EFFECT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF INSURANCE COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE.

HAKIMA MOHAMMED JELLE

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DECLARATION

I certify that this research project is my original work and has not been presented for a degree in any university.

Signed:…… Date:……..

Hakima Mohammed Jelle

Registration Number: D63/81907/2015

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

Signed:…… Date:……..

Dr. Cyrus Iraya

Department of Accounting and Finance

University of Nairobi

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DEDICATION

This research study is dedicated to my parents and siblings for their moral support through the entire MSC programme especially during this research project.

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LIST OF ABBREVIATIONS

ADF:	Augmented Dickey Fuller
CA:	Current Assets
CL:	Current Liabilities
EPS:	Earnings per Share
GPM:	Gross Profit Margin
IRA:	Insurance Regulatory Authority
MIPs	Medical Insurance Providers
MM:	Modigliani and Miller
NSE:	Nairobi Securities Exchange
P/E	Price Earnings
RI:	Residual Income
ROA:	Return on Assets
ROE:	Return on Equity
ROI:	Return on Investment
VIF:	Variance Inflation Factor
TA:	Total Assets
TL:	Total Liabilities

ABSTRACT

The optimal capital structure levels and capital structure decisions that impact on the how a firm performs have been a great dilemma for many. Capital structure decisions have an impact on the growth and profitability of a firm as these decisions enable firms maximize their shareholder's wealth. The research objective was to determine the effect of capital structure on financial performance of insurance firms listed at the NSE. To justify the research findings, descriptive research design was used to describe the relationship between the dependent variables and independent variables. Data collected for examination purposes was purely secondary as it was extracted from annual reports and financial statements of the listed firms. The target population was all the insurance firms listed at the NSE. Six firms were listed and formed part of the study's population. Data analysis was done via multiple regression analysis, descriptive statistics and correlation analysis. For the significance level to the hypothesis a confidence interval of 95 percent was used. The analytical model used was financial performance as the dependent variable takin ROA as the measure. Debt ratio, size of firm and liquidity were the independent variables. The financial ratios were calculated by use of Microsoft Excel spreadsheet using data obtained for six year period (2011-2016). The findings show debt ratio having a notable impact on the ROA of insurance companies. Size of the firm was found to have an insignificant negative relationship with the return on assets on the other hand liquidity was found to have a positive and significant relationship with financial performance of the insurance firms as measured by return on assets. The findings reveal that capital structure affects financial performance of insurance firms at the NSE. In view of this it is recommended that if the insurance firms are capable of funding their operations through retained earnings should do so and reduce on undertaking borrowings as this will boost their overall performance.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Most firms face various difficult decisions, for instance, capital structure. It is considered as one of the major areas of finance (Abor, 2005). Its decision impacts highly on the value of a firm thus making it crucial to make good capital structure decisions. When firms stele on poor capital structure decisions, the outcome to the firm will be higher costs in its capital which will in turn lead to reducing the present value of its projects thus rendering the projects not acceptable. On the other hand, effective capital structure decisions results in higher net present value, hereby boosting the worth if a company as more of its project will be acceptable. The decision on target capital structure a firm settles for is a very crucial decision. Finding that optimal structure has always been an area of emphasis for a long time. This decision gives a firm an edge over its competitors as it's very critical.

A number of theories have been developed that explains the connection between capital structure and financial performance of firms. Modigliani and Miller initiated the first theory through a presentation; they stated that assuming perfect capital markets, the value of firm is totally independent of its capital structure (Modigliani & Miller, 1958). They further relaxed this theory and included taxes. They concluded that firms utilize the tax advantages available to them thus maximizing the value of their firms. For this to happen, debt is increased in their capital structure (Modigliani & Miller, 1963). Jensen and Meckling (1976) proposed another theory called the trade-off theory. This theory states that a firms optimal capital structure results from balancing the benefits from tax advantages and costs involved when debt is issued. These costs include bankruptcy, agency and financial

distress. Pecking order theory is another theory that attempts to explain this relationship. This theory takes into consideration information asymmetry. It states that investors, and shareholders and other stakeholders do not have same information about the firm. When it comes to financing the firm, preference is given to retained earnings i.e. internal financing as opposed to debt financing and lastly equity financing being least preferred (Myer, 1984).

