

**THE EFFECT OF DEBT FINANCING ON THE FINANCIAL  
PERFORMANCE OF LISTED COMPANIES AT THE NAIROBI  
SECURITIES EXCHANGE**

**BY**

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**A RESEARCH PROJECT SUBMITTED IN FULFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF  
MASTER OF SCIENCE IN FINANCE, SCHOOL OF BUSINESS,  
UNIVERSITY OF NAIROBI**

**2018**

## **DECLARATION**

I, Winfred Gatwiri Mwenda, declare that this Research Project is my original work and has not been submitted to any other college, institution or university for academic credit.

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## **ACKNOWLEDGEMENTS**

I give my gratitude to the Almighty God for enabling me to complete this research. I also with a grateful heart acknowledge my supervisor Dr. Josephat Lishenga for walking this journey with me and his commitment to accord me all the support I needed. I also thank my family for believing in me and encouraging me to undertake this course. I am also thankful to my friends for treating me with understanding during the period of study.

The University of Nairobi provided a very great opportunity for me to have a period of study that was educative and pleasant. I feel privileged to have carried out my masters education there. I therefore thank the University for availing resources to study and giving me the chance to demonstrate my skills and talents as I did this research.

I thank everyone who gave me support in one way or the other to ensure that this research was a reality. I appreciate my classmates who were there to assist whenever I needed them.

## **DEDICATION**

I dedicate this research project to my parents Mr. and Mrs. Wilson Mwenda who encouraged and supported me in every way the pursuit of this dream. I also dedicate it to my loving husband Timothy Mutabari and my siblings, Doreen and Davis for the support and encouragement. May God abundantly bless you.

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## **ABBREVIATIONS**

COMESA	COMMON MARKET FOR EAST AND SOUTHERN AFRICA
EAC	EAST AFRICA COMMUNITY
GDP	GROSS DOMESTIC PRODUCT
MM	MODIGLIANI AND MILER
NSE	NAIROBI SECURITIES EXCHANGE
PPE	PROPERTY PLANT AND EQUIPMENT
ROA	RETURN ON ASSET
ROCE	RETURN ON CAPITAL EMPLOYED
ROE	RETURN ON EQUITY
SPSS	STATISTICAL PACKAGE FOR SOCIAL SCIENCES

## **ABSTRACT**

This study aimed at examining the effect of choosing debt as the financing option to the financial performance of listed companies. The objective of the study was to ascertain the effect of debt financing on the financial performance of companies listed at the Nairobi Securities Exchange. The study adopted the quantitative research design. The data analysis was done using the SPSS tool to determine what relationship is there between debt financing and financial performance. Out of the 64 listed companies, data was obtained from only 51 companies. Insurance companies were excluded due to issues of regulation while other firms had not publicized their financial accounts. A five-year period from 2013 to 2017 was put into consideration. Financial performance was the dependent variable. Debt financing was the independent variable and firm size and tangibility were the control variables. The study revealed that 10% of the changes in the dependent variable can be well explained by the predictor variables. This shows that other variables not included in the study can account for 89.9% of the changes in the independent variable. From the study, a significant positive relationship exists between debt financing and financial performance. Firm size and tangibility were found to be statistically insignificant determinants of financial performance. Firm size was found to have a negative but insignificant effect on the financial performance. Tangibility had a positive insignificant effect on the financial performance of the listed firms. This study therefore concludes that debt financing which yields a tax advantage had a positive significant effect on the financial performance of listed companies in Kenya during the period of study.

## **CHAPTER 1: INTRODUCTION**

### **1.1: Background of the Study**

Availability of finances for listed companies plays a major role for their development. Most companies listed in the Nairobi Securities Exchange finance both new and existing activities and projects by borrowing funds mainly from various financial institutions. Jean (2017) observes that most companies commonly apply debt financing as an option for their access of funds. According to Tirole (2006) debt structure may be in the form of short term debt or long term debt. A long term debt is repaid after a period of say, one to five years while a short term debt has a payback period of less than one year. Bichsel & Blum (2005) argue that factors that determine the rate and terms of the loans include; the policies of the financial institution borrowed from, the time the company has been in operation and credit worthiness of the company.

Jean (2017) argue that in the field of finance, how debt financing and financial performance affect each other is a matter of contention. Various studies done on debt financing and financial performance have resulted to inconsistent and clashing findings. In essence, Ross (1977), outlined that the more a firm chooses debt as its financing option the higher the likelihood of positive firm performance. Hadlock & James (2002) highly support Ross in their research about undervalued firms in that they also concluded that the use of debt finance and firm financial performance are directly proportional. However, according to Fama and French (1998), the relationship between debt financing and financial performance is indefinite due to lack of tax advantage of debt as a result of agency

problems. Cheng (2009) doing a research on listed companies in Taiwan concluded that debt financing and operating performance are not directly proportional.

Listed firms like other firms use debt as a source of funds for running their activities. The characteristic of debt crucially influences the financial performance of most companies. Jaramillo and Schiantarelli (1996) argued that manufacturing firms' efficiency is improved to a large extent by the presence of long-term finance. If this long-term finance is available in form of debt manufacturing firms can use these funds for investment in PPE and new capital stock which will ultimately improve the firm's efficiency. Marcouse (2003), observes that investment in recent and complex machinery increases labourer's efficiency. Ventire et al. (2004) brings out the fact that that output is increased per unit of hard work through the incorporation of latest and recent know-how thus listed firm can utilize latest technologies to increase productivity and performance.

### **1.1.1: Debt Financing**

Debt financing involves getting cash borrowed from the lending party at a rate of interest that is constant alongside a duration of time that is predetermined. It is usually in form of loans mainly from commercial banks or from sale of bonds. Large firms as well as small and medium enterprises can borrow funds from private sources such as family members and friends or public sources such as banks and the government. Rungani (2009) notes that the main source through which listed firms access debt is through commercial banks. Debt financing has both benefits and drawbacks on the development of companies as well as on its prudent investments, O'Brien and David, (2010). Considering the findings of Fama and French (2002), the key advantages of debt financing is the possibility of deducting tax on interest and the minimization of problems related with free cash flows. Major drawbacks

associated with debt financing include prospective cost of bankruptcy and conflict of interest between shareholders and debt holders. Hence, in making capital structure decisions, managers try to do a cost benefit analysis regarding tax benefits and costs related with bankruptcy risks. Kraus and Litzenberger, (1973).

Debt ratio is used in this study to measure debt. The organization's total debt is compared to the company's total assets. According to Makanga (2015), a percentage that is small indicates a little dependability of the company on money borrowed from others. A stronger equity position portrayed by a small percentage of total debt to total asset means that accompany is using less debt. Theoretically, measurements for debt ratio include total debt ratio, short term debt ratio and long-term debt ratio. This study will involve maturity ratios, in essence, long term debt to total assets, short term debt to total assets, and total debt to total assets.

### **1.1.2: Financial Performance**

This measures the efficacy of using a firm's primary assets to generate revenue. Financial performance also generally describes a company's comprehensive financial health within a given time hence it can be used as a comparison tool for homogeneous firms in the same industry as well as firms in different industries, Anjili (2014). Mwangi (2013) observes that the study on financial performance has been keenly looked into by various scholars both in the business sector and in strategic management. Business professionals in all corporations have also made it a key area of consideration since it impacts greatly to the life and continuity of a firm. Naser and Mokhtar (2004) argue that when a company reports high financial performance, there is an indication of high level of effectiveness on the

management team as well as adequacy in the use of the resources of the firm which translates to the overall productivity of a country's economy.

