

**EFFECT OF FINANCIAL LEVERAGE ON INVESTMENT OF NON
FINANCIAL FIRMS LISTED AT THE NAIROBI SECURITIES
EXCHANGE**

BY

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D63/74120/2014

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

NOVEMBER 2017

DECLARATION

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

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This research project has been submitted for examination with my approval as the University supervisor.

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ACKNOWLEDGEMENT

I give thanks to God for the patience, sustenance and good health throughout this research.

Special thanks go to my parents, Mr. and Mrs. Simon Mwangi for my upbringing and for the support they offered me throughout my education.

Much appreciation to my brother Paul Wanjohi for his unwavering support morally.

I wish also to extend my thanks and appreciation to my supervisor, Dr. Iraya Mwangi who tirelessly played a supervisory role to make this research a success.

God bless you all.

DEDICATION

I dedicate this project to my parents Mr. and Mrs. Simon Mwangi who raised me up and sacrificed many things in life for my education and to brother, Paul Wanjohi for his encouragement throughout the project.

TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENT.....	iii
DEDICATION.....	iv
LIST OF TABLES.....	viii
LIST OF FIGURES.....	ix
ABBREVIATIONS AND SYNONYMS.....	x
ABSTRACT.....	xi
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.1.1 Financial Leverage.....	2
1.1.2 Investment.....	4
1.1.3 Financial Leverage and Investment.....	5
1.1.4 Non-Financial Firms Listed at the Nairobi Securities Exchange.....	6
1.2 Research Problem.....	7
1.3 Research Objective.....	9
1.4 Value of the Study.....	9
CHAPTER TWO: LITERATURE REVIEW.....	10
2.1 Introduction.....	10
2.2 Theoretical Review.....	10
2.2.1 Agency Theory.....	10
2.2.2 The Q Theory of Investment.....	12
2.2.3 Trade off theory.....	13

2.3 Determinants of Investments by Non-Financial Firms	14
2.3.1 Financial Leverage	14
2.3.2 Sales Growth.....	14
2.3.3 Profitability.....	15
2.3.4 Liquidity	15
2.4 Empirical Review	16
2.5 Conceptual Framework	20
2.6 Summary of Literature Review	21
CHAPTER THREE: RESEARCH METHODOLOGY	22
3.1 Introduction	22
3.2 Research Design	22
3.3 Population of the Study	22
3.4 Data Collection.....	23
3.5 Diagnostic Tests	23
3.6 Data Analysis	23
3.6.1 Analytical Model	24
3.6.2 Test of significance.....	24
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION	24
4.1 Introduction	25
4.2 Response Rate	25
4.3 Descriptive Statistics	25
4.4 Diagnostic Tests	26
4.5 Correlation Analysis.....	28

4.6 Regression Analysis	29
4.6.1 Model Summary	29
4.6.2 Analysis of Variance	29
4.6.3 Regression Coefficients	30
4.7 Interpretation of the Findings	31
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS ..	33
5.1 Introduction	33
5.2 Summary	33
5.3 Conclusions	34
5.4 Recommendations	35
5.5 Limitations of the Study	36
5.6 Suggestion for Further Research	36
REFERENCES.....	37
APPENDICES	42
Appendix I: List of Non-financial firms listed at NSE	42
Appendix II: Research Data	43

LIST OF TABLES

Table 4.1 Descriptive Statistics.....	25
Table 4.2 Test for Normality	26
Table 4.3 Test for Multicollinearity	28
Table 4.4 Correlations.....	28
Table 4.5 Model Summary	29
Table 4.6 Analysis of Variance.....	29
Table 4.7 Coefficients.....	30

LIST OF FIGURES

Figure 2.1 Conceptual Framework	21
Figure 2.1: Residual plot.....	27

ABBREVIATIONS AND SYNONYMS

- D/E** - Debt to Equity
- DTA** - Debt to Total Assets
- E/D** - Equity To Debt
- NPV** - Net Present value
- NSE** - Nairobi Securities Exchange
- PPE** - Property Plant and Equipment
- R&D** - Research and Development
- ROA** - Return on Assets

ABSTRACT

Investment is a vital economic activity in the corporate finance theory. The key to maintaining and increasing the capital stock and production capability of an organization is investment. Generally, investment is narrowly related to the intensity of economic activity and development. The aim of this study was to determine the impact of financial leverage on investment of non financial firms listed at the Nairobi securities exchange. The agency theory, the q theory of housing investment and the trade off theory were adopted for the study. A descriptive design and was used in the study and the population entailed the 46 non-financial firms listed in the NSE. To carry out the study secondary data was used which was extracted from the targeted firms financial statements and reports. Analysis of data was carried out through descriptive statistical techniques, correlation analysis and the multiple linear regression. The findings revealed that the association linking debt ratio and investment is positive but insignificant and that the relation between profitability, sales growth and investment ratio was negative and insignificant. The findings further established that a negative and considerable relationship existed between liquidity and investment. The study concluded that investments by non-financial firms that are listed at the Nairobi Stock Exchange are not affected by financial leverage, sales growth and profitability. The study also concluded that liquidity significantly affects investments by non-financial firms listed at Nairobi Stock Exchange. The study recommended that the management of non-financial firms have to ensure they hold adequate level of financial leverage to ensure that they do not affect other functions of the firm. The study also made recommendetions that the management of non-financial firms should ensure that their firms are liquid enough to ensure that they can make investment decisions.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Investment remains one of the vital economic activity in the corporate finance theory. The key to maintaining and increasing the capital stock and production capability of an organization is investment (Dang, 2012). Generally, investment is closely associated to the concentration of monetary related activities and development. Major changes on the extent, the organization and the goals of investment often predicts impending event variations as well as lasting progressive traits in the economy (Perić & Đurkin, 2015). In the same vein, a linkage establishment between leverage and investment as well provides insight to the way in which monetary policies and cyclical aspects significantly manipulate the corporate sector (Adelegan, 2009). The inclusion of financial obligation in the assets component in firms is among the factors that contribute greatly in the success or collapse of firms, in relation to their ability to manage the general positive & negative possible effects of it (Al-Otaibi, 2015).

The relationship of financial debt in companie's decision to invest has been an essential issue in finance theory. The irrelevance preposition as according to Modigliani and Miller (1958) asserts how investment strategies in firms ought to be dependent upon the factors that escalate cash flows, the viability, or overall value of firms (Odit & Chittoo, 2011). The agency theory supports that issuance of leverage recommits the firm to an agreement of paying money as charge amount and principal, this forces management to act on these debts using cash which has been as well invested in unprofitable investments. Therefore, the use of debt is a mechanism used to overcome the over-investment problems experienced by

managers (Aivazian, Ge & Qiu (2005). The trade off theory states that; use of financial debt has confirmed to be more valuable especially if the investment made using a loan earns a profit that exceeds the overall charge of obtaining that obligation (Al-Otaibi, 2015).