Insurance firms are in the business of transferring risks. They normally charge a certain premium for the insured to be compensated for the loss incurred. Premiums collected are usually less than the claims to be paid thus insurance companies may be forced to dig into their retained earnings. In Kenya, various legislations have been put in place to ensure that the industry runs smoothly but these legislations have ended up constraining the insurance firms in issues relating to capital, for instance a minimum paid up capital is required for the insurance firms before registering a company. There is the cash and carry rules that insurance firms ought to comply with by assuming risks once premium is received which may end up having an impact on the management of cash flows for the insurance firms therefore affecting overall performance of the firms. The insurance industry is very competitive and the 51 licensed insurance companies have to compete for the limited market. Motor, fire and personal accident cover are the only insurance covers that have a high uptake in Kenya. These issues are very specific to insurance firms only and they have an influence on the capital structure of the firms thus having an impact on the overall performance of these firms.

1.1.1 Capital Structure

According to Ross et al. (2005) the capital structure of a firm refers to the way it finances itself from various sources of financing. These sources could be fully debt or even fully equity or a percentage of each. Capital can also be referred to the initial investment a company uses to start of a business. There are different ways a firm can source for its capital. It can be through debt, equity or both. The capital structure of a firm gives investors, stakeholders an idea of how a company is financing itself. It depicts how its operations and growth have been financed using the various sources of capital available to the firm. Debt can be sourced externally, it can be long-term that is to be repaid much later that is three years and above and short term which is expected to be repaid in the next one or three years depending on the agreement between the firm and the lender.

Al-Najjar and Taylor (2008) argued that companies have different capital structure depending on their size, age, type, asset structure, profitability and company risk among others. The benefit of capital structure that is optimal is that it shows the fulfillment of the stakeholders' needs. A company can finance its structure in different ways. It can finance through equity fully, i.e. having no debt at all. In this case a firm will not be able to take advantage of leverage if any. Secondly, it can finance its capital with no equity at all only debt capital. This is usually an unrealistic and impossible way since no investor is ready to invest his money in such a firm. Another method which is usually adopted by many firms is through a certain percentage of both debt and equity depending on the firms needs to finance its structure.

The capital structure theory was pioneered by two economists, Modigliani and Miller in 1958. The Modigliani and Miller Model predicted that the value of a firm is not influenced

by its capital structure thus debt and equity are regarded to be perfect substitutes. This model is widely accepted. Modigliani and Miller theory was backed up by a number of assumptions. These assumptions however were not relevant in an ideal situation, for instance they assumed that no transaction costs are involved in the trading of securities and that there is no bankruptcy costs. The assumption by Modigliani and Miller of a perfect market capital was relaxed hence capital structure became crucial in the process of establishing what the value of a firm should be. This gave path to development of substitute theories of capital structure decision and evidence based analysis. The choice a firm makes on which capital structure to choose from i.e. either debt or equity is currently believed to rely on the features of a firm, studies on this usually have given a mixed result and most of the time it's difficult to interpret. Although theories like pecking order, market timing, trade-off and agency cost are in existence. According to Myers (2001) "there is no universal theory of debt-equity choice, and no reason to expect one".

Capital structure measures that can be used to assess the financial ability or rather strength of a firm are the debt ratio and debt-equity ratio. The debt ratio does compare the total liabilities of a firm to the total assets of the firm. If the total liabilities are more than the equity, then that means the equity is less thus indicating a high leveraged position for the firm. We also have the debt-equity as a measure, it's derived from matching total liabilities to total stockholder's equity of a firm.

1.1.2 Financial Performance

Padachi (2006) argues that a financial management that is well planned and put into action will result to an increase in firms' value. Financial performance of a firm is the level with

which a firm's financial goals are achieved. It's the process by which the result of a firm is measured in terms of monetary value. It's a measure used to gage the success of a firm and it can be used for comparison purposes. A firms' financial performance is crucial in its existence. How effective and efficient a firm is in managing its resources for operations, financing and investing activities is clearly depicted in its high performance (Naser & Mokhtar, 2004).