Various measures on financial performance include Return on Assets, Return on Capital Employed, profitability and sales growth. According to Cooke and Uchida (2004), Return on Assets crucially measures a firm's profitability. The ROA averagely notifies the amount of profit originating from each unit of the firm's asset, Petersen and Schoeman, (2008). Petersen and Schoeman (2008) also indicate an equation that can be used to calculate ROA:  $ROA = \text{Net Profit after Tax} / \text{Total Assets}$ . This shows that ROA indicates the efficiency of the usage of the company's assets so as to generate income.

ROCE ratio serves as a compliment of ROE in that it factors in the aspect of adding a company's debt liabilities to equity to reflect the total capital employed of a company. Rutivi (2009) argues that ROCE is considered a more comprehensive ratio for financial performance since it measures the ability of a firm to produce earnings from total capital. The ROCE ratio is calculated using the following equation:

$$ROCE = \text{EBIT} / \text{Capital Employed (Total Assets - Current Liabilities)}$$

Profitability Growth refers to the increase of profits of a corporation. Profitability growth is also evidenced by a consistent growth in profit after all the firm's expenditure has been catered for within a given time period, Business Dictionary, (2011). Growth of a firm's profit is an efficient measure of a firm's performance since it indicates the development and improvement of a firm. An example of a profitability ratio is the profit margin calculated as:  $\text{profit margin} = \text{Net Income} / \text{Net sales}$ . An increase in sales of a firm is a great measure of the financial performance of a firm. Amos (2016), concluded that as the level

of sales of a firm goes up, financial performance as depicted by ROA and ROCE increases since sales have a sufficiently great impact on the financial performance. Stock returns are majorly the ideal measure of a company's performance rather than accounting profits.

### **1.1.3: The Effect of Debt Financing on Financial Performance**

For over fifty years modern day researchers have primarily tried to explain the place of debt in the profitability of a firm, MM (1958). Nevertheless, the role of debt on the profitability of a firm remains a dubious topic which is of great interest for researchers such as Goddard et al. (2005), Berger and Bonaccorsi (2006), Rao et al, (2007), Baum et al. (2007), Weill (2008), Nunes et al. (2009), Margaritis and Psillaki (2010) and Kebewar (2012). The debt ratio is critically scrutinized to find out whether or not in real sense there exist a favourable debt ratio. A favorable debt ratio is one in which the cost of capital of a corporation is minimized as the corporation's value is being maximized. Expressly, debt ratio is said to be favourable or optimal when it maximizes the company's profit.

Preceding studies indicate that debt influences the cost of capital which eventually impacts on the company's profitability as well as prices of stock, Higgins (1977), Miller (1977), Myers (1984), Sheel (1994). Additionally, many scholars have done studies on the use of debt by companies and have concluded that capital structure decision is commonly dependent on an interpose between interest tax shields and financial distress costs, Kim, (1997), Sheel, (1994), Sunder & Myers, (1999), Titman & Wessles, (1988), Upneja & Dalbor, (2001). Despite the fact that there are several theories on debt financing, there is lack of existence of a unified theory on the same Terra, (2011). Previous research has concentrated much on debt financing of firms in developed countries. Much attention has

not been accorded to firms in developing countries hence the essence of this study that deals with Kenyan firms.

#### **1.1.4: Nairobi Securities Exchange**

Kabingo (2016) notes that the Nairobi Securities Exchange continues to serve a very crucial role in spearheading the growth of the Kenyan economy mainly by encouraging people to save and invest. NSE is regulated by the Capital Markets Authority. It is constituted of 64 listings which are divided into 13 sectors; Agricultural, Automobiles and Accessories, Banking, Commercial and Services, Construction and Allied, Energy and Petroleum, Insurance, Investment, Investment Services, Manufacturing and Allied, Telecommunication, Real Estate Investment Trust and Exchange Traded Funds. Recently, the treasury secretary gazetted regulations that will enable short selling at the NSE. This is where investors will be allowed to borrow shares and buy them later at a lower price than they had borrowed and will pay them back out of the profit then generated. This is meant to increase liquidity of the investors.

Listed companies at the NSE largely finance their projects and operations using debt. Listed firms that are large in size acquire more debt as compared to smaller firms, Wangecha (2008). The company's board of directors are mainly left with the privilege of choosing whether to use debt or equity for financing. Debt has mainly been preferred to equity by most executives since it is likely to maximize the value of a company, Ayenzwa (2014). Through this study, the effect debt has on the financial performance of listed companies shall be determined. Of the 64 listings, financial institutions such as those in the banking sector will be exempted due to high regulation and control in regards to liquidity



and minimum capital requirement by the central bank of Kenya. Therefore, 53 listed companies shall be studied.

## **1.2: Research Problem**

Access to funds serves as the life-blood to every corporation that holds the principle of perpetual succession, Agnew, (2003). Wrong financing decisions can cause the failure of a corporation, Chisti, Ali & Sangmi (2013). In various studies done in the past, debt has been found to affect financial performance of companies positively, negatively, or both effects. A research gap therefore exists since earlier studies done were aimed at finding the best proportion of debt and equity to be applied on a firm and not necessarily a pure study focusing only on debt financing. This study will also take into consideration the period in which Kenyan companies were hit greatly by the political climate such as president's election nullification that even led to a shutdown at the NSE that saw a market loss of over Kshs. 50 billion. It also looks at a period when various changes have been incorporated at the NSE such as the official joining of NSE to the United Nations Sustainable Stock Exchanges and the launch of the NSE 25 share index.

Considering past global studies done, debt has been noted to have a negative effect on the financial performance of firms. For instance, Majumdar and Chhibber (1999), Eriotis et al. (2002), Ngobo and Capiiez (2004) and Goddard et al. (2005) reviewed that debt negatively affects the financial performance of a firm. Other scholars however denotes that debt influences financial performance positively. In essence, Baum et al. (2006) and (2007), Berger and Bonaccorsi (2006). Additionally, others such as Simerly and LI (2000), Mesquita and Lara (2003) and Weill (2008), argue that debt has both positive and negative effect on financial performance of firms. On the other hand, Berger and Bonaccorsi (2006),

Margaritis and Psillaki (2007) and Kebewar (2012) argue that a nonlinear relationship i.e. (inverse U-shaped relationship) exists between debt financing and financial performance. Eventually, Baum et al (2007) confirmed the existence of a non-significant impact of debt on financial performance in American industrial companies. Considering these conclusions and findings that are contradicting, various financial information users and investors that need to make certain financial decisions find it very tricky and difficult to determine if choosing debt as part of their financing options is of good impact to the financial performance of a firm or not.

Certain local studies, for instance, Makanga (2015) doing a study on the effect of debt financing on the financial performance of manufacturing companies listed at the Nairobi Securities Exchange showed that both short term debt and non-current debt have no significant influence on ROA which translates to no effect on the financial performance of a company's financial performance. Jean (2017) doing a comparative study on the effect of debt financing on financial performance of I&M bank and Sidian Bank revealed that there exist a remarkable relationship linking debt level and financial performance. Lishenga (2003) sampled 30 Kenyan firms from 1998-2002 with the basis of examining maturity structures of debt of these firms and found out that firms having multiple growth options are less likely to choose debt option in their capital structure decisions.

In conclusion, researchers have erupted many different contradictory results in their study of the relationship between leverage and financial performance. My study therefore, tries to identify whether the effect debt financing has had on financial performance has changed over time with the different changes in the financial markets such as changes in borrowing rates of companies as well as changes in the political arena. The study has put into

consideration a period that covers these changes such as interest rate capping and a time where the Nairobi Securities Exchange has been negatively affected by the political environment. Most researchers have concentrated on capital structure when studying the financial structure of companies while paying no attention to debt financing specifically. Additionally, a unified theory pertaining to the effects of debt financing on financial performance of firms does not exist. Hence, the absence of enough studies dealing with debt financing and rather more concentration done on studies on capital structure, is what motivated my study.