In Kenya like other countries in the world obligation charge is taxable. Notably usage of debts in financing activities of an organization is considered as a benefit on one hand because the interests often are supposed to be tax free whereas the organization is often is controlled by creditors so as to control their risk in the organization (Maniagiet al., 2013). Kenya is a developing country in dire need of this study to facilitate management and financiers with knowledge to assume discreet investment judgments and choices as most studies in this field have been concentrated in the industrialized countries. The Nairobi Securities Exchange (NSE) undertakes very significant part on the whole venture of most economic advancements. It also aids in mobilization of domestic savings which by so doing brings about the reallocation of funds the dormant agents to active ones (Kimathi, Galo & Melissa, 2015).

1.1.1 Financial Leverage

This refers to the percentage of assets funded using debit capital in total disregard of equity capital (Rayan, 2010). The total sum of debit that is employed to fund a firm's developments is known as financial leverage (Tempel, 2011). Above all it is frequently signified as the act of transacting on equity and hence a monetary skill involving securing of extra loaned finances to maximize the return in equity (Al-Otaibi, 2015). Added to this, it refers to the employment of liability in organizational economic setting for growth of returns. The main objective of firms applying leverage is to maximize the possible earnings

of the resources of companies. In case where firms use leverage, they have to settle charges in respect of utilizing these resources (Kimathi, Galo & Melissa, 2015). A firm that uses financial leverage is said to be trading on equity. The higher the amount of debt employed by a firm the higher its financial leverage (Olang, 2017).

It is worth noting that financial leverage is largely employed in most commercial activities, particularly in cases where funding via preferred stock instead of common stock is involved. In short, effects of a variation on the extent where most organization's resources are being funded through loaned funds on the return for each share of the organization is referred as financial debt (Al-Otaibi, 2015). Additionally it basically represents the extent to which a firm employs either of the two principal forms of corporate financing; debt and equity. Consequently it constitutes a method of improving the likely earnings of a firm, although it remains a significant challenge on the shareholder's interests as it generates threats in repaying the debt charges (Shahid Akmal & Mehmood, 2016). In addition when financial leverage is used in a firm, the respective firm is supposed to attain more returns on the fixed charges reserves as compared to their expenses. Similarly, a rise in debts denotes a respective rise in financial leverage (Enekwe, Agu & Eziedo, 2014).

Financial leverage is achieved by means of dividing the firm's overall debt obligations to its collective assets for the period. (Shahid Akmal & Mehmood, 2016). The ratio of liabilities to assets is normally used as a criterion for determining a company's capital structure. This measure, which is called financial leverage, is an indicator of financial risk and ability to pay debt (Enekwe, Agu & Eziedo, 2014). A higher degree of financial debt leads to a higher payment of interests which in turn affects negatively the firm's base line of share earnings (Olang, 2017). Finance debt is a financial determinant that looks at the

ratio of capital that comes in the form of debt. Differing measures of financial leverage that are used in financial literature include debt to total assets (DTA), debt to equity (D/E), as well as equity to debt (E/D), based on book values and market values (Vengesai & Kwenda, 2017).

1.1.2 Investment

This is the current pledge of money for a period so as to acquire future cash flows that will in turn compensate costs and risks the investor took (Sajid, Tahir & Sabir, 2015). Investment is defined to include current pledge of funds for duration within the expectations of receiving cash flows in the future that will be used as compensation to investors for the period they have committed their resources, the anticipated inflation rate and the risks associated with the projects (Stores, 2015). Investment is also defined as the outlay formed so as to generate a thing that is of greater worth to the investor as compared to the initial cost (Soumaya, 2012). Therefore investment is a determinant of the stocks of fixed assets that are added to and replaced for the period. It comprises of investment in equipments, software and structures a firm have made (Sajid, Tahir & Sabir, 2015).

Firm investment takes into consideration funds used to acquire and upgrade physical assets. Investment is mainly measured through capital expenditure. All expenses incurred on newly acquired capital assets are considered to be capital expenditures in nature or on an investment that will improve the economic useful life of an asset (Vengesai & Kwenda, 2017). The major proxies used to measure investment include, the net of financial commitment in property, plant and equipment (PPE), overall capital, and total speculation in addition to research and development (R&D) costs. The net total of investment is

computed by adding the overall investment in PPE to net investment in the intangibles and the net investment in monetary asset together with the overall firm's gaining (Tempel, 2011). Investment ratios give a clear indication of the incomes and performance of shares that a firm holds (Rayan, 2010).

1.1.3 Financial Leverage and Investment

The degree to which firm's use borrowed funds to finance its investments will generally have consequences to the firm. Shareholders returns are leveraged when firms earn more than the due interest of the debt on financing investments using debt capital (Rayan, 2010). The free cash flow theory which postulates that a high leverage ratio disciplines managers to an extent of prohibiting them from investing in projects that have negative NPV_(s) enabling firms to be more profitable in the long run (Mule & Mukras, 2015). The agency theory contends that high financial debt over-hang will tend to lessen motivations in the shareholder management conflicts within the management of the entity to spend more on those projects that have positive net present worth, since loan-holders accrue more benefits than the shareholders who are the real owners of the firm (Odit & Chittoo, 2011). However, the Modigliani and Miller, MM (1958) proposition indicates that a firm's value will be established by its actual property as opposed to the sum of equity and current debt in the structure of capital (Al-Tally, 2014).

According to Odit and Chittoo (2011), firms that are greatly leveraged are least probable to assume benefits of valuable development chances as opposed to firms possessing little leverage levels. A study by Aivezian, Ge and Qiu (2005) examined the effect of financial debt on the firms' venture decisions and established that debt is undesirably linked to

speculation and that the negative outcome should be considerably stronger for organizations that have low development chances as compared to those assuming high development prospects. Khan (2015) examined the effect of financial debt on entity's speculation choice and revealed a negative association between investment and debt, although the negative association concerning investment and debt is significantly intense among those entities with slight progress rate.

1.1.4 Non-Financial Firms Listed at the Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) remains as the main securities exchange of Kenya and also the leading securities exchange within the East African countries; this makes it able offer platforms for the issuance and trading of debt and equity securities (Kioko, 2015). The NSE is a body corporate established under the Companies act (CAP 486) of the Kenyan law and comprise of all licensed stock brokers as the shareholders (Muigai, 2016). The capital markets authority of Kenya regulates the exchange and its main function is to provide a stock market where shares are bought and sold (Olang, 2017). The Nairobi Securities Exchange (NSE) focusses on helping the trade clearance arrangement of equities, debt derivatives and other related financial tools. Notably all companies in the securities exchange are mandated to be listed as this enables the investors to buy and sell securities of a company therefore it is connected to the soundness of Securities Exchange (Maniagiet al., 2013).

The NSE is a market for stocks that is characterized with lowly beginnings and it has eventually grown greatly over the period. There are 44 non-financial companies highlighted in NSE under the following sectors: Commercial and services, agriculture,

industrial and linked telecommunication and technology, investment, automobiles and accessories, energy and petroleum sectors (Ogili & Muiva, 2015). Most studies at the NSE focus on financial debt and the financial performance of firms. Obonyo (2015) for this case the effects of financial debt to the overall performance of mining companies financially, that are listed in the Nairobi Securities Exchange was analyzed and existence of a positive association amongst financial debt and earnings per share (EPS) was noted to occur. Kunga (2015) also examined the association concerning monetary debt together with profitability of companies that are enumerated in the NSE and found that liquidity and financial debt showed a undesirable association on the ability to make profits.

