minimum fixed asset is 0.10, which implied to the minimum fixed asset of the listed firms and the maximum fixed asset is 0.98, which implied to the maximum asset structure of the listed firms. On profitability the mean return of asset is 0.2582 which indicated the average of profitability of the listed firms while standard deviation of 0.11422, indicated the variation of profitability in the listed firms.

The minimum return on asset is 0.12, this indicate the minimum profitability of the listed firms and the maximum return on asset is 0.47 which indicate the highest profitability of the listed firms.

Lastly liquidity indicated the current ratio mean is 7.13, implied to the average liquidity of the listed firms with a standard deviation of 4.919, implies to the variation of liquidity of the listed firms the minimum current ratio is 1.12 which implies the least liquidity of the listed firms and the maximum current ratio is 21.12, which implies the maximum liquidity of the listed firms

### 4.3 Diagnostic statistics

**Table 4.2 Test for collinearity**

Collinearity Statistics		
	Tolerance	VIF
(Constant)		
Firm size	.312	3.205
Asset structure	.719	1.391
Profitability	.767	1.304
Liquidity	.680	1.471

Table 4.3 presents test performed to test the presence of collinearity using variance inflation factor. The findings indicated that the VIF of firm size, asset structure, profitability and liquidity is 3.205, 1.391, 1.304 and 1.471 respectively. The findings also revealed that the tolerance of the variables were less than 10 meaning there was no collinearity. The findings also implied there was no collinearity since the values obtained were between 1 and 10.

**Table 4.3 Test of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Firm size	.148	290	.000	.885	290	.000
Asset structure	.229	290	.000	.857	290	.000
profitability	.249	290	.000	.839	290	.000
liquidity	.349	290	.000	.616	290	.000

a. Lilliefors Significance Correction

From the table 4.4 the results of normality are tabulated of all variables under study. The researcher used Shapiro wilk method to test the normality since is highly recommended by Ghasemi & Zahediasl (2012), the findings presented the variables i.e. company scope, profitability, asset structure and liquidity had a p value of less than 0.05 on choice of a capital structure. According to field (2009), data is non-significant if the test shows that ( $p < 0.05$ ), while the data is referred to be significant when ( $p > 0.05$ ). Therefore from the study we can conclude that the data set for the four variables are not distributed normally. Pallant (2007) and Elliot and Woodward (2007), argued that alternative parametric methods can be adopted whenever the data is not generally distributed to test the signifiacne. In order to find out the deviance of the data from normality, histograms where used as well and the results are tabulated in the following figures 4.1, 4.2, 4.3 and 4.4.