### **1.3: Research objective**

The objective of the study was to establish the effect of debt financing on the financial performance of companies listed at the NSE.

### **1.4: Value of the Study**

The findings of this study will be of benefit to the management team and employees of listed firms being studied since it will help them gain knowledge of what debt financing will influence the firm's financial performance. This will add to the existing theory and increase knowhow of various radical reforms that take place in the manufacturing firms in relation to debt financing.

The Capital Markets Authority as a regulatory authority will find this study beneficial since it can improve on how best to regulate and enforce various policies for listed firms in Kenya. Capital Markets Authority will be able to come up with renewed policies and regulations regarding debt financing for listed firms.

Various analysts such as security analysts and financial analysts alongside investors like stock brokers will find the findings of this research helpful since the debt financing and financial performance relationship has great contribution to investment study and formation of portfolio.

The results from this study will be impactful to various experts, entrepreneurs and other institutions since it will enable them gain knowledge about financing new investments and other operations.

Academicians will greatly benefit from this research since it will add to literature that is in existence particularly on debt financing and financial performance. Moreover, the facts and perceptions derived from this study could be well timed in passing across various contextual prospective to scholars.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1: Introduction**

The literature review here covers various theories underpinning this study. It also looks into the determinants of financial performance and reviews various studies done on and around the topic of study. The chapter ends with a summary of the chapter findings.

### **2.2: Theoretical Review**

Theories that can be used to explain the impact debt financing has on financial performance include the trade-off theory formulated by Modigliani and Miller (1958, 1963), the pecking order theory by Myers (1984) and the market timing theory by Baker and Wurgler (2002).

#### **2.2.1: Trade Off Theory**

The tradeoff theory argues that there are benefits of using debt as a financing option such as tax shield on debt and that there are also drawbacks associated with debt financing which are in form of costs. In essence costs associated with financial distress such as bankruptcy cost of debt and non-bankruptcy costs such as employee turnover, unfavorable terms of payments by suppliers and internal conflicts among bondholders. Kondongo (2013) reaffirms that an addition in the use of debt leads to reduced marginal benefit of using more debt in that a firm that is looking for an optimal value of debt and equity will make use of this trade off to decide what amount of debt and equity to employ for financing.

Financial distress is encountered by a firm when the firm is unable to meet promises made to creditors, Mwangi (2009). Complete failure to meet creditors' financial obligations

makes a firm insolvent. An important composition of Trade-off theory of capital structure is usually the cost of financial distress or the direct or indirect bankruptcy costs of debt.

There are varying conclusions about trade-off theory by different scholars. Titman and Wessels (1988), Rajan and Zingales (1995) and Fama and French (2002) argue that firms that report higher profits have a likelihood of acquiring little amount of debt. This is conflicting with the factual projection of the tradeoff theory that portrays that firms with higher profits are supposed to acquire higher amounts of debt to take advantage of tax benefits of debt. Graham (2000) comparing the drawbacks and benefits of debt discovered that firms recording very high profits and with very little probability of being insolvent consciously make use of debt.

### **2.2.2: Pecking Order Theory**

Myers and Majluf (1984) formulated this theory. This theory argues that companies prefer finances generated from within itself to funds gotten externally. If by any means funds from outside are needed, a firm is likely to choose debt financing and not equity financing. They would prefer equity to debt financing as the last option. An optimum ratio of debt to equity does not exist because of asymmetric information. Dividends which is income from equity is used as to finance long-term assets and the value of the firm is maximized using debt. This theory goes further to argue that firms finance their operations using a certain order of preference.

Since there exist information asymmetry among various parties in a company particularly the company and prospective investors, retained earnings are preferred to debt by the firm. On the same line, a company will choose short term debt instead of long-term debt. Myers

and Majluf (1984) reveal that the issue of asymmetric information can be dealt with through the utilization of retained earnings by a firm to finance its operations without employing any form of new security. This portrays that increase of information asymmetry between employees and investors' makes issuance of equity more costly. It therefore recommended that companies affected greatly by information asymmetry must make use of debt as a financing option to get rid of making securities sales at very low prices.

### **2.2.3: Market Timing Theory**

Baker and Wurgler (2002) came up with market timing theory. They brought across the fact that issuance of stock by firms is done on a timely basis in that new stock is issued in the market when the stock is overpriced and bought back when the stock is underpriced. The capital structure of a firm is influenced by variations in the prices of stock. As at the market timing theory, Muchugia (2013) argue that companies choose equity when equity's comparative cost is low. On the other hand, they prefer debt if the cost of equity is high.

It was proved by Baker and Wurgler (2002) that there is a constant influence on the company's capital structure by market timing of equity. The measure of the market timing used is usually a weighted average of the amount of capital required for external purposes over a certain past period of time. Market to book values of the company are applied as weights. These scholars discovered that the measure used for market timing are highly and constructively related to changes in debt. This led them to conclude that the overall result of trying to previously time the equity market involves the capital structure of the firm.

Questionable remarks have erupted concerning the Market timing theory. Havokimian (2006) criticizes this theory on grounds that regardless of its existence it does not put into

consideration its effects on a company on the long run. On the other hand, other researches have been consistent with the market timing theory. For instance, Jahanzeb et al (2013) confirm that indeed firm managers keenly observe the behavior of stocks in the market before making capital structure decisions. He goes on to argue that before a firm issues new stocks, it ensures that their position in the market is favourable and that before this issuance firms have to work on their performance to make their stocks attractive to investors in the market. The market timing theory reveals that different costs of debt and equity affect the issuance of securities by firms. This means that capital structure is affected by firm's decisions concerning issue of securities in the market since capital structure is a result of decisions made before securities are issued.

#### **2.2.4: Capital Structure irrelevancy theory**

Modigliani and Miller came up with this theory in the 1950s. This theory argues that the value of a firm is not dependent on whether the firm is highly or less leveraged. Instead, Modigliani and Miller claim that the value of the firm is dependent on the future growth prospects of that firm. If a company's growth prospect is high, so will be its market value and will lead to higher stock prices, Manu (2013).

This theory explains that a company that is using both debt and equity has the same value as a company that is unleveraged as long as the profits and future prospects are the same. Several assumptions accompany this theory. It is assumed that no taxes are charged, the cost of buying and selling securities is nil, investors have access to the same information as the owners of the company, both investors and the company have the same borrowing rates and that a company's EBIT is not affected by debt financing. Preston (2010), argue



that these assumptions are not practical in real world hence outlines the weaknesses of this theory.

## **2.3: Determinants of Financial Performance**

Debt Financing play a vital role in affecting the financial performance of firms. Alongside debt financing, Tangibility influences the financial performance of a firm. This study uses size of the firm as a control variable. These variables are discussed below.

### **2.3.1: Debt Financing**

The most common way for listed firms to raise funds through debt is by borrowing from commercial banks. Though banks and other financial institutions may lend money to these firms, A.N, Berger & G.F Udell (2004) notes that sometimes availing these funds to them may be distracted by lack of good lending facilities, government regulations as well as certain differing structures of these institutions. Such factors limit the amount of funds available to a listed firm. The various lending technology that lending institutions opt for might also affect the availability of funds to these companies' firms. This could be either be transaction based or relationship based. Transaction based lending mainly make use of financial ratios generated from various financial records. On the other hand, Relationship based lending is a result of various contacts engaged into by the listed firm and the lending institutions. Through these interactions, lending institutions will be able to determine the credit worthiness of the borrowing firm.