1.2 Research Problem

Financial debt is the utilization of fixed-charge funds, which may include shareholder's equity, preference capital and debt capital (Olang, 2017). Theoretical perspective by Modigliani and Miller, MM (1958) suggest that financial debt does not affect the firm's investment policies thus firms should make investments based on future demand of its products, production technology, market interest rates and other fundamental factors affecting profitability (Eghbalnia, Fadayinejad & Noferesti, 2013). The tradeoff theory however asserts that optimal funding combination concurs by means of the point of financial debt and exact balance between profits and prices of leverage funding (Aivazian, Ge & Qiu 2005). The agency theory support that financial leverage acts as a safety mechanism against over-investment, since free money flows which may be utilized by managers for their private gains ought to be drained to bond-holders as interest (Tempel, 2011). Therefore, the effect on financial leverage on investment remains a theoretical concern to date.

In Kenya, several companies have been experiencing diminishing performance making some of them even be delisted from the Nairobi securities exchange in past years (Njire, 2014). According to Ayako, Kungu and Githui (2015) as much as many companies registered with the NSE show improvement in their output, some experience diminishing progress rendering them to be delisted from the NSE over the past years. Still, a number of managers and practitioners lack sufficient guidance to attain an optimal financing decision. Obonyo (2015) also postulate that a number of listed firms in Kenya have been facing profitability challenges and therefore declaring very little earnings per share or none at all.

The significance of financial leverage on investment decisions has been investigated by various scholars across the world. A research carried out by Soumaya (2012) analyzed the effects of debts on the sensitivity of money flows and found that debt had a negative result on the sensitivity of investment-cash flows, however this study focused on investment cash flow sensitivity. Adenugba, Ige and Kesinro (2016) also evaluated the effect of financial debt on a firm's value and found that financial debt had considerable effects on a firm's net worth. However, Eghbalnia, Fadayinejad and Noferesti (2013) conducted a study on the impact of a leverage to an entity's investment where they established that there is no considerable connection between firm investments and its debt in terms of long term obligations to total assets. The sampled studies focus give contracting outcome based on the effect of financial debt on firm investments.

Several studies have also been conducted in Kenya on financial leverage. Njire (2014) for example assessed the impact of financial leverage on investment among the firms registered with the NSE and found that financial debt had a noteworthy undesirable cause over the company's progress but study focus was on financial performance. Kimathi, Galo

and Melissa (2015) also evaluated the association between financial leverage and the financial performance and established a negative outcome towards economic output amongst exceedingly levered and less levered companies since undesirable connection occurred concerning a firm's leverage and its progress with the study focusing on financial performance. As such, most authors focus more on the connection concerning financial debt and financial progress as opposed to investments. This leads to the query; What is the effect of financial leverage on investment of non financial firms listed at the Nairobi securities exchange?

1.3 Research Objective

The research objective was to determine the impact of financial leverage on investment of non financial firms listed at the Nairobi securities exchange

1.4 Value of the Study

This research will be of great importance to the managers of non-financial firms listed at the NSE. Also the overall management of a firm can use the findings, conclusions and recommendations to come up with strategic policies towards borrowing and the use of debt to finance their organizations investments. Additionally, managers can use the findings to determine between best alternative to finance their investment between equity and debt.

The findings can also be to the Nairobi securities exchange, the capital markets authority of Kenya and other organization, which are directly associated with listed firms to come up with policy mechanisms on financial leverage and investment decisions. The study will also be of significance to finance theory and literature as its will add to the available knowledge on financial leverage and investment decision of listed firms.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This part concerns the theoretical review, the determinants of firm's investments, the empirical literature which reviews past studies, which are related to the research topic, the conceptual framework and lastly the summary of the reviewed literature.

2.2 Theoretical Review

Agency theory, the q theory of housing investment and the trade off theory were discussed under the theoretical review.

2.2.1 Agency Theory

According to Jensen and Meckling (1976) agency theory refers to the association factors that exist when there is a definite association between a principal and an agent. Agency relationship can be created when the principal delegate authority or job to an agent (Al-Tally, 2014). This theory highlights the conflict of interest between management of a firm and the owners, in this case the shareholders are the principal and the management acts as the agent. Conflict of interest arises when the management pursue its own interests rather than the interests of the owners of the business. The theory argues that managers act in their own interests such as job security and prerequisites (Mule & Mukras, 2015). This theory concerns the diverging interests when an organization's management and ownership seize to be one. The core case following this presumption is that the managers of a company always operate in their own self-interests (Njire, 2014).

The agency theory postulates that managers do not entirely benefit from gains of a firm's investments since they do not incur the overall costs of these for the activities by abandoning those expenses which would personally advantage them (Al-Tally, 2014). According to the theory, the management might under-invest in times of fear that the investments might not produce adequate cash to pay the interest and principal of the debt that was required to fund the investments. An increase in debt leads to under-investment because the likelihood of default raises which in turn results in the management to keep the level of debt at lowest point as possible (Tempel, 2011). The theory also asserts that debt agreements give shareholders an encouragement to invest sub-optimally. If firms are booming and yielding large returns above the leverage, the shareholders enjoy most of the benefit, however if a firm fails to yield profits, the debtors are the ones who bear utmost loss because their liability is limited (Ryan, 2010).

This theory describes two agency problems that are related to the managerial investment activities. Managers who have considerable free cash flow might over-invest so as to increase their personal compensation as well as their benefits. When equity finance is used to fund a company, the management is not obliged to make dividend payments and by not doing so, it can misuse free cash flows for their personal benefits to the extend of neglecting dividend payments to the shareholders (Tempel, 2011). Agency problems also arise from attractions between shareholders, debt holders, management and effect the investment. Sometime under investment or over investment leads to a range of situations in which investments may not be entirely reactive or may be in excess of reactivenes with the changes in economic essentials (Khan, 2015)

2.2.2 The Q Theory of Investment

Brainard and Tobin (1968) and Tobin (1969) proposed this theory and it asserts that the market evaluation of equities, in relation to substitution cost of the physical assets they represent, is one of the main determinants of new investments (Ma'in & Ismail, 2011). The q theory states that investments are encouraged when market yields on equity are at minimum, relative to the real returns on investing in physical assets (Dang, 2012). The theory postulates that firms always compare their net marginal product of capital with cost of funds. A change in the corporate tax rate influences the sound state of capital stock but does not influence the sound state of q for the reason that the change does not manipulate the cost to the firm to obtain new capital goods from the market. As capital accumulates, marginal product of capital falls and the structure converges to up to a point where q is equivalent to the equilibrium worth (Perić & Đurkin, 2015).