One of the measures of financial performance includes analyzing financial statements. These statements provide information to management on available resources and how they were financed and what the company accomplishes with them. They can be grouped as liquidity, operating and profitability, risk growth and market values (Reilly & Brown 1997). Some of the measures that can be used include: the current ratio of a firm, its return on equity, its return on invested capital and return in assets among others. To measure financial performance the ROA and ROE can be used to see how firms perform. Return on assets indicates a company's profits relative to the total assets of the firm. It reflects how management utilizes the available resources for instance total assets to generate income. It's usually given in a percentage form. ROE may be referred to as the profit generated shown as a percentage of the shareholder's equity. For insurance companies, performance can be seen as net premiums earned, profit from their operations which in these case are the underwriting activities, their annual turnover, and return on equity (Mwangi & Murigu, 2015).

1.1.3 Relationship between Capital Structure and Financial Performance

Tian and Zeitun (2007) argued that capital structure of companies and corporate performance are closely related or interlinked. Productivity, profitability, growth, and customer's satisfaction are variables which can be used as measures of corporate performance. Financial measures can also be used to measure corporate performance. Financial ratios are one of the main measures of financial performance. The ratios could be liquidity, profitability and solvency ratios. Liquidity ratios to be uses include current ratio, acid test etc. Profitability ratios to be used in measuring financial performance may include ROA, ROE, EPS and P/E ratio. Following Jensen and Meckling (1976) argument on the influence of capital structure on financial performance, various studies have been conducted with regards to the relationship between capital structure and financial performance of a firm. Contradictory and mixed results were found after the conclusion of these studies.

Hadlock and James (2002) found a positive relationship between capital structure of a firm and financial performance is positive. Ghosh et al., (2000); Eldomiaty and Azim (2008) and Salim and Yadav (2012) also support this argument. Other researchers however, found a totally different relationship (Fama & French, 2002; Simerly & Li, 2000). In their conclusion, they argued that leverage level and financial performance have a negative relationship.

1.1.4 Insurance Industry in Kenya

In Kenya, the Insurance industry is governed by the Insurance Act cap 487. This Act established Insurance Regulatory Authority. The Act empowers the Authority as it is

mandated to oversee the operations of the insurance industry. The Association of Kenya Insurers was formed in the 1987. It oversees the operations of insurance companies in Kenya. During the year 2015, there were 51 insurance companies, 3 reinsurance companies, 144 insurance brokers, 5 reinsurance brokers, 22 medical insurance providers (MIPs) and 6,428 insurance agents. Out of the 51 insurance companies only 6 are listed at the NSE as at 2015. Other licensed players included 133 investigators, 114 motor assessors, 27 loss adjusters, 7 risk managers, 3 claims settling agents and 19 banc assurance insurance agents during the year (IRA, 2015).

The insurance industry in Kenya has had a stable growth in the last decade. A report by IRA in 2015 indicated that the insurance premium increased by 10.4% when compared to the previous year for the insurance industry. More than 50% of the total premiums was related to general insurance business. The asset base for the industry had also increase from Kshs. 478.75 billion to Kshs. 478.75 billion in 2014 and 2015 respectively. 81% of these assets were held in assets that generated income which increase by 9.9% in the period under review (IRA, 2016).

The Finance Act of 2015 made key changes to the Insurance Act. New provisions were substituted with the minimum capital requirements that were in place. This study focuses on the period that the new provisions were not implemented yet. The previous provisions had a minimum capital requirement and it differed with the type of insurance business the insurance firms were in. For insurance firms that were in the long term type of business a minimum paid up share capital of Kshs. 150 million was required, Kshs. 300 million was required for firms that were in general insurance business and Kshs. 800 million for reinsurance business. This kind of requirement had an effect on the capital structure of

insurance firms as these firms would have to oblige. This did in turn affect the performance of the insurance firms at large.

1.2 Research Problem

Corporate capital structure theory, according to various researchers has been a study of interest in the field of corporate finance for a number of decades. This is after a presentation by Modigliani and Miller on the irrelevance of the capital structure theory. They elucidated that capital structure of a firm is not dependent of its value. Despite a number of theories explaining capital structure and its appeal, researchers have not yet been able to find the optimal capital structure. The discussions on the relevance or irrelevance of capital structure have been an interesting debate to many researches as the theories have led to contradicting decisions and outcomes. For instance, according to MM capital structure is largely irrelevant in that it cannot have a bearing on the prediction of a firm's market value. The best that the researchers have been able to accomplish are recommendations that meet the expectations of temporary results (Abor, 2008).One of the critical and difficult decision a firm has to make is with regards to the capital structure mix to be adopted. Firms need to choose the level of debt or equity that has an impact on the price of a firm and also one that will give the firm a competitive advantage in the industry for the firm to be stable in a competitive business environment.