Debt financing for listed firms can be measured by analyzing various financial ratios such as long-term debt, short term debt or a mix of the two which results to total debt of the firm. These measures are expressed as a ratio of total assets. Financing a firm using debt is

associated with financial growth of that particular firm. Ebaid (2009) did a research about firms in Egypt and found that long term debt influences the financial performance of a firm negatively. Abor (2005) found that return to assets was positively affected by long term debt. Mutai (2014) brings out the fact of how failure of these firms to pay debt points a negative image of the respective firm. Emerging debt issues such as lack of paying back are major causes of business failure. Omete (2017) argues that debt financing affects the financial performance of a firm negatively in that as firms continue taking debt, they are prone to indebtedness problems which translates to poor firm performance. Hence points out that firms should use less of debt in financing their projects.

### **2.3.2: Size of the Listed Firm**

Berger and Udell (1998) Argue that financial institutions, after testing their credit worthiness, are willing to finance both large and small firms. Larger firms have other benefits compared to small ones such as economies of scale, larger market power as well as competitiveness ability hence this warrants them higher profits, Galindo and Schiantarelli, (2003). Liargovas and Skandalis (2008) outline that firm size and firm's financial performance are directly proportional. However, Parmono (2008), found out that not firms in all industries are affected by size factor, but only a few.

Gichura (2011) found that larger manufacturing firms have access to highly developed technology compared to smaller firms. This exposes these firms to markets that are most profitable. Larger firms are also able to carry out specialization of various products and businesses which leads to higher profits. Bashir (2003) continues to confirm the ability of firms to take advantage of benefits that come alongside economies of scale.

However various scholars reveal that firm size does not have a significant effect on a firm's profitability. Hagedoorn and Cloudt (2003) doing a research on manufacturing firms in Germany concluded that there is a weak and unstable relationship between size and firm's profitability. These researchers also confirmed that profitability is not majorly affected by firm size but how well a firm is able to grab opportunities and utilize them fully. Whittington (1980) found out that profitability and firm's size are negatively related after doing a research on listed manufacturing firms in the United Kingdom. Jermanis (2006) bring up the fact that very large firms can be difficult to manage due to their bulkiness. This might translate to these firms being inefficient and thus their financial performance declines. Bureaucratic management is also a common problem in very large firms, Skandis (2008). This paralyzes the flexibility of making decisions within the company. A large firm is likely to have many management layers which is a great opportunity for agency problem within the management team.

### **2.3.3: Tangibility**

Booth et al (2001) observes that the tangibility of a company's assets determines greatly the potentiality of a firm to acquire debt. A firm that is rich in fixed assets has a higher probability of obtaining debt at a lower rate than one that does not. Fixed assets/total assets is the ratio used to measure tangibility. Gamlath (2015) did a research on the effect of tangibility on the financial performance of Sri Lankan insurance companies found out that Profitability and tangibility are inversely proportional.

Researchers have found both positive and negative outcome on financial performance of corporations as a result of Inflation has been seen to have both positive and negative impact on performance of companies in the economy. Money is lost when consumers tend to be

lax about making purchases of goods as a result of these goods being more expensive than they used to be. This means the level of savings and investments reduce which causes a decline in the profitability of listed firms, Khan et al. (2014). On the other hand, some scholars have proved inflation effect on financial performance to be insignificant. For instance, Chioma, Adanma and Clementina (2014) concluded that the effect inflation has on the financial performance of manufacturing firms in Nigeria is of little significance.

## **2.4: Empirical Studies**

This outlines other studies done on or around this topic both locally and internationally. It tries to capture different school of thoughts brought by other scholars.

### **2.4.1: International Studies**

Kebewar (2012) researched about the impact of debt on the financial performance of around 2000 companies on the service sector that are not listed in the European Stock Exchange from 2001-2008, and found out that both linearly and non-linearly, the use of debt by these companies did not affect their profitability. The results of this study agrees with what Baum et al (2007) found out when he studied Industrial corporations in America. Even after using firms of different sizes, the findings proved to be the same.

Pouraghajan and Malekian (2012) did a study with an aim to find out how the financial performance of 300 firms listed in the National Stock Exchange of India from 2007 to 2011 is affected by capital structure. Financial Performance was measured using the ROA and ROE ratio. It was found out that the use of debt by this companies leads to a negative effect on the financial performance of the companies. It was also noted that the profits of those companies could be raised by decreasing the debt ratio.

Dube (2013) studied the effect of debt financing on the financial performance of agricultural firms in Zimbabwe. The findings showed that choosing debt as a financing option leads to a positive impact on the profitability of the firms. It was also discovered that specialization in investment results to better profits for the firms. Agricultural firms should also use debt moderately to finance their operations to avert paying very high interests and all problems related to indebtedness.

Jaramillo and Schiantarelli (2002) did a study on corporations in Ecuador, regarding time frames of acquiring debt by focusing on how corporations' performance is influenced by long term debt. It was established that acquiring debt for longer periods is likely to lead to higher profits than when debt is acquired for shorter periods.

Al-Tally (2014) studied firms that are listed publicly in Sri Lanka and found out that financial performance and capital structure are related. Taking the 50 companies under study, there was a rise in the profitability mean whenever the debt level fell.

Ebaid (2009) did a research to show how choosing debt or equity to finance firms affect the financial performance of small and medium enterprises in Egypt. ROE, ROA and gross profit margin were ratio measures used to determine financial performance. Debt to equity ratio and total debt to asset ratio was used to measure debt or equity decision. The analysis done revealed that the debt or equity decision has an insignificant effect on the financial performance of a firm.

#### **2.4.2: Local Studies**

Langat, et al., (2014) did a research on the impact debt financing has on the construction firms in Kenya. He concluded that financial performance measured by ROA and ROE has

a 1% relationship with long term debt and 5% with total debt. However, in both models showed a 5% negative relationship between performance and short term debt. This was explained to mean that financing construction firms using short term debt is unprofitable.

Omesa, et al., (2013) took 25 firms listed at the Nairobi Securities Exchange from 2012-2015 firms and researched about how capital structure and financial performance are related. It was found out that the companies' total assets and long term debt were linearly related.

Maina & Ishmail (2014) studied a sample of 20 firms listed at the NSE and compared capital structure and financial performance. From a regression analysis it was found out that debt and equity are key elements that influence financial performance. It was also noted that capital structure and financial performance are inversely proportional. This was interpreted to mean that increase in the amount of debt for financing lowers the company's financial performance. Short term debts were found to be more commonly used than long term debts by companies listed at the NSE.