In accordance to the q theory, the rate at which investors wish to raise their capital stock should be linked to q, where the net worth of capital is comparative to the replacement costs of capital (Adelegan, 2009). The greater the Q in a firm's investment, it will show that the firm is highly able to enlarge its investments by taking loans from banks. And if the Q is more than 1 ($Q > 1.0$), the market worth will be superior to the recorded value of the company's assets, this will persuade firms to take loans from banks and eventually invest majorly in capital projects since their value is above the cash outlay initially compensated for the debts. Generally, a high Tobin's Q will encourage companies to raise their debt capacity and in return, increase overall investments (Ma'in & Ismail, 2011). Conversely, if the Q is a lesser amount of 1.0 ($Q < 1.0$), then the market value is a lesser amount of the firm's assets book value recorded, in consequence, this discourages

companies to borrow from banks and at large invest less in capital market (Perić & Đurkin, 2015). The Q theory base it's assumptions on the measure that investment will be increased when the value of capital is high in the market than the cost associated to generate it (cost of capital).

2.2.3 Trade off theory

This theory is associated with Kraus and Litzenberger (1973). The theory postulates that debts offer tax shield to firms, therefore firms seek higher levels of debt so as to gain the utmost tax benefit and eventually improve the profits. High levels of debt increase the likelihood of insolvency (Rayan, 2010). This theory assumes that firms have an optimal capital composition on the base of trade-off that exists between the costs and profits from the use debt (Mule & Mukras, 2015). The theory assumes that huge companies will lean to be further diversified and for this reason they are likely to be less vulnerable to financial distress. Additionally, if control maintenance is important, then it is possible that firms will attain larger size through debt financing instead of equity financing. Therefore, control consideration as well support positive association between the firm's size and the debts for the firm (Njire, 2014).

The trade off theory puts an assumption that there are advantages accrued from the use of borrowed funds within capital structure used up to the attainment of a capital structure that is optimum. This theory has the recognition of debt interest that is tax deductible which in turn reduces the tax liability and increase tax shield (Rayan, 2010). An optimal capital structure is attained by matching the tax benefits that accrue from use of leverage, alongside the costs related with that debt, which may include agency costs and bankruptcy (Al-Tally,

2014). The trade off theory states that financial debt might have a negative effects when the investment have not achieved adequate returns because the firm shall be put at high risk because of the intensity of the funds borrowed, this will result in reduction of the general value of the company (Al-Otaibi, 2015).

2.3 Determinants of Investments by Non-Financial Firms

2.3.1 Financial Leverage

Financial leverage is a key tool assists the firm's management to come up with sound and prudent financial decisions on financing any available investment opportunities. In that case, the higher the amount of leverage, the more the debt amount in the firm's capital structure at a period of time (Rayan, 2010). The debt amount employed by an organization to fund the assets investment is referred to as financial leverage. A firm can finance its investments through equity or debt. Additionally, a company can also employed preferred capital to finance any identified investment. A company rate of return or return on investment is normally influenced by the amount of leverage in the firms cost of capital and the fixed interest on debt also affects profitability of the firm (Enekwe, Agu & Eziedo, 2014).

2.3.2 Sales Growth

Here, growth of sales evaluates the competence with which the total non current assets are calculated. A high ratio is an indication of a high level of competence in the utilization of assets and the contrary holds the same (Odit & Chittoo, 2011). Over-investment is anticipated to arise when there are low growth opportunities which might result the lack of

projects that have positive NPV(s) (Tempel, 2011). Growth of sales exhibit the performance of firms in relation to that of preceding year. Sales growth ratio measures the increase in sales over a specific period (Sajid, Tahir & Sabir, 2015). Sales growth represents the year–on-year changes in turnover. Sale growth is measured as the ratio of difference in sales over two subsequent years to previous year’s turnover.

2.3.3 Profitability

Profitability is an overall measure of a firm’s economic success and the competence of its management (Olang, 2017). Profitability simply means the association between firm’s earnings and its capital assets. Low profitability will not be an indication of organizational sickness (Shahid Akmal & Mehmood, 2016). Profitability measures productivity of capital employed and operational efficiency of a firm. This is an essential variable used in the evaluation of development opportunities because it tries to clarify the amount of assets a company is using to the contribution of the net total profits. Consequently, investing in assets will generally contribute in the raise of profits and increased profitability can be alternated with highly growing companies (Odit & Chittoo, 2011). Profitability ratios offer an approach to the level of achievement in shareholders value creation by assessing the effects of debt, liquidity and asset management on operating outcome of an organization (Rayan, 2010).

2.3.4 Liquidity

This is known as the ability of a firm to honor its existing obligations. Companies have to make sure that they are not affected with illiquidity since it may lead into financial distress that eventually leads to insolvency of firms. Illiquidity will lead to struggles when it comes

to honoring current obligations for the firm; this have affects the credit worthiness of a firm (Odit & Chittoo, 2011). A firm that is poor in cash may lose opportunities to take on projects that are profitable. Firms with poor cash are forced to have access to funds so as to fund their projects or even honor their obligations. Cost of obtaining funds may be relatively high because of the firm's asset structure. Financial institutions evaluate this as a high risk (Al-Tally, 2014). Current ratios show the ability of a firm's current assets (receivables, stock, cash) to settle its current debts. A higher current ratio will show that a firm is more competent in paying its current debts when they are due (Sajid, Tahir & Sabir, 2015).

2.4 Empirical Review

Olang' (2017) examined the impact of financial debt on the profitability of firms listed in the Nairobi Stock Exchange. The paper employed a causal research design and targeted 66 listed firms at the NSE and used purposive sampling technique to select a sample size of 30 firms. Descriptive and inferential statistical methods were employed in the analysis the collected data. The research findings established that firm's size had a statistically considerable impact on the profitability of listed firms whereas financial debt, liquidity and growth opportunity were not statistically significant hence the conclusion that financial leverage has no considerable impact on the profitability of firms.

Muchai (2016) explored the impact of corporate debt on the profitability of manufacturing and allied firms listed at the NSE. The research adopted an explanatory non-experimental research design and carried out a survey on the seven firms listed under the manufacturing and allied segment from year 2010 to year 2014. The paper findings established that total

leverage has a statistically considerable negative impact on profitability. The paper as well established that short-term leverage had a considerable negative impact on profitability whereas long term debt had a negative but not statistically significant effect on profitability. The author concluded that corporate leverage negatively affects profitability of NSE listed manufacturing and allied companies.

Sajid, Tahir and Sabir (2015) investigated the effect of financial debt on investment decisions for the listed firms in KSE-30 Index of Pakistan. The study sought to identify the key variables which affects firms' decision to invest and that leads to the bankruptcy of companies listed in Pakistani. The authors employed correlation analysis, descriptive statistics and pooled ordinary least square regression model to analyze the 30 quoted firms in Pakistan. The results revealed that financial debt had a considerable and negative effect on investment decision of the listed firms in Pakistan.

Al-Otaibi (2015) investigated the effect of financial debt on the performance of firms in Saudi. The study used regression analysis and gathered data from the Saudi Stock Exchange for a span of two years. Results of the study discovered that there is a statistically considerable association between the financial performance and the return on equity but there is no considerable association between financial debt and the return on assets. Conclusions of the study was that a positive association between the return on equity and debt ratio

Ngigi (2015) explored the impacts of financial debt on the company investment for firms listed at the NSE. The study collected data for a span of 5 years from 2009 to 2014 and used a causal research design was used in data collection. The study carried out a census

of the 62 firms listed at the NSE and used the regression model in the analysis of the data collected. The paper revealed that financial debt had a considerable negative impact on corporate investment whereas liquidity had a negative impact on investment. The study concluded that a firm's investment decisions are directly related to the cash flow, profitability, firm size and growth.