**Figure 4.1 Histogram of firm size**

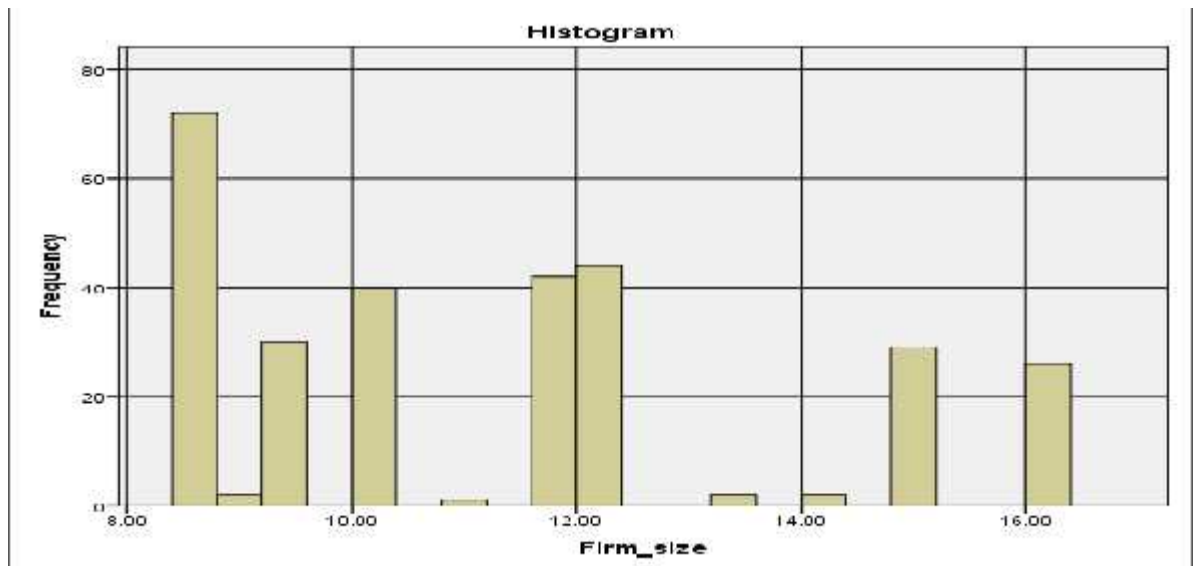
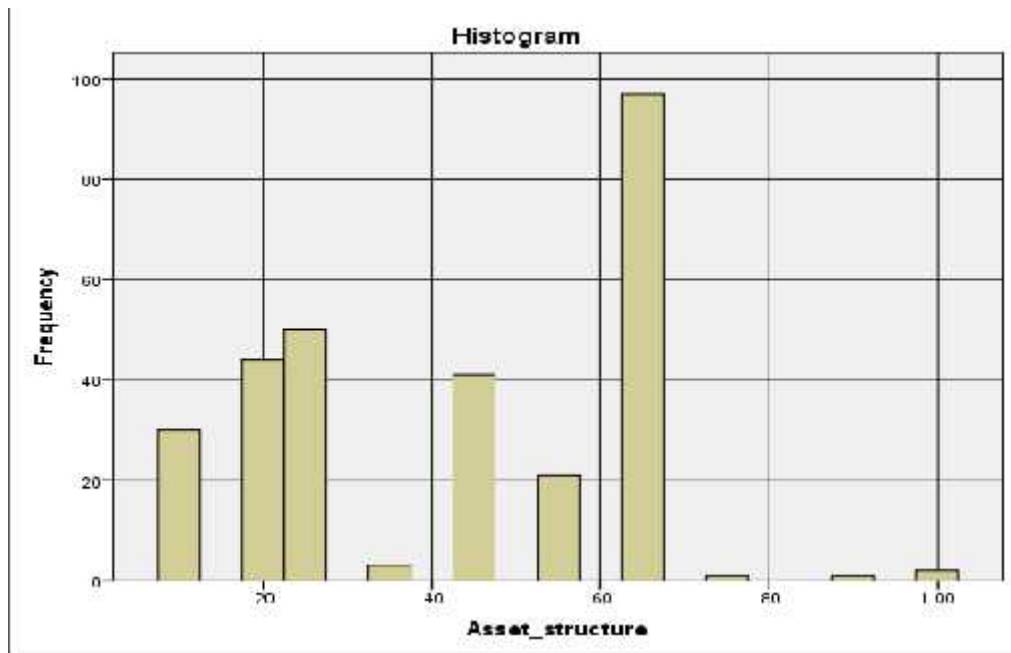




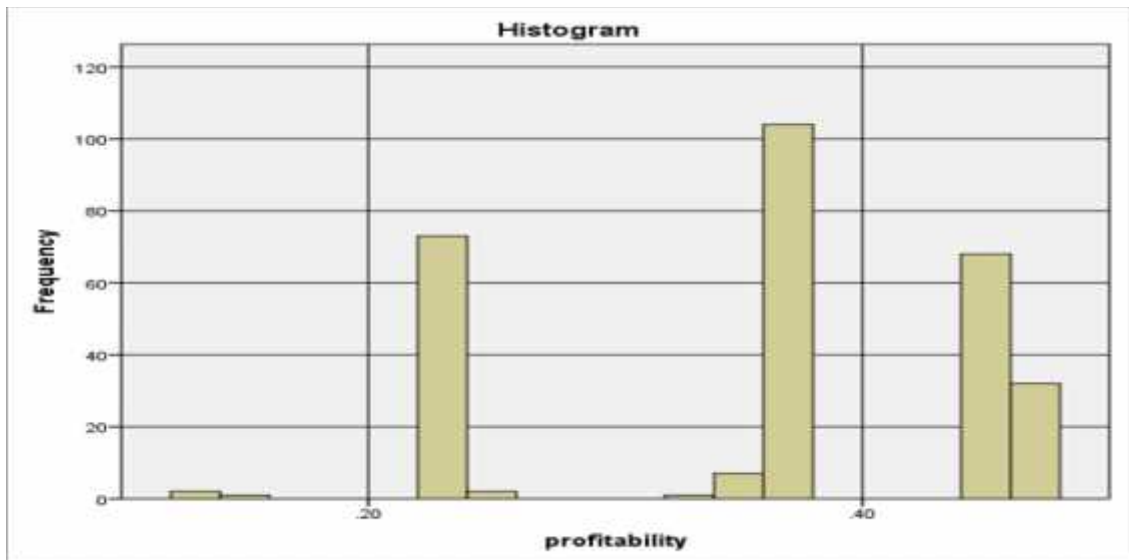
Figure 4.1 shows the histogram of the firm size, the deviation from normal distribution was not too large as shown from the above histogram, therefore this shows that the data was not far from normal distribution hence it is relevant to be used for regression analysis.