The Kenyan Insurance Industry has had a number of constraints with regards to how their capital ought to be structured. This is due to the legislations on minimum paid up capital requirement and the cash and carry rules. These legislations have an influence in deciding what the capital structure should look like. Due to the uniqueness of insurance industry, it

operates in a dynamic environment and that claims from the insured are expected to fluctuate year to year it becomes tricky to know the optimal capital structure. According to (Getahun, 2014) most of the insurance firms do not know what factors affect their capital structure thus they may end up making wrong decisions.

Researchers have sought to find out if capital structure influences financial performance in any way possible. Kuria and Omboi (2015) conducted a study that focused on the relationship of the capital structure of a firm and its financial performance. The study selected firms that were in the investment and banking sectors of the Nairobi Securities Exchange. Their results indicated that no relationship exists between long term debt and financial performance of investment and banking institutions listed at the NSE. They also noted that the debt to equity ratio affects both the ROA and ROE of the firms negatively and positively for the investment firms and banking firms respectively listed at the NSE. According to Kaumbuthu (2011) in his study on the industrial and allied sector of the NSE, he concluded that debt equity ratio and ROE have a negative relationship.

Kibet (2013) conducted a study on the energy sector that sought to investigate if a relationship exists between capital structure and share price of firms quoted at the NSE. Effect of debt, equity and gearing ratio were assessed on the share price of the firms. Results indicated that debt, equity and gearing rare were found to have an influence on share prices. Abdul (2012) conducted a similar study on the energy sector for firms listed at the Karachi Stock Exchange. The results indicated that a negative relationship exists between debt ratio and performance of firms. Abor (2005) undertook a study on the effect capital structure of listed firms in Ghana have on profitability. The findings were that a

significant positive relationship between short term debt to total assets ratio and performance of firms.

It is evident that different researchers both locally and globally have given contradicting conclusion on this relationship between capital structure and financial performance. Few studies have been done in the area of capital structure. Looking at the studies done in Kenya, emphasis was on manufacturing sector of the NSE and Investment and financial sectors of the NSE. The empirical evidence from this industry is unknown as to the researcher's knowledge thus it is against this background the researcher thought this study relevant. Therefore this study intends to answer the following question. Does a relationship exist between capital structure and financial performance of insurance companies listed at the Securities exchange of Nairobi?

1.3 Research Objective

The objective of this study is to determine the effect of capital structure on financial performance of insurance companies listed at the Nairobi Securities Exchange in Kenya.

1.4 Value of the Study

The main beneficiaries of this study will be insurance companies in Kenya. Insurance firms need to know how their capital structure pattern is as their main core business is settling of claims or paying damages at the time of loss. Making capital structure decisions at the optimal level is important for these companies as it greatly helps in dealing with operating in a competitive environment.

The study will assist in adding more literature as few studies that focus on insurances firms have been done so far in Kenya. The public will also benefit as it will be able to be cautious on where to place their risks since the appropriate capital structure depends on risk level. Most people are not well informed on the various risks they may incur if they invest in insurance companies. This study will enable the public know the various risks involved and how to mitigate and ensure they don't incur losses in their investments. The Government of Kenya may also use the research finding or conclusions to better productivity of the Insurance industry in the country.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter underlines major theories and seeks to evaluate previous studies in relation to capital structure and financial performance. Section 2.2 presents theories on capital structure; sections 2.3 presents determinants of financial performance in insurance firms; section 2.4 presents empirical study and section 2.6 presents a summary in regards to sections discussed.

2.2 Theories on Capital Structure

This section shows the different theories of capital structure. They include: the Modigliani and Miller theory, the pecking order theory and the trade-off theory, the market timing theory and the free cash flow theory, In this paper we will discuss the three most important which are the Modigliani and Miller theory, the pecking order theory and the trade-off theory

2.2.1 Modigliani and Miller Theory

Capital structure theories originated from Modigliani and Miller (1958) who are regarded as the pioneers and advocates of the capital structure theory. Their presentation triggered the debate on the capital structure concept of firms. In their presentation, they stated that under the assumption of a perfect market and a firm having no transaction costs, the capital structure of the firm is deemed to be irrelevant to its value. They also believed that a firm's debt level has no influence on its value and that funds that are available internal and external can be substituted perfectly.