In Kenya, Mule and Mukras (2015) studied the relationship between financial debt and the financial performance of the listed firms in the country. The authors made use annual data for the time between 2007 and 2011 and the panel data methodology. The study results found that financial debt considerably and negatively affected the performance of the listed firms in Kenya using ROA, but financial debt negatively had inconsiderable impacts on return on equity. This study also found that asset tangibility and ownership concentration are key determinants of performance and is calculated in terms of Tobin's Q. This paper made conclusions that financial debt is a vital negative forecaster of financial performance as calculated in terms of Tobin's Q and ROA.

Enekwe, Agu and Eziedo (2014) examined the impacts of financial debt on the financial performance of the Nigeria pharmaceutical firms from 2001 to 2012 and sampled three companies. The study employed an ex-post facto research design and secondary data was obtained for the study. Descriptive statistics, Pearson correlation and regressions were used to analyze the collected data. The findings of the study established that debt-equity ratio and debt ratio had a negative connection with the return on assets whereas interest coverage ratio had a positive connection with return on assets on the Nigeria pharmaceutical companies.

Odit and Chittoo (2011) examined the effect of financial debt on investment decisions of firms with the use of firm-level panel data in Mauritius that consisted of 27 firms listed on the Mauritius Stock Exchange and sampled over a time span of 15 years. The findings revealed that a considerable negative association existed between investment and debt. The authors also revealed that a negative connection between investment and debt existed for the slow growing firms; econometric findings revealed an inconsiderable association between debt and investment for highly growing firms.

Bitok et al (2011) investigated the determinants of debt for companies listed at the NSE. The study sampled 54 firms' listed and collected data for the period between 2003 and 2008. The findings revealed that firms having more material assets are in a better state of providing collateral for their debts. The study also revealed that large and profitable companies usually retain high leverage ratios and companies having high development rates use less of borrowed funds. The study concluded that firm's debt is positively associated with profit, asset tangibility, macro-economic and size, and as well negatively linked with the level of profitability for firms and non-tax debt tax shield.

Rayan (2010) explored whether financial leverage positively or negatively impacts firm value. The study was carried out using secondary data sourced for the period between 1998 and 2007 and sampled 113 Johannesburg Stock Exchange listed firms. The study used the multiple regression models for the analysis of the secondary data collected. The findings of the paper revealed that an increase in financial leverage is negatively correlated with firm value. The study also revealed that the relationship between interest rates and capital structure is inconclusive.

Yuan and Motohashi (2008) analyzed whether bank loan ratios and total debt ratios of the listed firms in Chinese had any effect on their fixed investment from year 2001 to 2006. The study revealed that total debt ratio had a negative effect on the fixed investment among Chinese listed firms. The study also revealed that total debt ratio had a more strong negative effect on low-growth companies than on high-growth companies, implying that bank loan ratio in fact restrained firms from over-investment. The study concluded that bank loan ratio had a stronger effect on the fixed investment than the total debt ratio, and in fact had the strong impact of restraining investment mostly by the low growing firms.

2.5 Conceptual Framework

A conceptual framework diagrammatically represents the association between the research variables. The agency theory supports that a raise in the debt level leads to under-investment because the likelihood of default raises which in turn results in the management to keep the level of debt at lowest point as possible. The Q theory contends that that investment is increased when the value of capital is high in the market than the cost associated to generate it. Finally, the trade theory states that financial debt can have a negative impact on investment. The conceptual model for this study is developed as follows

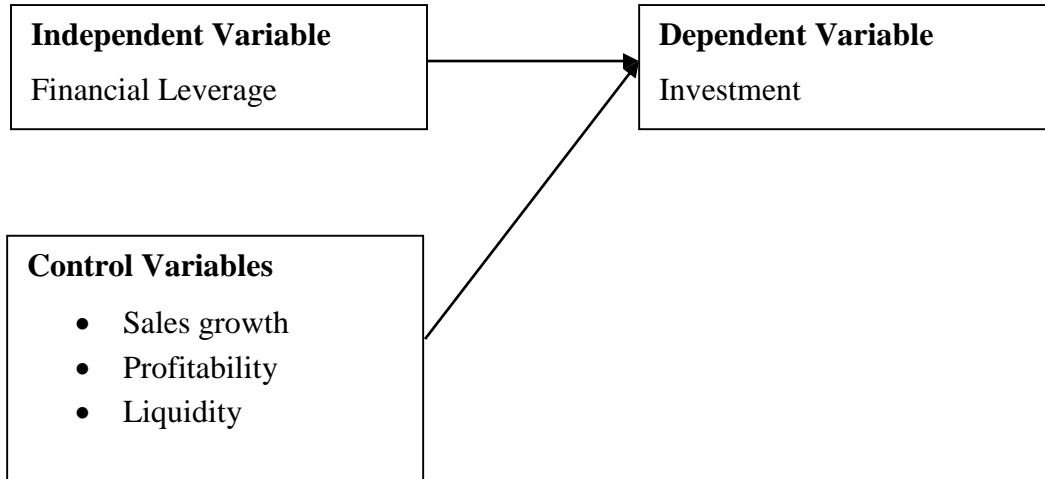


Figure 2.1 Conceptual Framework

Source: Researcher

2.6 Summary of Literature Review

Under this section; the agency theory, the q theory of investment and the trade off theory were explored. The agency theory assumes that managers with extensive free cash flows might over-invest in order to increase personal compensation and benefits. The q theory of investments asserts that investments are encouraged when markets yield on equity are at minimum, relative to the actual returns on investment in tangible assets. Finally, the financial leverage provides a firm with tax shield, and therefore firms will pursue high debt levels sequentially to acquire the maximum benefits from tax and eventually progress profitability. Further, a number of studies have been sampled among them Odit and Chittoo (2011), Sajid, Tahir and Sabir (2015), Olang' (2017), Mule and Mukras (2015), Ngigi (2015) & Muchai (2016). Most of the sample studies focus on the relationship between leverage and financial performance of listed firms. Thus, literature on financial leverage and firm investment decisions requires additional investigation.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The introduction section describes the research design, the targeted population, the methods of collecting data and finally the techniques of analyzing the data.

3.2 Research Design

A research design is the blueprint of research that acts as a guideline in the method of research starting with the formulation of research questions and hypotheses to the reporting of research findings (Zikmund et al., 2011). This research assumed a descriptive research design that involves fact-finding enquiries of different kinds and even surveys. Descriptive studies also agree to the explanation of a phenomenon or traits linked to a targeted population, approximations of extend of a population with similar traits and finding of relations between various variables (Zikmund et al., 2011). A descriptive research design therefore helped to clarify the association concerning financial debt and investment of non-financial firms listed at the Nairobi Security Exchange.

3.3 Population of the Study

A population can be explained as groups, individuals, organizations, events, human, and the situation to which that population covers (Zikmund et al., 2011). The population of this study entailed the 46 non-financial firms that are registered in the NSE.