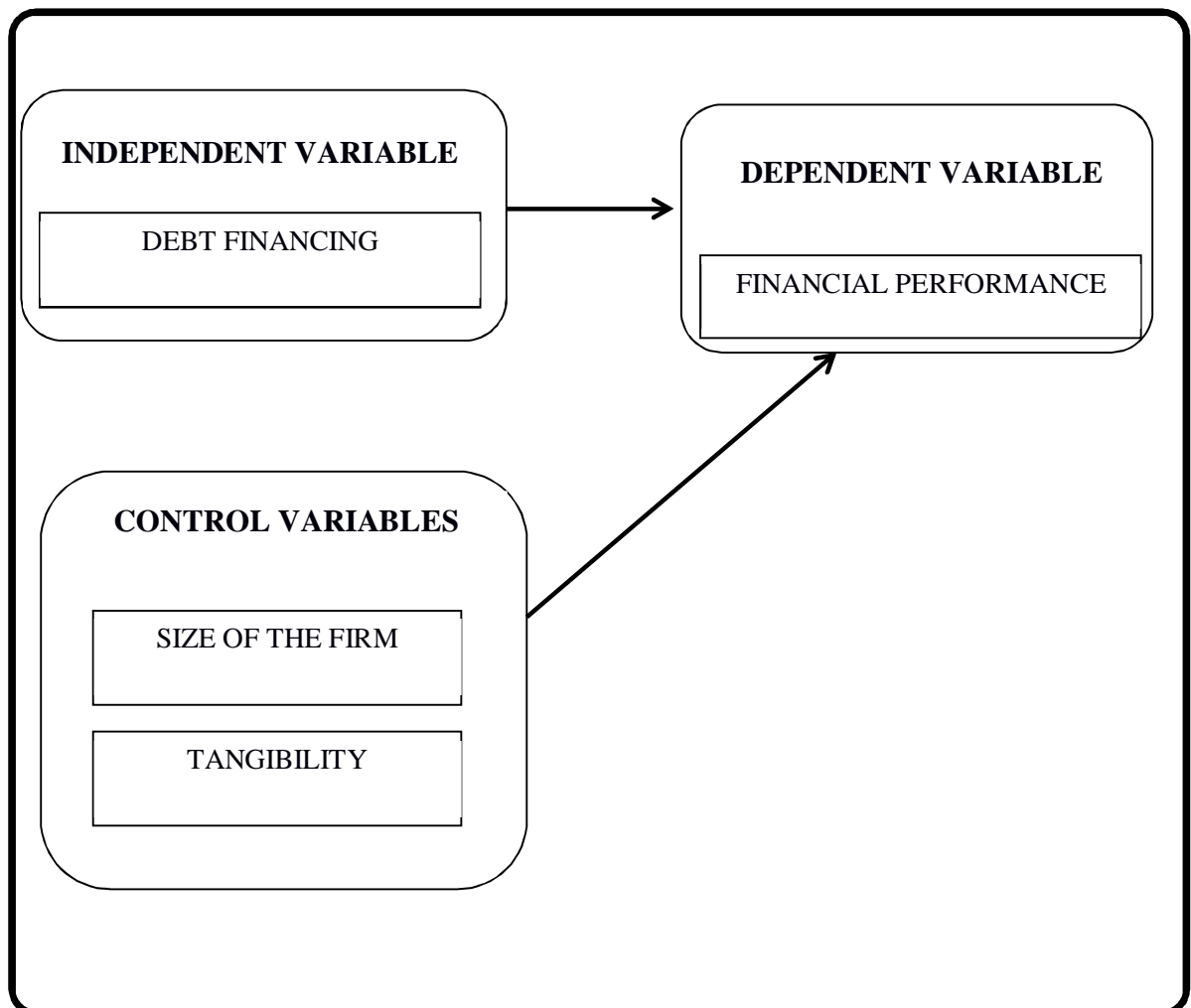
Chepkemoi (2013) conducted a study on 150 SMEs in Kisumu County concerning how financial performance of SMEs is influenced by capital structure. After using multiple regression, it was discovered that profitability and capital structure are negatively related. On the contrary growth of sales and profitability were found to be positively related.

Magara (2012) sought to establish what determines financial performance of firms at the NSE. Elements such as size of the firm, assets tangibility, level of debt and rate of growth were found. Muchugia (2013) researched about how financial performance of commercial

banks is affected by debt financing. Short term debt and profitability were found to be directly proportional because short term debt is cheaper.

## 2.5: Conceptual Framework

The conceptual framework reflects how the dependent variable which is the listed firms' financial performance is related to the independent variable, Debt financing. Size of the firm and asset tangibility are control variables. The listed firms performance is outlined for a period of five years.



*Figure 2.1 conceptual framework*

## **2.6: Summary of Literature Review**

The literature review chapter has given an in depth study of previous literature on various elements that have impact on the financial performance of firms listed at the Nairobi Securities Exchange. These factors have been discussed and they include; debt financing, tangibility and size of the firm as a control variable. The chapter went ahead to outline international studies done on the effect debt financing has on the performance of listed firms and these studies revealed both positive and negative impact. An overview of Local studies on and around the topic have revealed that profitability and capital structure are negatively related. Theories on the effect of debt financing have been also tackled. The chapter is an outline of both factual and theoretical background of the study.



## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1: Introduction**

This section puts into consideration the research design, the population being studied, the sampling frame, the size being sampled as well as the data analysis. These aspects provided the basis of deciding the means and methods of collecting data in examining how use of debt by listed firms as a source of finance affect their financial performance.

### **3.2: Research Design**

The Research Design makes it possible to combine all the elements being studied so as to make sure the research question of this particular study is being answered. It also facilitates the reduction of ambiguity in the question being studied. According to Kothari (2005), the Research Design serves as a guiding tool on ways of collecting data, analyzing data and interpreting data.

A quantitative research design will be used since it entails transforming the numerical data generated into statistics that can be used to reach certain conclusions. Quantitative research draws conclusions about a large group of population by putting into study a sample representing the whole population. If sampling is done accurately and clearly, the statistical results of the sample will be the same as those of the larger group and inference can be done to the population.

Experimental research and Descriptive Research are forms in which quantitative may be in. Descriptive research which does not pay attention to causality will be used to study listed firms on the basis of how their choice of debt as a means of financing will affect their

financial performance. This will mainly involve deducing specific information from financial statements of listed firms sampled mainly from previous studies done as well as also from the media.

### **3.3: Population**

The population is composed of all the elements involved in the study Blume and Stambaugh (2013). All individuals making up the population are assumed to have characteristics that are the same. The target population is listed companies at the NSE. Of the 64 listings, financial institutions such as those in the banking sector and will be exempted due to high regulation and control in regards to liquidity and minimum capital requirement by the central bank of Kenya. Therefore 53 listed companies as at 31<sup>st</sup> December 2017 shall be studied for a period of five years (2013-2017).

### **3.4: Sample Design**

Sampling involves picking certain specific items from the rest of the population to represent all the elements under study. All the listed companies will be studied with an exception of commercial banks due to high regulation and control in regards to liquidity and minimum capital requirement by the central bank of Kenya.

### **3.5: Data Collection**

Data collection facilitates the availability of information that warrants a precise and accurate analysis and conclusion, Kagombe (2017). This study will use secondary data which will involve acquiring data from financial statements such as statement of financial position, statement of comprehensive income as well as notes to financial records, for the

period between 2013-2017. Panel data will also be applied in the study. This information will be obtained from previous studies, books, published accounts of companies that are listed in the NSE and the private sector, journals, media, and also newsletters. Variables to be studied include profitability, asset levels, debt structure of the firms and the credit worthiness of the firm.

### **3.6: Data Analysis**

The aim of data analysis in this study will be to determine the effect debt financing has on the financial performance of listed companies at the NSE. The data extracted from financial statements will be arranged systematically in spreadsheets and tables and then analysed using SPSS software. A multiple linear regression model will be used to show the debt financing and financial performance relationship.

*Formulae 3:1*

$$Y=b_0+b_1X_1+b_2X_2+b_3X_3+\epsilon$$

Where:

Y= Financial Performance (The dependent Variable) measured by ROA

$b_0$  represents the Regression constant-it is the value of Y when  $X_1=X_2=X_3=0$

$b_1$  shows how a unit change in  $x_1$  affects Y

$b_2$  Change in Y as a result of a unit change in  $X_2$

$b_3$  Change in Y in respect to a unit change in  $x_3$

$X_1$  Debt Financing measured by total debt/total assets

X<sub>2</sub> Size of the firm measured by the natural logarithm of total assets

X<sub>3</sub> Tangibility measured by fixed assets/total assets

b<sub>1</sub>(i=0,1,2,3) are the coefficients

ε is the error term

### **3.7: Test of Significance**

The test of significance will be used to assess whether there is a sufficient relationship between debt financing and financial performance of firms listed at the NSE. The standard deviation and the t-test of significance will be used.