This theory is based on a number of assumptions which are not realistic in an ideal situation or market. One of the assumption is that managers act on behalf of the shareholders thus they ensure that shareholders wealth is maximized, thus there exists no agency costs. There is information asymmetry as all parties involved have access to the same kind of information. There no taxes, no transaction costs and firms have only two classes of securities to issue that is equity and debt which is risk free. Another assumption is that financial instruments can be traded at any given time and they do not involve any costs.

The MM theory was founded on the fact that tax advantage arising from debt should be equal to the costs associated with taking the debt in the first place. Modigliani and Miller (1958) gave a conclusion that shows the debt of firm being irrelevant to its value. For this theory to be maintained, the tax advantage and risks associated with debt must be equal which also implies that if the tax advantage is expected to be zero risk advantage should also be zero. Their argument was that whichever mix a firm selects for its capital structure, this will have zero influence on the worth of a firm, its profitability and the cost of capital. Assumptions of the MM theory that were criticized were: (i) individuals and firms can borrow at the same time and (ii) that bankruptcy does not exist. Stiglitz (1969) state that there is limitation towards market rates for firms and individuals when it comes to borrowing. Based on practice firms borrowing and individual borrowing cannot be compared. Also, bankruptcy does exist and it can affect and bring challenges to a firm.

Under the MM theory, shareholders of a firm are indifferent towards the capital structure choice. They believe that it doesn't affect the value of a firm. Thereby concluding no relationship exists between capital structure and firm performance. In other words the value of the firm does not rely on debt to equity ratio of the firm.

2.2.2 The Pecking Order Theory

Myers and Majluf (1984) and Myers (1984) argued "the pecking order theory states that firms select their capital structure based on certain preferences". The pecking order theory has an assumption that there is no optimal or rather target capital structure. Internal financing being the most preferred mode of financing which is mainly through retained earnings that is from internal operations then debt financing comes next while equity financing being the least preferred. Myers and Majluf (1984) and Myers (1984) back their conclusions by the existence of the costs involved in issuing of risky securities because of either asymmetric information or managerial optimism. Managers are said to operate in support of current shareholders as they have access to inside information as compared to investors. (Myers & Majluf, 1984). Under the Modigliani and Miller irrelevance proposition, one of the assumptions was that the firms and individuals have the same kind of information thus asymmetric information. But under the pecking order theory this assumptions gets to be relaxed.

This theory affirms that a firm will opt for debt to finance its capital expenditures if the cash flows are not enough rather than equity. The pecking order theory suggest that firms would go for debt financing if their internal cash flows are not able to finance its operations rather than choosing equity financing. The justifications that underpin this theory is that firms ought to reduce their costs and minimize on resources used in swaying in investors to invest in the firm's projects and also the presence of asymmetric information. This theory in short implies that firms with high retained earnings require debt or equity financing the least since there is the availability of enough funds to fund their operations.

According to Baskin (1986) high profit levels and high gearing level are negatively related. These results contradict the presence of optimal capital structure thus supporting the understating given by pecking order theory. According to Halov and Heider, (2004) the standard pecking order is a type of adverse selection in that when sellers gave more information than the buyer about the value of a firm, firms will have a preference in issuing debt as opposed to getting equity outside hence pecking order model applies. The idea behind this theory is that owners, shareholders and managers of firms have more information about the firm's opportunities, risks and also the firm's value than outsiders. This kind of information which is normally asymmetric in nature brings about adverse selection problems for the firms when it seeks external funding. The implications of this theory is that some of the firms may end up undertaking projects that do not have positive net present value because some of the securities to be issued may be mispriced giving rise to adverse selection costs. The choice of financing that a firm selects can reduce the adverse section costs thus capital structure is important in asymmetric information. Asymmetric information has an influence on value of firm. Existing and potential investors may decide to take up or withdraw their investments if managers announce any changes in the capital structure of firms.