3.4 Data Collection

To carry out this research, secondary data was used which was extracted from the targeted firms financial statements and reports. Data on investments, liquidity and financial leverage was obtained from was obtained from statement of financial position while data on cash flows, sales growth was obtained from the statement of comprehensive income whereas data on profitability was obtained from both statements. The data was retrieved for a period of 5 years starting from 2012 to 2016.

3.5 Diagnostic Tests

This study carried out a test on multicollinearity, normality, test for homogeneity and test of independence of observations (serial correlation). The Durbin Watson statistic was used to tests for serial correlation or autocorrelation while the variance inflation factors and tolerance levels was used to test for multicollinearity. Finally, normality was tested using measures of Shapiro Wilk Test while the homogeneity test was carried out using a residual plot.

3.6 Data Analysis

Analysis of data was carried out through descriptive statistical techniques, correlation analysis and the multiple linear regression. Descriptive statistics entailed the mean values, standard deviation, variance and other measures of central tendency. Correlation and regression examination was employed in ascertaining the degree of association as well as the relationship between the variables respectively. Equally important statistical package for social sciences was applied to assist in the analysis of data.

3.6.1 Analytical Model

The regression model was adopted as the analytical model for the research.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \mu$$

Where

Y = Investment determined using the investment ratio, which is the ratio of fixed assets over total assets

β_0 = Constant of the model

$\beta_1 - \beta_5$ = Coefficients of the regression equation

X_1 = Financial leverage determined using the debt ratio

X_2 = Cash flows determined using the natural log of earnings before extraordinary items and depreciation

X_3 = Sales growth determined using the sales growth ratio

X_4 = Profitability determined using the return on assets

X_5 = Liquidity determined using the current ratio

μ = Tolerable error

3.6.2 Test of significance

The F and t test statistics were largely applied in testing the statistical impact of the regression equation and coefficient respectively. The test was carried out as 95% confidence level.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This section contains the response rate findings, descriptive findings, diagnostic tests results, correlation and regression results and the interpretation of the results of the study

4.2 Response Rate

This study targeted 46 non-financial firms that are listed in the NSE but complete data was obtained from 42 quoted non-financial firms. The 42 firms generated a response rate of 91.3%, which was deemed sufficient to continue with the study.

4.3 Descriptive Statistics

Table 4.1 Descriptive Statistics

	Investment ratio	Debt ratio	Profitability	Liquidity	Sales growth
N	210	210	210	210	210
Mean	.57059	.16467	.05190	2.52205	.07374
Median	.61149	.12445	.04600	1.48650	.04600
Std. Deviation	.23033	.17980	.111404	3.046648	.353941
Skewness	-.2905	.37428	-.476	.721	.520
Kurtosis	-.9647	.90446	.307	1.413	1.891
Minimum	.048	.000	-.503	.136	-.658
Maximum	.9931	.4931	.385	25.754	2.244

Source: Research findings

The findings on the above table show that mean investment ratio of the listed non-financial companies is 0.5801; minimum and maximum being 0.048 and 0.9931 respectively. In the table, it is also revealed that the average debt ratio for the companies is 0.16467; minimum and maximum values being 0.000 and 0.8931 respectively. The findings also indicate that the average profitability for the firms measured using ROA was 0.0519 with the minimum ROA being -0.503 with the maximum ROA being 0.385 respectively. In addition, the table shows that the average liquidity and growth in terms of sales was 2.52205 and 0.07374 respectively. The table also shows that the skewness and kurtosis values range between 1 and -1; this is an indication of the data being normally distributed.

4.4 Diagnostic Tests

4.4.1 Test for Normality

The Shapiro Wilk and Kolmogorov tests were used to assess for normality of the data.

Table 4.2 show the results

Table 4.2 Test for Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Debt ratio	.180	210	.035	.847	210	.527
Profitability	.113	210	.057	.949	210	.663
Liquidity	.092	210	.023	.969	210	.369
Sales growth	.162	210	.025	.784	210	.651

a. Lilliefors Significance Correction

Table 4.2 exhibits the normality test. The findings show all the p values being greater than the significance figure of 0.05 hence an indication of the data to be normally distributed.

4.4.2 Test for Homogeneity

The study used a residual plot to assess for homogeneity. Figure 4.1 shows the results

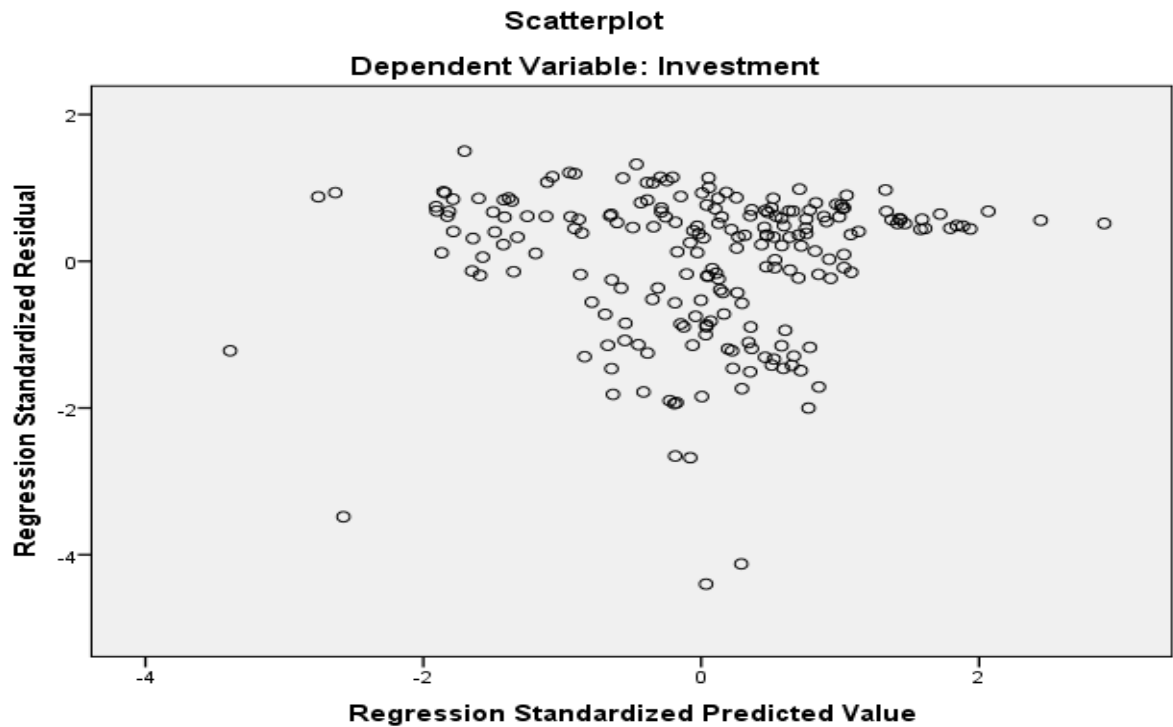


Figure 2.1: Residual plot

Source: Research findings

The residual plot indicates that the data point are not convergent at point hence an indication that there is no heteroskedasticity hence the assumption of homogeneity of variance is upheld.