The t test will be calculated using the formula below:

Formulae 3:2

$$t = \frac{x - \mu_0}{\sigma / \sqrt{n}}$$

where:

t test statistic

x sample mean

μ normal mean

n listed companies being studied

σ standard deviation

## **3.8: Diagnostic Tests**

### **3.8.1: Multicollinearity**

This is a case where the independent variables are highly associated, Kothari (2004). This falsifies the regression coefficients causing them to be unsteady, hard to explain and hence resulting to incorrect significance tests, Cooper, (2007). Multicollinearity is tested by Variance Inflation Factors (VIFs) and Correlation Coefficients. If VIFs are less than 5 and correlation coefficients between variables are less than 0.8, then there is no multicollinearity, Gujarati, (2004).

### **3.8.2: Heteroscedasticity**

This shows lack of constant error variance, Gujarati (2004). This distorts the standard errors resulting to biased test statistics and confidence intervals which ultimately leads to fallacious results, Wooldridge (2003). Heteroscedasticity is measured using White Test which is a chi square test of the form  $nR^2$  where:

$n$  represents the sample size

$R^2$  represents the unadjusted coefficient of determination.

If the chi-square values are statistically significant at 5%, the null hypothesis are rejected to show the presence of heteroscedasticity. Feasible Generalized Least Squares (FGLS) estimator is the method used to overcome heteroscedasticity.

### **3.8.3: Stationarity**

This is where the mean, variance and autocorrelation of data structure are stable, Gujarati (2004). It is important to test for stationarity because non-stationarity falsifies t-ratios causing them to give biased significance tests. The Augmented Dickey Fuller (ADF) unit root test is used to check presence of stationarity. If the test statistic is more negative than the critical value at 5% level of significance, the null hypotheses is rejected depicting the presence of stationarity.

### **3.8.4: Normality**

This tries to find whether variables are non-skewed. Skewedness is whereby data is biased towards one side of the center than the other. Shapiro Wilk test is used to test whether the variables are normally distributed. To cater for the problem of variables not being normally distributed, robust standard errors are used instead of normal standard errors.

## **CHAPTER 4: DATA ANALYSIS, FINDINGS AND INTERPRETATION**

### **4.1: INTRODUCTION**

The chapter aimed at analyzing data acquired from the NSE to demonstrate the effect debt financing has on the financial performance of the companies listed at the NSE. Tables and figures were used to present the study results arrived at from the use of descriptive statistics, correlation analysis and regression analysis as demonstrated in the sections below.

### **4.2: Response Rate**

53 listed companies as at 31<sup>st</sup> December 2017 were targeted. However, a response rate of 96% was represented since some companies were listed in different times since 2013. Data on return on assets, debt financing, tangibility and firm size was obtained.

### **4.3: Diagnostic tests**

The research focused on data that was significant to the study. Diagnostic test was performed to ascertain the normality of the data. A 5% level of significance was assumed. This helped to identify the accuracy of the data. The null hypothesis stated that the data was not normally distributed.

The data does not depict normal distribution as shown below. The significance level is less than 0.05% and as depicted by both the Kolmogorov-Smirnova and Shapiro-Wilk tests. we therefore fail to reject the null hypothesis.

*Table 4:1 Tests of Normality*

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Financial Performance	.150	243	.000	.867	243	.000
Debt financing	.442	243	.000	.116	243	.000
Log firm size	.334	243	.000	.807	243	.000
Log Tangibility	.341	243	.000	.800	243	.000

Lilliefors Significance Correction

#### **4.4: Descriptive statistics**

For this research, Descriptive statistics presents the variable's mean, minimum and maximum values as well as their standard deviation. Table 4:2 below is an illustration of the descriptive statistics for the various variables covered in the study. This information was obtained from SPSS covering a period of five years, (2013-2017). ROA used as the measure of the independent variable, financial performance, had 0.060603292 as its mean and 0.13811562 as the standard deviation value. 0.3 was the mean value of Debt financing the dependent variable while its standard deviation value was 2.1. 10.29 was the mean value of the size of the firm, a control variable and 0.693 as the standard deviation value. Tangibility another control variable had 10.3 as its mean value and 0.684 as the standard deviation value. These figures are outlined in the following table.



*Table 4:2 Descriptive Statistics*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
Financial Performance	243	-.57000	.58000	.0603292	.13811562
Debt financing	243	0	23	.30	2.100
Log firm size	243	9	12	10.29	.693
Log Tangibility	243	9	12	10.30	.684
Valid N (listwise)	243				

#### **4.5: Correlation Analysis**

This analysis is used to ascertain if there exists an association between the variables. The correlation can either be positive (strong, medium or small) or negative. Pearson correlation was applied in this research to demonstrate the correlation between financial performance of listed companies in Kenya as the dependent variable and the independent variables (debt financing, firm size and tangibility).

From the table below, it was discovered that there is a positive correlation between debt ratio and ROA. The correlation was also statistically significant; ( $r = .311, p = .000$ ). The study depicted a small non significant correlation between ROA and the rest of the variables, debt financing, firm size and tangibility. A positive correlation was determined between size and financial performance, though insignificant as illustrated by ( $r = .031, p = .627$ ). The correlation between tangibility and financial performance was also positive but insignificant; ( $r = .038, p = .557$ ).

*Table 4:3 Correlations*

**Correlations**

		Financial Performance	Debt financing	Log firm size	Log Tangibility
Financial Performance	Pearson Correlation	1	.311**	.031	.038
	Sig. (2-tailed)		.000	.627	.557
	N	243	243	243	243
Debt financing	Pearson Correlation	.311**	1	-.013	-.015
	Sig. (2-tailed)	.000		.839	.815
	N	243	243	243	243
Log firm size	Pearson Correlation	.031	-.013	1	.991**
	Sig. (2-tailed)	.627	.839		.000
	N	243	243	243	243
Log Tangibility	Pearson Correlation	.038	-.015	.991**	1
	Sig. (2-tailed)	.557	.815	.000	
	N	243	243	243	243

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

**4.6: Regression Analysis**

The three predictors; Debt financing, Firm size and Tangibility were used to regress the dependent variable, measured by ROA. The 5% significance level is where the regression analysis was performed. The table below illustrates the statistics of the model

*Table 4:4 Model Summary*

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.318 <sup>a</sup>	.101	.090	.13176149	1.401

a. Predictors: (Constant), Log Tangibility, Debt financing, Log firm size

b. Dependent Variable: Financial Performance

R squared illustrates the variability of the response data caused by the predictor variables changes. As shown by the table above, R square has a value of 0.101 which means that 10.1 percent of the variability in financial performance of listed companies is due to changes in debt financing, size of the firm and tangibility. The rest of the variables not considered in this study account for 89.9 percent of the deviations in the financial performance off the listed companies. Moreover, the correlation coefficient (R) depicts a large association between the dependent and independent variables as  $R = 0.318$ . The value of Durbin-Watson statistic that was greater than 1.0 (i.e. 1.401) shows lack of serial correlation of the variables.

*Table 4:5 ANOVA<sup>a</sup>*

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.467	3	.156	8.968	.000 <sup>b</sup>
	Residual	4.149	239	.017		
	Total	4.616	242			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Log Tangibility, Debt financing, Log firm size

At 95% confidence level, a significance value that is less than 0.05 represents a statistically significant model. A p-value that is greater than 0.05 shows a statistically insignificant association between the ROA measure and other variables. Looking at table 4:5 above, the analysis of variance, the value of significance is 0.000 which is not more than  $p=0.05$ . This demonstrates that the model was statistically significant in showing the effect debt financing, firm size and tangibility have on the ROA measure of listed companies in Kenya. The significance of each of the variables was determined using the t-test in this research. This was done to establish the impact each variable has on the dependent variable, financial performance of the companies listed at the NSE. The significance of the model is depicted as the p-value. In this study  $p=0.000$  which illustrates a significant relationship between financial performance and the other variables.