**Figure 4.2 Histogram of Asset structure**



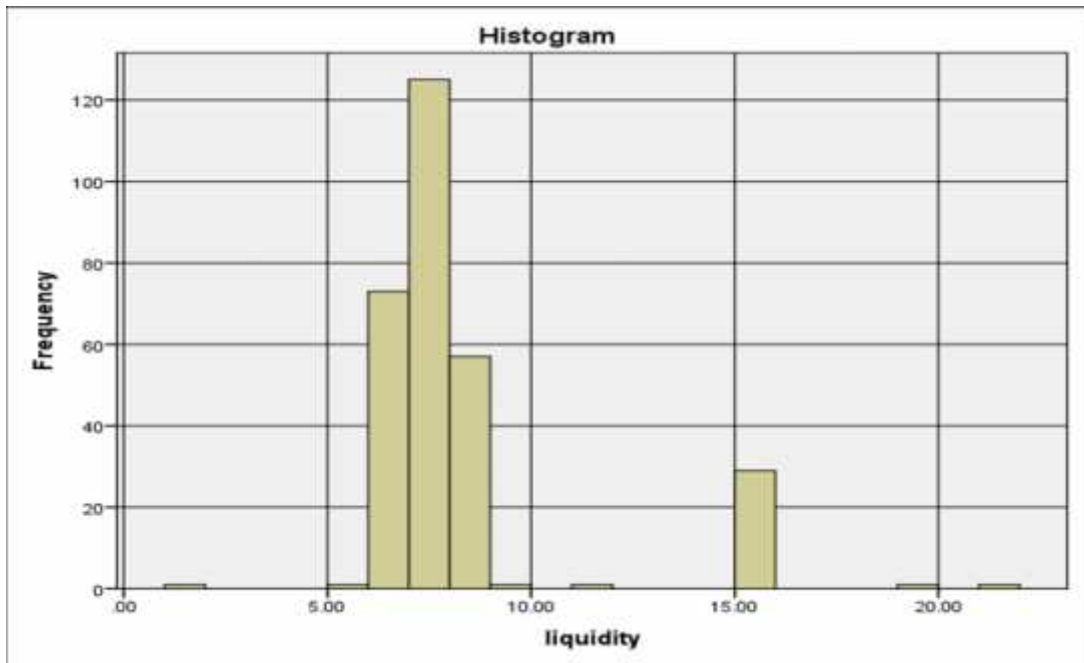
From the Wilkins Shapiro test the results shows that  $p < 0.05$  for the asset structure. Therefore it is null hypothesis should be rejected since the asset structure histogram shows that the data findings are not far away from the normal data distribution hence the researcher can regress the data

**Figure 4.3 Histogram of profitability**



In figure 4.3 it shows the histogram of profitability, the deviation from the normality is not too much as shown from the above figure because of the approximation from the line of the best fit, therefore this shows that there is a close relationship to normality hence data being relevant for regression analysis.