4.4.3 Test for Multicollinearity

The study used the variance inflation factors and the tolerance levels to assess multicollinearity.

Table 4.3 Test for Multicollinearity

	Tolerance	VIF
Debt ratio	.941	1.063
Profitability	.987	1.014
Liquidity	.964	1.037
Sales growth	.988	1.013

Source: Research findings

Table 4.3 exhibits the multicollinearity results. The results show that the variance inflation factors (VIF) are less than 10, which signify no multicollinearity existing between the dependent and independent variables.

4.5 Correlation Analysis

Table 4.4 Correlations

	Investment ratio	Debt ratio	Profitability	Liquidity	Sales growth
Investment ratio	1				
Debt ratio	.084	1			
Profitability	-.035	-.203**	1		
Liquidity	-.143*	-.271**	.204**	1	
Sales growth	.053	.002	.217**	-.003	1

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

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

Source: Research Findings

The above table shows the correlation among debt ratio, sales growth and investment ratio and the correlation is weak and positive. The table also shows that profitability, liquidity had a negative correlation with the investment ratio.

4.6 Regression Analysis

The regression equation describes the relationship between two variables and in this model we look at the relationship between the independent variables: sales growth, profitability, liquidity, debt ratio with the dependent variables: Investment ratio.

4.6.1 Model Summary

Table 4.5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.284 ^a	.081	.063	.249280	1.857

a. Predictors: (Constant), Sales growth, Profitability, Liquidity, Debt ratio

b. Dependent Variable: Investment ratio

Source: Research findings

The model summary findings indicate that the independent variables explain 8.1% of the disparity in the dependent variable as indicated by the coefficient of determination value of 0.081. The correlation coefficient value of 0.284 shows a weak connection among the independent and dependent variables. The Durbin statistics value is 1.857, which is an indication that there is no serial correlation in the data.

4.6.2 Analysis of Variance

Table 4.6 Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.120	4	.280	4.506	.002 ^b
	Residual	12.739	205	.062		
	Total	13.859	209			

a. Dependent Variable: Investment ratio

b. Predictors: (Constant), Sales growth, Profitability, Liquidity, Debt ratio

Source: Research findings

The table above exhibits that the regression equation is significant and a good predictor of the connection among the dependent variable and independent variable. This indicated by the p value of 0.002, which is less than 0.005, and the F statistics of 4.506.

4.6.3 Regression Coefficients

Table 4.7 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.658	.070		9.401	.000
Debt ratio	.085	.044	.133	1.925	.056
Profitability	.011	.019	.039	.581	.562
Liquidity	-.070	.021	-.226	-3.321	.001
Sales growth	.004	.021	.014	.213	.832

Source: Research findings

The coefficient results on the above table indicate that the association among debt ratio and investment is positive but insignificant. The results also show that the connection among profitability, sales growth and investment ratio is also negative and insignificant. Finally, the results show that the connection among liquidity and investment is negative and considerable.

4.7 Interpretation of the Findings

The study found that there is no considerable connection linking financial leverage and investments of non financial companies listed at the NSE. This means that financial leverage has no significant impact on investments by listed non financial firms. In similarity, Olang' (2017) concluded that financial leverage has no considerable impact on the profitability of companies listed in the country. Odit and Chittoo (2011) also found an insignificant connection among financial debt and investments. Sajid, Tahir and Sabir (2015) however found that that financial debt had a considerable and negative effect on investment decision of listed companies in Pakistan. Ngigi (2015) however found that financial debt had a considerable negative impact on corporate investment

This paper also established that there is no considerable association existing between profitability and investments of non-financial firms listed at the NSE. This means that profitability has no significant impact on investments by non-financial firms. However, according to Tempel (2011) over-investment is anticipated to arise when there are low growth opportunities, which might result the lack of projects that have positive NPV(s).

The findings revealed that there is no considerable connection among sales growth and investments of non-financial firms listed at the Nairobi Securities Exchange. This means that sales growth has no significant impact on investments by non-financial firms. Odit and Chittoo (2011) however suggested investing in assets will generally contribute to the raise of profits and high profitability can be alternated with highly growing firms

The study findings established that there is a considerable and negative correlation linking liquidity and investments of non-financial companies that are listed at Nairobi securities

exchange. This means that liquidity has a considerable negative impact on investments by non-financial firms. According to Odit and Chittoo (2011), illiquidity can lead to struggles when honoring the existing obligations, this have impacts on the credit merit of a firm. Ngigi (2015) also found that liquidity had a negative effect on investment for listed firms in Kenya.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section presents a summary and the conclusions of this research and recommendations for the study. It as well indicates the limitations of the paper and suggestions concerning new study.

5.2 Summary

The study aimed at establishing the connection between financial debts on investment of non financial firms listed at the Nairobi Securities Exchange. This study used financial debt as the independent variable while investments was used as the dependent variable. Sales growth, profitability and liquidity were used a control variables. The study targeted 46 non-financial firms listed at the Nairobi Securities Exchange but obtained competed data from 42 quoted non-financial firms. The 42 firms generated a response rate of 91.3%, which was deemed sufficient to continue with the study.

The findings of descriptive statistical analysis established that the mean investment ratio of the listed non-financial firms was 0.5801 and that the average debt ratio for the firms was 0.16467 respectively. The findings also revealed that the average profitability for the firms measured using ROA was 0.0519 and that the average liquidity and growth in terms of sales was 2.52205 and 0.07374 respectively. The correlation findings established that the correlation between debt ratio, sales growth and investment ratio was weak and positive

but the correlation between profitability, liquidity had a negative correlation with the investment ratio.

The regression summary statistics established that the independent variables explained 8.1% of the variation in the dependent variable while the correlation coefficient undisclosed that a weak correlation existed among the independent and dependent variables. The study results further established that the regression model was considerable. The coefficient findings showed that the association among debt ratio and investment is positive but insignificant and that the relation between profitability, sales growth and investment ratio was negative and insignificant. The findings further established that the association among investment and liquidity was negative and considerable.

5.3 Conclusions

The study findings revealed that there is no significant connection existing between financial debt and investments of non financial firms listed at the NSE. The study concludes that financial debt has no significant impact on investments by listed non financial firms.

The study also revealed that there is no considerable connection between the profitability and investments of the non-financial firms listed at the NSE. This paper concludes that profitability has no significant impact on investments by non-financial firms.

The study results revealed that there is no significant connection between sales growth and investments of non-financial firms listed at Nairobi securities exchange. This study concludes that sales growth has no significant impact on investments by non-financial firms.

The study findings further established that there was a significant and negative connection among investments and the liquidity of non financial firms listed at the Nairobi Securities Exchange. This study concludes that liquidity has a significant negative effect on investments by non-financial firms.

5.4 Recommendations

The study concluded that financial leverage had no significant impact on investments by listed non financial firms. The study however recommends that the management of non financial firms should ensure they hold adequate level of financial leverage to ensure that they do not affect other functions of the firm.