*Table 4:6 Coefficients<sup>a</sup>*

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.040	.128		-.309	.758
1 Debt financing	.021	.004	.312	5.091	.000
Log firm size	-.079	.094	-.398	-.847	.398
Log Tangibility	.088	.095	.437	.930	.353

a. Dependent Variable: Financial Performance

Considering the table 4:6 above, it is clear that for this research debt financing yielded a value that is positive and statistically significant (high t-value (5.091),  $p < 0.05$ ). The size

of the firm produced a negative and statistically insignificant value as pertains to this study ( $t = -0.847$ ,  $p = 0.398$ ). Tangibility resulted into a positive but statistically insignificant value as well for this study as depicted by ( $t = 0.93$ ,  $p = 0.353$ ).

The following regression equation was estimated:

*Formulae 4:1*

$$Y = 0.40 + 0.021X_1 - 0.079X_2 + 0.088X_3$$

Where,

Y = Financial performance

X<sub>1</sub> = Debt financing

X<sub>2</sub> = Firm size

X<sub>3</sub> = Tangibility

From the above approximated regression model, the constant = 0.40 shows that if the chosen predictor variables (debt financing, firm size and tangibility) were taken to be zero, then the value of ROA measure of listed companies at the NSE would be 0.40. Any increase in debt financing would result into an increase in financial performance by 0.021. If the size of the firm increased by one unit, this would bring about a decrease in financial performance by -0.079 while any unit increase in the asset tangibility would cause an increase in financial performance by 0.088.

#### **4.7: Discussion of Research Findings**

This research was geared at finding the impact debt financing has on the ROA measure of listed companies at the NSE. The independent variables considered were: Debt financing as measured by total debt/total assets, firm size determined using the natural logarithm of

the total assets of companies and tangibility measured by dividing the fixed assets with the total firm's assets. The dependent variable under study is financial performance measured by ROA ratio. The impact each of the predictor variable had on the dependent was examined in regards to strength and direction.

The Pearson correlation coefficients between the variables revealed that there exists a correlation that is positive between debt financing and the ROA measure. The association between size of the firm and financial performance was weak and positive. The study also revealed a weak positive relationship between tangibility and financial performance.

It was also revealed that for the five years under study, the independent variables: debt financing, size of the firm and tangibility account for 10.1 % changes in the ROA measure, financial performance illustrated by the  $R^2$ . This means that there are other variables other than the ones in this study that can explain 89.9% changes in the ROA measure of listed companies. At 95% confidence level, the model is fit because the F-value is 8.968. The regression model revealed that only debt financing was statistically significant ( $p < 0.05$ ) and that size of the firm and tangibility were not statistically significant. With this there is certainty in concluding that the multiple regression model is statistically significant, because it can suitably predict the impact caused by debt financing, firm size and tangibility on the dependent variable.

As per this research project, the findings reveal that debt financing has a significant positive correlation with financial performance. This is opposed to the findings of Makanga (2015) who concluded that debt has no significant impact on the dependent variable.

## **CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1: Introduction**

The chapter summarizes the major results of the research which go hand in hand with the main aim of carrying out the study which was to determine how the dependent variable, financial performance, is affected by debt financing. It also outlines various recommendations that can be implemented by various policy makers, the limitations of the study as well further areas of research.

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

The study purposed to find out how debt financing affects the financial performance of listed companies at the NSE. The independent variables studied were debt financing, firm size and tangibility. The descriptive research design was used. Data used was Secondary data from NSE website and published accounts. The analysis of data was by use of SPSS software version 21. The study used annually acquired data for the 64 listed companies in Kenya putting into consideration a five-year period from January 2013 to December 2017.

From Correlation analysis, a weak positive significant correlation was found between debt financing and financial performance. Size of the firm and tangibility which are control variables had a positive statistically insignificant relationship with the dependent variable.

Co-efficient of determination R-square had a value of 0.101 which implies that the predictor variables can explain 10% of the changes in the ROA measure. This shows that other external factors other than the ones in this study can explain changes in the dependent variable up to 89.9%. At the 95% level of confidence the model is fit because the F-value

is 8.968. This gives the surety of the overall multiple regression model being statistically significant. This is because it can predict the independent variable's impact on the dependent variable.

From the regression model, when the independent variables have a zero value, the value of the financial performance of listed companies, would be 0.40. Also, any change in debt financing by a unit, would increase financial performance by 0.02. This study concludes that financial performance of listed companies is significantly affected by debt financing. Firm size and tangibility were found to be statistically insignificant determinant of financial performance and therefore this study concludes that firm size and tangibility do not significantly influence financial performance of listed companies in Kenya.

This finding concurs with Katz et al., (2013) who examined the levels to which the funds acquired from debt are invested by the managers to increase the firm's profitability or divert them towards rent extraction, non-value adding projects and perquisite consumption. The main components yielding profitability were identified as: utilization of assets, operating liability leverage and margins lead to lower future tax profitability for firms whose tax aggressiveness is higher compared to less tax aggressive firms. Lower margins also had a more robust impact than that of operating liability leverage and inefficient asset utilization. This outcome is applicable in many contexts that exacerbate or mitigate rent extraction, such as the better governance structure, existence of foreign operations, industry leadership position, across corporate life cycle stages and more transparency.



### **5.3: Conclusion**

From the study we conclude that there is a positive significant effect on financial performance of listed companies in Kenya by debt financing. The rest of the control variables, size of the firm and tangibility do not have a statistical significance in the effect of financial performance. From the study findings we can ascertain that an increase in the amount of debt used by listed companies in Kenya from 2013 to 2017, led to an increase in the financial performance of those companies.

We can therefore conclude that the use of debt for a company increases its financial performance, since the use of debt yields a tax advantage. From the regression model, we can conclude that the firm size has a negative effect on the financial performance of the listed Companies at the NSE. This effect is however insignificant. Moreover, tangibility positively but statistically insignificantly affects the financial performance of listed companies. Though debt financing is the only significant variable, the three variables can explain the change in the dependent variable up to 10.1%. The rest of the external variables account for 89.9% change in the dependent variable.

This finding is in line with what Bamal (2009) concluded. He concluded that debt has a significant effect on the financial performance of industrial companies and recommended the use of debt over equity for financing. Kabwar (2016) also concurs with this conclusion but suggests that a company should use long term debt instead of short term debt since it has more positive impact on financial performance.

## **5.4: RECOMMENDATIONS**

From the study, there exists a positive relationship between the use of debt for financing and the financial performance of the firm. This study therefore suggests that sufficient steps should be employed by owners of companies to ensure debt is utilized as an option for financing since it increases the firm's financial performance.

Companies should therefore confidently borrow since this impact positively on the financial performance. It is also important for these companies to put into consideration the interest paid on debt. The returns yielded by the assets acquired through debt should surpass the interest on the debt to avoid the risk of leverage. The use of debt maximizes shareholders wealth.

## **5.5: Limitations of the study**

The study was limited to a five year period hence it is not certain whether the findings and conclusions will remain relevant if a longer period was put into consideration. There is greater reliability in considering a period of study of more years.

The quality of the obtained data may not be fully substantial since it is based on assumptions. Secondary data is publicized and is not fresh and firsthand information like primary data. Only a few variables that affect financial performance were put into consideration whereas there are so many variables with an effect on the financial performance of a firm. This was the case mainly because the data available is limited.

The study was analysed using the multiple linear regression model which is prone to various challenges affecting the results. The findings from the model are prone to errors

and could be misleading. Suppose we add to the model more variables, the hypothesis in the relationship between the variables may not remain.

The research concentrated on only firms listed at the NSE whereas there are quite a number of companies in operation that are not listed. They could have provided comparative results which could have strengthened the findings and conclusions.