**Figure 4.4 Histogram for Liquidity**



In figure 4.4 presents the histogram of liquidity, the deviation of the normality from normal distribution shows closeness of the variable to approximation on the line of best fit. Hence the data was regressed for analysis as shown in figure 4.5

**Table 4.4: Test of Heteroscedasticity**

	LM	Sig
BP	120.841	.054
Koenker	97.488	.065

The study tested heteroscedasticity using Breusch-pagan and Koenker test statistics. The findings in table 4.5 indicate that there is no heteroscedasticity as test by Breusch- pagan and confirmed by koenker test. Heteroscedasticity occurs when p value is less than 0.05.

#### 4.4 Correlation Analysis

The range of correlation analysis is between +1 and -1. The correlation analysis method was used to establish the degree of relationship between variables under study and also to test whether the relationship is significant as well as establishing the cause and effect relationship.

**Table 4.5: Correlation analysis**

		Capital Structure	Firm size	Asset structure	Profitab ility	Liquidity
Capital Structure	Pearson Correlation	1				
Firm size	Pearson Correlation	.697**	1			
Asset Structure	Pearson Correlation	.574**	.390	1		
Profitability	Pearson Correlation	-.448**	.654**	.611	1	
Liquidity	Pearson Correlation	-.413**	.512	.167	.672**	1

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

From study findings, there is a positive relationship among company size and the investment choice of the firms listed at the NSE. Where the ( $r=0.697$ ,  $p \text{ value} < 0.001$ ). Therefore a growth on the company's size caused an increase in the capital structure base of the firms listed at the NSE, this means that the variation of the variables is in the same direction. The association among asset structure and capital structure showed a positive trend with the capital structure base ( $r=0.574$ ,  $p \text{ value} < 0.001$ ). Hence concluding that an increase in the assets structure results in increase of capital structure. This discoveries of the investigation showed that a undesirable association exists among firms profitability and capital structure as well of the listed firms ( $r=-0.448$ ,  $p \text{ value} < 0.001$ ). Hence this can lead to a conclusion that high profits results in less capital structure base.

The association between liquidity and capital structure showed as negative skewness ( $r=-0.413$ ,  $p \text{ value} < 0.001$ ). Hence we can conclude that an increase in the liquidity of a firm leads to decrease in in the capital structure base of a firm

#### 4.5 Regression Analysis

The study employed the multivariate regression model that was used to examine the relevance of the variables under study in respect to the capital structure decision

**Table 4.6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.837 <sup>a</sup>	.700	.692	.248

a. Predictors: (Constant), firm size, asset structure, profitability, liquidity

From the findings of table 4.3, the difference in the dependent variable as a result of deviation in the independent variable is tabulated by use of the coefficient of determination referred to as adjusted R squared. R squared cannot be used to find out if the coefficients estimates and predictions are biased and whether the regression model is adequate. Therefore this is the reason why the adjusted R2 is highly recommended. From table 4.3 above, the coefficient of determination equals to 0.692 (R2= 69.2%)

In conclusion, the changes in capital structure can be illustrated by changes in the variables firm sizes, asset structure, profitability and liquidity to a degree of 69.2 % leaving only 30.8% unexplained.

**Table 4.7: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.381	4	5.095	19.45	.000 <sup>b</sup>
	Residual	74.735	285	.262		
	Total	95.116	289			

a. Dependent Variable: capital structure

b. Predictors: (Constant), firm size, asset structure, profitability, liquidity

The main aim of ANOVA analysis is to establish if the deviation in the research variables gives details of the observed variance in the findings of the study. From the ANOVA table, the significant level of .000 indicates that the findings are relevant to make conclusions on the research variables since the P value is less than 0.05 and thus

the model statistically significant. The calculated F value was greater than the critical value that is  $2.40 < 19.45$  an indication that firm size, asset structure, profitability, and liquidity affects the capital structure of listed firms in the NSE.