2.2.3 Trade Off Theory

Myers (1984) suggested the tradeoff theory that focuses on balancing between savings that arises from tax when a debt is undertaken and minimizing costs associated like agency, bankruptcy and financial distress (Oruc, 2009). After the relaxation of MM assumption on corporate taxes and bankruptcy costs, firms trade off the benefits that accrue from tax and

costs that may be expected if the firm undergoes bankruptcy. It stems from the point that debt has a benefit and a cost at the same time.

This theory emphasizes that optimal leverage is established by balancing tax savings and costs incurred while issuing debt. It ought to select an optimal capital structure that will enable a firm maximize its value by reducing costs involved. Once corporate taxes were included in the first proposition of irrelevance a debt benefit created as it shields earnings from taxes. The tradeoff theory is classified as a tax based theory. It assumes that any source of money has some costs and returns associated with the firm's profits and risks (Awan & Amin, 2014). Thus, firms with more tax advantages will issues more debt to finance their operations therefore balancing off benefit and costs of debt.

Bankruptcy cost is referred to the costs that a firm will incur if the firm expects to default. Liquidation cost is a form of bankruptcy costs that shows the reduction of value of a firm that arises from liquidating assets of the firm. According to Chen (2011) as cited by Shahar et al. (2015) distress cost which is also an example of bankruptcy cost, it refers to the costs a firm incurs if it is perceived to discontinue its operations. Awan and Amin (2014) states that "financial distress and agency cost theories assume that higher debts bring financial distress and eventually bankrupt a firm or force it to go into liquidation or restructuring a company".

The trade-off theory posits that at the ideal level of debt and equity ratio, firms are expected to be able to maximize their market value by summing up the present value of benefits expected from debt financing and costs expected from debt financing.

2.3 Determinants of Financial Performance in Insurance Firms

Capital structure is described as composition of equity and debt shown in the financial statements of a firm. It refers to the composition of equity and debt and other securities included in an organization's capital structure (Saad, 2010). Some of the measures of financial performance include cash flow, profitability, liquidity, leverage, management efficiency among others. Profitability of firm measures the capability of a firm to create profit and sustain its expenses. Measures used in profitability include ROE and ROA. For liquidity it shows the ability of a firm to access cash whenever it's required and the ability of a firm to pay its liabilities on time. It reflects how easily assets can be converted to cash. It includes measures like current ratio, acid test etc. Cash flow measures describe the activities used by the cash available in the firm. Under cash flow, three activities are usually examined to give the cash and cash equivalent balance. These are operations, investing and financing activities.

2.3.1 Capital Structure

The capital structure of a firm has an effect on the financial performance. This is because the decision a firm undertakes may increase or reduce the firm's value. The cost of debt involved and the percentage of equity has an effect on the earnings of the firm.

2.3.2 Size

In small firms internal funds are preferred as this will enable managers minimize intrusion and if the internal funds are not enough to cater for the operations of the firm, debt is preferred to equity as it is has more advantage for the firm. Larger firms are said to be more diversified have stable cash flows therefore positively influencing leverage.

Empirical studies have shown large firms opting for debt that take a longer time to be repaid than one which takes a shorter time this is because the costs incurred in issuing debt is lower in firms that have a larger asset base compared to ones with smaller as the former has better asset base to back up there debt as opposed to the latter which has smaller thus may not be able to have enough security (Michaelas et al., 1999).

2.3.3 Liquidity

Liquidity in firm is the capability of a frim to convert its assets into cash very easily. And be to meet its immediate debt. High liquidity in a firm will enable firm take advantage of opportunities that will yield high returns and at the same time protect the firm from going bankrupt during financial distress times. With pecking order theory, liquid reserves are easily created from the profits available as firms opt for funds generated internally than externally. Firms wouldn't be required to seek external funds if the assets they have are liquid and enough to finance the various projects in the firm. Thus a negative relationship with leverage. Liquidity of firms is measured using the current ratio or quick ratio. It brings out the capability of a firm to meets its obligations that are immediate using the current assets available. A good current ratio indicates that a firm is capable of paying up its obligation using the current assets.

The best way a firm can be able to manage its current ratio is by speeding up the collection of account receivables and trying as much as possible to increase accounts payable days. Awan and Amin (2014) pointed out that the liquidity position of a firm and its debt as acclaimed by the trade-off theory have a favorable relationship. Firms that have higher liquidity ratios are believed to be healthier while on the other hand high debt and low

liquidity in a firm shows that the firm may fail and their investments are risky. Insurance firms have to be strict on their cash flow management as this will ensure that they have sufficient funds to meet up their obligations for instance claims which are not yet paid (Mwangi & Murigu, 2015).