### **5.6: Suggestions for Further Research**

The study can be extended for a longer period of time to improve on the findings and conclusions pertaining to the effect debt financing has on the financial performance of the firm.

Firms not listed at the NSE should be put into consideration since this study gave attention to those listed only. Only 51 companies of those listed were studied. There are several other companies that can be studied to generate different results.

A few of the factors affecting financial performance were considered. Further research can aim at focusing on other factors. Size of the firm and tangibility were found to have no significance effect on financial performance. More significant factors can be put into effect in determining how the financial performance is affected. Other variables other than financial performance can be put into consideration.

This research can be complimented by a study whose data is primarily acquired from one on one interviews and questionnaires that are in depth. This can concentrate on all the 64 companies listed at the NSE.

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## APPENDICES

	<b>Symbol</b>	<b>Listing</b>	<b>Notes</b>
1.	EGAD	Eaagads Limited	Coffee growing and sales
2.	KUKZ	Kakuzi Limited	Coffee, tea, passionfruit, avocados, citrus, pineapple, others
3.	KAPC	Kapchorua Tea Company Limited	Tea growing, processing and marketing
4.	LIMT	Limuru Tea Company Limited	Tea growing
5.	SASN	Sasini Tea and Coffee	Tea, coffee
6.	WTK	Williamson Tea Kenya Limited	Tea growing, processing and distribution
7.	G&G	Car & General Kenya	Automobiles, engineering, agriculture
8.	MASH	Marshalls East Africa	Automobile assembly
9.	FIRE	Sameer Africa Limited	Tires
10.	XPRS	Express Kenya Limited	Logistics

11.	HBER	Hutchings Biemer Limited	Furniture
12.	KQ	Kenya Airways	Kenya's flagship airline; crosslisted on Uganda Securities Exchange and Dar es Salaam Stock Exchange
13.	LKL	Longhorn Kenya Limited	Publishing
14.	NMG	Nation Media Group	Newspapers, magazines, radio stations, television stations. Crosslisted on the Uganda Securities Exchange, the Dar es Salaam Stock Exchange and the Rwanda Stock Exchange
15.	SCAN	Scangroup	Advertising and marketing
16.	SGL	Standard Group Limited	Newspapers, magazine, Radio station, TV station
17.	TPSE	TPS Serena	Hotels & resorts
18.	UCHM	Uchumi Supermarkets	Supermarkets; Crosslisted on the Uganda Securities Exchange, the Dar es Salaam Stock Exchange and the Rwanda Stock Exchange



19.	ARM	ARM Cement Limited	Cement, fertilizers, minerals; mining and manufacturing
20.	BAMB	Bamburi Cement Limited	Cement
21.	BERG	Crown-Berger (Kenya)	Paint manufacturing
22.	CABL	East African Cables Limited	Cable manufacture
23.	PORT	East Africa Portland Cement Company	Cement manufacture and marketing
24.	KEGN	Kengen	Electricity generation
25.	KENO	KenolKobil	Petroleum importation, refining, storage & distribution
26.	KPLC	Kenya Power and Lighting Company	Electricity transmission, distribution and retail sale
27.	TOTL	Total Kenya Limited	Petroleum importation and distribution
28.	UMME	Umeme	Electric power distribution. Primary listing on the Uganda Securities Exchange <sup>[2]</sup>

29.	BRIT	British-American Investments Company	Insurance
30.	CIC	CIC Insurance Group	Insurance
31.	CFCI	Liberty Kenya Holdings Limited (formally CFC Insurance)	Insurance
32.	JUB	Jubilee Holdings Limited	Insurance, investments. Crosslisted on the Uganda Securities Exchange and the Dar es Salaam Stock Exchange
33.	KNRE	Kenya Reinsurance Corporation	Reinsurance
34.	PAFR	Sanlam Kenya Plc (formally Pan Africa Insurance Holdings)	Insurance
35.	ICDC	Centum Investment Company	Investments
36.	OCH	Olympia Capital Holdings	Construction and building materials
37.	TCL	TransCentury Investments	Investments
38.	NSE	Nairobi Securities Exchange	Stock exchange

39.	BAUM	A Baumann and Company	Machinery distribution and marketing, investments
40.	BOC	BOC Kenya Limited	Industrial gases, welding products
41.	BAT	British American Tobacco Limited	Tobacco products
42.	CARB	Carbacid Investments Limited	Carbon dioxide manufacturing
43.	EABL	East African Breweries	Beer, spirits; crosslisted at Uganda Securities Exchange and Dar es Salaam Stock Exchange
44.	EVRD	Eveready East Africa	batteries
45.	ORCH	Kenya Orchards Limited	Fruit growing, preservation and distribution, fruit-juice manufacture and marketing
46.	MSC	Mumias Sugar Company Limited	Sugar cane growing, sugar manufacture & marketing
47.	UNGA	Unga Group	Flour milling
48.	SCOM	Safaricom	Mobile telephony Internet service provider

49.	ADSS	Atlas Development & Support Services <sup>[3]</sup>	Support services in Oil and Gas. Primary listing on the London Stock Exchange. <sup>[4]</sup>
50.	HAFR	Home Afrika	Real estate
51.	FTGH	Flame Tree Group Holdings Ltd <sup>[5]</sup>	Consumer Goods
52.	KVL	Kurwitu Ventures <sup>[6]</sup>	Sharia Investments
<b>53.</b>		Stanlib Fahari I-REIT	REITs

*Table 5:1 Listed Companies*

*Table 4:1 Tests of Normality*

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Financial Performance	.150	243	.000	.867	243	.000
Debt financing	.442	243	.000	.116	243	.000
Log firm size	.334	243	.000	.807	243	.000
Log Tangibility	.341	243	.000	.800	243	.000

a. Lilliefors Significance Correction

*Table 4:2 Descriptive Statistics*

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Financial Performance	243	-.57000	.58000	.0603292	.13811562
Debt financing	243	0	23	.30	2.100
Log firm size	243	9	12	10.29	.693
Log Tangibility	243	9	12	10.30	.684
Valid N (listwise)	243				

Table 4:3 Correlation Analysis

		<b>Correlations</b>			
		Financial Performance	Debt financing	Log firm size	Log Tangibility
Financial Performance	Pearson Correlation	1	.311**	.031	.038
	Sig. (2-tailed)		.000	.627	.557
	N	243	243	243	243
Debt financing	Pearson Correlation	.311**	1	-.013	-.015
	Sig. (2-tailed)	.000		.839	.815
	N	243	243	243	243
Log firm size	Pearson Correlation	.031	-.013	1	.991**
	Sig. (2-tailed)	.627	.839		.000
	N	243	243	243	243
Log Tangibility	Pearson Correlation	.038	-.015	.991**	1
	Sig. (2-tailed)	.557	.815	.000	
	N	243	243	243	243

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

*Table 4:4 Regression Analysis*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.318 <sup>a</sup>	.101	.090	.13176149	1.401

a. Predictors: (Constant), Log Tangibility, Debt financing, Log firm size

b. Dependent Variable: Financial Performance

*Table 4:5 ANOVA<sup>a</sup>*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.467	3	.156	8.968	.000 <sup>b</sup>
	Residual	4.149	239	.017		
	Total	4.616	242			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Log Tangibility, Debt financing, Log firm size

Table 4:6 *Coefficients*<sup>a</sup>

Coefficients <sup>a</sup>										
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.					
	B	Std. Error	Beta							
1	(Constant)	.040	.128							
	Debt financing	.021	.004	.312	5.091	.000				
	Log firm size	-.079	.094	-.398	-.847	.398				
	Log Tangibility	.088	.095	.437	.930	.353				

a. Dependent Variable: Financial Performance