**Table 4.8: Regression Coefficients**

Model	Unstandardized		Standardize	t	Sig.
	Coefficients		d		
	B	Std. Error	Beta		
(Constant)	2.192	.522		4.195	.000
Firm size	.372	.085	.308	4.359	.000
1 Asset structure	.276	.037	.691	7.556	.000
profitability	-.102	.071	-.120	-2.487	.003
Liquidity	-.173	.073	-.216	-2.998	.019

a. Dependent Variable: Capital structure

The established multiple linear regression equation becomes:

$$Y = 2.192 + 0.372X_1 + 0.276X_2 - 0.102X_3 - 0.173X_4$$

The findings of the study shows that holding all variables (firm size, asset structure, profitability and liquidity) at constant zero capital structure at the firms will be 2.192, the study found out addition of a single unit in a company size will increase the capital structure of the firms by 0.372, the study also found out addition of one unit in asset structure will increase the base on choice of financing option of firms by 0.276,

also a unit decrease in profitability of the firms will increase the capital structure by 0.102 and a unit decrease in liquidity will increase the capital structure by 0.173.

The p values of the independent variables; (firm size, asset structure, profitability and liquidity) indicated as .000, .000, .003 and .019 respectively were all less than 0.05. This meant that all independent variables were statistically significant.

#### **4.6 Discussion Of The Findings**

From the findings of the research it is evident that, 69.2 % of the capital structure in the listed firms by NSE is attributed by changes in firm size, asset structure, profitability and liquidity while 30.8 is attributed to changes of other variables which were not part of the study. The study also found out that there is a robust association between both dependent and independent variable i.e. firm size, asset structure, profitability, liquidity. The study also revealed that the firm size, asset structure, profitability and liquidity significantly affects the choice of best financing option either debt or equity of the companies listed at the NSE.

The findings of the study also showed a variance of firm size and capital structure to be in same direction of the companies listed at the NSE, therefore this indicates if a firm changes the size of the firm with a single unit it directly affects the choice of capital structure by 0.372 units. The study agrees with Chioye (2012) that the firm size affected the choice of capital structures of firms listed at the NSE. This implies that firm size increases the need for debt ratio to finance other activities. The study also agrees with Njagi (2016) who found out that the more the size of the firms grows the more opportunities it increases on the capital structure choice. The size of an entity is a factor that affects the choice of a capital structure and therefore companies



listed at the NSE are regarded to have been risk averse therefore lowering the variance of earnings leading to accommodate the huge debt ratios. In order for financiers to reduce the agency costs associated with debt when extending funding to firms they highly rely on the size of the firm due to the fact that larger firms repay back the loan without difficulties than small scale ones.

The findings as well showed that a positive association between assets structure and choice of financing of the companies listed at the NSE shows that change in one unit of assets structure increases the capital structure by 0.276 units. This findings agree with the argument of Myers and Majluf (1984), which suggest a positive association between the value of collateral of assets and firm capital structure. They argue that information symmetries by the company may be reduced by the company selling off secured debt. Floating debt may be hard to outside investor where information asymmetry exists. In the same note, Scott (1977) has suggested that a company may increase the share value by issuing protected debt. Bradley et al...(1984) argues that companies that capitalize on the tangible assets poses complex monetary leverage base because they borrow at less interest rates when their debt is safe with those tangible assets.

A adverse association among profitability and investment choice is exhibited on the companies listed at the NSE as well therefore, the findings indicate that a decrease in the profitability would increase the capital structure by 0.102. The findings agree with Wanja (2016) who established that profits had a negative relationship with capital structure. According to Gachangi (2014) the long term liability of the firm indicates an inverse relationship with the profitability. The findings of the study are in line with the pecking theory which holds that most firms will prefer internal finance as

compared to borrowing. The order of preference is that firms will consider the less risk of finance to the highest risk of finance due to unequal knowledge theory among business insiders and the few knowledgeable market contributors (Myers 1984)

The on association between liquidity and capital structure shows a negative relationship which agree with the arguments that increase in one unit on liquidity reduces the capital structure by 0.173 units. The findings of the study agrees with Oduol (2011) study on relationship of liquidity on capital structure. As the level of liquidity decreases the level of debt ratio increases. Otieno (2014) study on capital structure of listed firms in Kenya found out that, firms with more cash at its disposal will tend to use it in financing the operations of the firm than to borrow. Ozkan (2001)

Established a negative association on liquidity and leverage because managers of different companies opt to finance business activities using retained earnings before going debt or equity

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

The section outlines the findings of the investigation and gives inferences and recommendations in line with the objectives of the study. The main aim of the study was to focus on the effects of selected firm characteristics on the choice of financing option of the companies listed at the NSE in Kenya.