Based on the research findings the research concluded that that profitability had no significant impact on investments by non-financial firms. The study however recommends that the management of non-financial firms should ensure that their firms are profitable since profit maximization is one of the goals of a firm.

The research concluded that sales growth had no significant impact on investments by non-financial firms. The study however recommends that the management of non financial firms should ensure that the maximize sales since sales ensures that the firm is profitable.

The study made the conclusion that profitability had a considerable negative impact on investments by non financial firms. It therefore recommends that the management of non-financial firms should ensure that their firms are liquid enough to ensure that they can make investment decisions.

5.5 Limitations of the Study

This study put focus on non financial companies listed at the NSE thus the findings are limited to the targeted non financial firms and may not be applied to non financial firms since they were not considered by the research.

In addition, the findings are limited to the considered research variables, which include financial leverage, sales growth, profitability, liquidity and investment of the non financial firms. Finally, the findings are applicable within the research period, which was considered by the study.

5.6 Suggestion for Further Research

The model summary results established that the considered variables only explained 8.1% of the variation in investments by non-financial firms. This indicates that there are factors, which affect investment by non-financial firms at the NSE. This study thus recommends an additional study on the factors affecting the investments decision made by firms listed at the Kenyan securities market.

The study also focused on all the listed firms at the NSE. This study therefore recommends an additional research on financial leverage and investment on specific segments at the NSE. Finally, the study recommends an additional research the study recommends an additional research of the effect of firm specific factors on investment decisions by firms listed at NSE.

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APPENDICES

Appendix I: List of Non-financial firms listed at NSE

Agricultural sector

1. Eaagads Limited
2. Williamson Kenya Limited
3. Kakuzi Limited
4. Kapchorua Limited
5. Limuru Tea Company Limited
6. Rea Vipingo plantation limited
7. Sasini tea & coffee limited

Commercial & Services sector

1. Express Kenya Limited
2. Kenya Airways Limited
3. Nation Media group
4. TPS Serena limited
5. Standard group
6. Uchumi Supermarkets
7. Hutching Biemer
8. Longhorn Kenya
9. Scan group
10. Home Africa Ltd

Construction& Allied sector

1. Athi river Mining
2. Crown Paints Kenya
3. Bamburi cement Limited
4. E.A.Cables
5. E.A.Portland cement Ltd

Automobile & Accessories

1. Car & general Kenya Limited
2. Marshall E.A Limited
3. Sameer Africa

Energy & Petroleum

1. KenGen
2. Kenol Kobil
3. Kenya Power & Lighting Co Ltd
4. Total Kenya Limited
5. Umeme Ltd

Investment

1. Centium Investment Company
2. Olympia Capital Holding
3. Trans – Century Ltd
4. Nairobi Security Exchange
5. B.O. C Kenya

Manufacturing

1. Baumann & Co.
2. Kenya Orchards Ltd
3. Unga group Ltd
4. BAT Kenya Limited
5. East Africa Breweries Ltd
6. Mumias Sugar Co.
7. Eveready EA

Telecommunication

1. Safaricom Ltd

Appendix II: Research Data

Firm	Year	Total assets	NCA	Current assets	Current liabilities	Total debt	Sales	Net income
Kakuzi	2016	3015067	2049347	965720	416738	0	2651199	562425
	2015	4288966	2817369	1471597	369210	0	2481844	459714
	2014	3857454	2589132	1268322	177421	0	1689917	160205
	2013	3717543	2546888	1170655	147181	0	1384375	165028
	2012	3571700	2334227	1237473	146023	0	2043332	408656
Rea Vipingo	2016	4186797	1833737	2353060	203785	195167	4089281	1407729
	2015	4881218	2547971	2333247	302932	172740	3568118	1466681
	2014	3203131	1914813	1288318	198051	29607	2700547	350929
	2013	2834011	1793124	1040887	220663	58338	2570103	444811
	2012	2376618	1497062	879556	257984	151103	2571725	380433
Sasini	2016	16818463	14033606	2784857	570323	0	3570629	761850
	2015	16044527	13985862	2058665	467712	0	2786126	1101212
	2014	14929577	13684494	1245083	534840	0	2762547	45421
	2013	9054366	7759321	1295045	731249	0	2816834	91689
	2012	8922980	7813109	1109871	585628	0	2779883	-124113
Kapchorua	2016	2144587	1249010	895577	210297	0	1209133	106696
	2015	2329151	1338975	990176	114444	0	1073989	234322
	2014	1929161	1307541	621620	121855	0	1192483	-22785
	2013	2078475	1255138	823337	388985	0	3490681	125991
	2012	1962897	1210707	752190	456895	0	3607409	78392
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	2013	485320	452319	33001	35475	0	68025	-59215
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B.O.C	2016	2215302	1014710	1200592	525853	0	1076719	126323
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BAT	2016	18499800	9531450	8968350	6345960	2976976	36676249	4234334
	2015	18681184	9102184	9579000	6601000	1700100	35817594	4976000
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	2012	15176495	8046667	7129828	6052680	726982	30503560	3270852
Carbacid	2016	3081768	1893513	1188255	167632	0	831761	375568
	2015	2968727	1854036	1114691	247126	0	809719	393863
	2014	2533163	1552475	980688	155757	0	826630	490641
	2013	2204394	1312332	892062	88417	0	952836	475541
	2012	2012816	1373428	639388	150166	0	921753	775596
East African Breweries Ltd	2016	61746000	40190000	21556000	27969000	26648750	64322000	8021000
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Eveready East Africa Ltd	2016	1082806	816253	266553	587381	443274	553311	-206505
	2015	1511665	871045	640620	651306	349120	1124582	-201509
	2014	930057	166700	763357	572293	386835	1216580	-177589
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	2012	1150729	274686	876043	695764	2587090	1374789	70084
Kenya Orchards Ltd	2016	89001452	41877952	47123500	23328465	56271926	65132764	3760000
	2015	78731223	44619344	34111879	16433745	56271926	60974312	28915648
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	2012	70372491	48510161	21862330	12543235	56271926	29684494	244957
Mumias Sugar Co. Ltd	2016	27018727	25107708	1911019	10826038	9273959	6285917	4731026
	2015	19181960	17326474	1855486	13670007	6294156	5531357	-4644801
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	2012	27338613	20167253	7171360	5720655	5388979	15542686	2012679
Unga Group Ltd	2016	9199783	3380021	5819762	2531888	465365	19743564	508816
	2015	8671788	5674928	2996860	1540850	638910	18723250	327189
	2014	8026578	2541402	5485176	2351954	173329	17002302	382767
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ARM Cement Ltd	2016	51058802	42773131	8285671	14159435	13243508	12823826	-2800175

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Bamburi Cement Ltd	2016	40811000	21811000	19000000	7046000	0	38034000	5890000
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Crown Paints Kenya Ltd	2016	5059029	1277284	3781745	3250210	714592	7347557	131796
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E.A.Cables Ltd	2016	7548406	5318844	2229562	3319124	2792995	3650451	-582602
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E.A.Portland Cement Co. Ltd	2016	27842120	25727272	2114848	4962120	3783376	8871456	4137167
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Car & General	2016	9705198	4038345	5666853	5636222	3389099	9735788	217426
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