#### **5.2 Summary of Findings**

The key purpose of research was to examine the effects of selected firm characteristics on the choice of capital structure whereby descriptive descriptive research design where data used was from past records from the year 2006 to 2015 of the listed firms by NSE. The study results showed a minimum debt ratio of the listed firms. The study also found out the maximum debt ratio where this showed the listed firms with the highest debt ratio. The outcome of the study showed that minimum financing of the listed firms is a key factor to consider. This implied that there were listed firms with a negative capital structure. The study also found out the mean of the firm size which indicated the average size of the listed companies. The researcher also found out the mean of the asset structure is indicated as the average of the total asset of the listed firms. Also the findings of the study showed the minimum asset structure, this indicate the lowest fixed assets of the listed firms. In addition to asset structure the study showed the maximum asset structure, this implied the listed firms with the highest fixed assets.

The study findings also shows the mean of the profitability of the asset structure. This shows the average profitability of the listed firms. Also the study showed the minimum of the profitability, which indicated the highest value of profitability of the listed firms. The study also showed the minimum value of profitability, this indicated the listed firms with the lowest profitability. The findings of the study also showed the mean of the liquidity of the listed firms as well as the average of the liquidity of the companies listed at the.

The study revealed that 69.2% change in the capital structure was attributed by changes in the firm size, asset structure, profitability and liquidity. Therefore this study shows that an affirmative association among the company size and capital structure of companies listed at the NSE. This may be explained by the larger the firm size the more options of accessing capital. The debt ratio may increase as a result of the firm size. Large firms have may require alternative means such as debts to finance some of the expansion activities of the firms. Another outcome of the findings is that, asset structure has an influence on the debt ratio. The findings of the study reveal that there is a affirmative association among the asset structure and the capital structure of the listed firms. This implies that the more the asset structure the firms the more increase in the debt ratio. The asset structure of the listed firms can be used as a collateral means to acquire loans. The more the asset structure the more loan can be given to the listed firms

It is evidenced from the findings of the study that firms profitability influences capital structure negatively which is attributed by the fact that debt ratio in the listed companies showed a negative trend due to the decrease in profits levels. Liquidity and capital structure of this firms exhibited a negative association as well f the companies

listed against the debt ratio. This implies that firms that the extent that firms have cash to meet short term obligation the more it affects negatively on the debt ratio.

### **5.3 Conclusions**

The outcomes of the study lead to the subsequent inferences. First, the study found out that the size of the firms affects the capital structure. The study concludes that the larger the firms grow the more the debt ratio increases. When the company size increases the more the capital base it requires. The study found out that the asset structure affects positive the capital structure. The study concludes that the more asset structure a firm has the more the investment funding need increases. This is attributed to the fact that the large firm has more asset structure compared to the small firms. The asset structure can be used as collateral to acquiring debt.

The more logarithm of sales the firms have the more debt ratio increases. The study also establishes that the profitability has decreasing association with the capital structure. The more profits the firm generates the more the debt ratio will have a negative effect. The listed firms' high debt ratios will decrease the profitability of the organization. The profits of the listed firms will decrease through paying the debt owned by the firms. For profitability, the study attained an inverse relation that supports the arguments by the pecking order theory which disagrees with the trade off theory, therefore this study recommends that those companies that have huge gains finance their operations with retained earnings and not by use of the debt source

The study revealed that the liquidity impacts on choice of financing option and therefore the more the liquid the firm is the less the capital base it requires. The study concludes that liquidity of the firm affects negatively the capital structure. The listed

firm with lots of cash at their disposal use it to finance the activities before considering borrowing.

#### **5.4 Recommendations of the Study**

From the study findings the listed companies will need to consider the effects of selected firms' characteristics on the capital structure, this is evidenced by the argument that most of the companies are private organizations and therefore the study will benefit other private sectors since the findings of the study revealed that 69.2% change in capital structure is attributed to the change in firm size, asset structure, profitability and liquidity. The study makes the following recommendations. First, the business size impacts positively the capital structure.

The study recommends the listed firms should take into consideration the company size. The larger the company size the more influence it has on capital structure. If the firms are looking for debt as a means of financing some of the firm activities the size of the firm should be taken into consideration. The second recommendation is that asset structure influences positively the capital structure. The study recommends the firms to consider the asset structure in terms of logarithm of sales when considering the capital structure as a means of financing some of the activities. When the logarithm of sales is high then the firms are able to increase the debt ratio to finance some of the projects.

Another recommendation is that the firms gain shows an undesirable influence on the level of debt. The study recommends organizations that when the firms are profitable they should reduce the debt ratio this is to avoid the debt ratio from reducing the profits made by the listed firms. The last recommendation is that liquidity have a undesirable consequence on capital structure.

The study recommends the listed firms before taking any debt as means of financing they should consider the liquidity of the firm. When the firms have more cash they should use the cash in financing the activities thus minimizing the use of debt.

### **5.5 Suggestion for Further Study**

The findings of the study were based on listed firms by NSE, and therefore from the findings of the study it can be suggested that, a similar study should be done on non-listed firms so as to generalize on the findings of the effects of firm's characteristics on choice of capital structure. Another suggestion is that similar studies should be conducted after every three to five years so as to check on the trend and variance behavior of the firms listed at the NSE on financing options either debt or equity due to the market dynamics. The research further recommends that, since there are other macroeconomic determinants that affect choice of capital structure of listed firms in NSE therefore a similar research can be carried out and those variables considered.

The study also recommends that similar study should be conducted in public organizations to examine the consequence of the firm characteristics and the choice of capital structure of the public organizations. The study also suggest that a similar study should be carried out on equity ratio as measure of capital structure to find out the difference between effect of firm characteristics and equity ratio, as well as a study between effect of firm characteristics on debt ratio of listed firms in NSE.

The study focused on listed companies in Kenya, a similar study should be carried out on listed companies within East Africa region so as to generalize the findings of the effects of firm characteristics on choice of capital structure in East Africa.

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**APPENDIX 1: LIST OF COMPANIES LISTED AS AT 31ST DECEMBER  
2015**

1. Eaagads Ltd.
2. Kapchorua Tea Co. Ltd.
3. Kakuzi
4. Limuru Tea Co. Ltd.
5. Rea Vipingo Plantations Ltd.
6. Sasini Ltd.
7. Williamson Tea Kenya Ltd.
8. Car and General (K) Ltd.
9. Sameer Africa Ltd.
10. Marshalls (E.A.) Ltd.
11. Express Ltd.
12. Kenya Airways Ltd.
13. Nation Media Group.
14. Standard Group.
15. TPS East African (Serena) Ltd.
16. Scangroup Ltd.
17. Uchumi Supermarket Ltd.
18. Hutchings Biemer Ltd.
19. Longhorn Kenya Ltd.
20. Atlas Development and Support Services
21. Athi River Mining
22. Bamburi Cement Ltd.

23. Crown Berger Ltd.
24. E.A. Cables Ltd.
25. KenolKobil Ltd.
26. Total Kenya Ltd.
27. KenGen Ltd.
28. Kenya Power & Lighting Co Ltd.
29. Umeme Ltd.
30. Jubilee Holdings Ltd
31. Pan Africa Insurance Holdings Ltd.
32. Kenya Re-Insurance Corporation Ltd.
33. Liberty Kenya Holdings Ltd.
34. Sanlam Kenya
35. British-American Investments Company (Kenya) Ltd.
36. CIC Insurance Group Ltd.
37. Olympia Capital Holdings Ltd.
38. Centum Investment Co Ltd.
39. Trans-Century Ltd.
40. Home Africa Ltd.
41. Kurwitu ventures
42. Nairobi Securities Exchange Ltd.
43. B.O.C Kenya Ltd.
44. British American Tobacco Kenya Ltd.
45. Carbacid investments Ltd.
46. East African Breweries Ltd.

47. Mumias Sugar Co. Ltd.
48. Unga Group Ltd.
49. Eveready East Africa Ltd.
50. Kenya Orchards Ltd.
51. A.Baumann CO Ltd.
52. Flame Tree Group Holdings Ltd.
53. Safaricom