2.3.4 Cash Flow

Insurance companies generate their cash from underwriting activities, financing and investing activities. These cash flows generated enable insurance companies meet its daily obligations. Since claims may come up at any time it's necessary for the companies to always have a good cash flow management system. Insurance companies maybe at a risk of become insolvent if they don't keep attention in maintaining stable positive cash flow and reducing unnecessary cash outflow.

2.4 Empirical Studies

Various empirical studies have been undertaken to critically examine what relationship capital structure and performance of firms has.

A study conducted by Vincent (2013) on the effect of capital structure and value of companies that are listed at the NSE showed that capital structure and value of firms have a positive relationship. In this study descriptive survey design was used as the research design. Stratified random method of sampling was selected to ensure that the population was well represented in the sample. Data analysis was through the use of multiple regression and correlation analysis.

Maina and Kondongo (2013), investing the effect of capital structure on the performance of listed firms at the NSE. Their results concluded that relationship between measures of performance and capital structure is negative. This results backed up the Modigliani and Miller theorem that suggests "capital structure is relevant in determining the performance of a firm".

Kibet (2013) sought to investigate a study on the relationship between capital structure and share price of firms quoted at the NSE. The study assessed effect of debt, equity and gearing ratio in share price. Data selected covered a period of six years, the energy sector of the NSE was selected to be the population under study. For data analysis both descriptive statistic and the Pearson's coefficient of correlation were used to test for validity of the model. Debt equity and gearing rate were found to have an influence on share prices for the energy sector. Equity had a negative relationship with share price while gearing ratio and debt affected share price positively. These study emphasized on one sector only of the NSE thus not giving a good representation.

Abdul (2012) conducted a study that sought to determine the relationship between capital structure decisions and firm performance. The target population of this study was the engineering sector firms that are listed on the Karachi Stock Exchange. Thirty six firms were sampled and the period under review were years 2003-2009. The results concluded indicated that financial leverage of a firm which is usually measured using short term debt to total asset and the debt ratio had a negative relationship with the performance of the firms. The firm performance in this study was measured using ROA, GPM and the Tobin's Q. The asset size was also shown to have an insignificant relationship with the performance of the firms. It was noted that in Pakistan that firms in the engineering sector depended

largely on short term debt. Addition of other measures that are market based could add more insights to the study.

Rub and Abbadi (2012) conducted study on the effect of capital structure on the performance of Palestinian Financial Institutions. The target population was 8 banks that were listed at the Palestine Securities Exchange. The data under study covered a period of 4 years, 2007-2010. Independent variables were bank deposits, total assets and total bank loans. ROE was used as measure of performance in this study. Data analysis was done through the use of descriptive statistics. The findings showed that a strong correlation exists between ROA and efficiency; total deposits to total assets and efficiency. The same variables had the same effect on market value while loans were found to have a weak effect. A positive relationship between leverage and market efficiency was found to exist.

Ebaid (2009) undertook a study that focused on the effect of capital structure choice on the performance of firms in Egypt. For data analysis, multiple regression was used in testing what the relationship is. The independent variables used in this study were short term debt, long term debt and total debt. On the other hand, measures used in the performance of the firms were ROA, gross profit margin and ROE. Sample data selected was from non-financial firms that are listed and data collected was from the years 1997-2005. It was concluded that the choice of capital structure that a firm selects usually has no impact or rather a weak impact on the performance of the firm. This study used a number of firm measures to get the result, thus it gives a clear picture on the actual relationship between the different variables.

Tian and Zeitun (2007) undertook a study that showed the relationship between capital structure and performance of firms in Jordan. Data collection was for firms listed and was from years 1989-2003. The findings showed negative relationship exists between debt level and performance.

Kyereboah-Coleman (2007) examined the impact of capital structure on the overall performance of microfinance institutions in Ghana. The independent variables employed for this study were short term debt, long term debt and total debt. Risk level, the age of the firm and size made up for the omitted variables which were also controlled. Data from fifty two micro finance institutions were drawn from Ghana to be used as the sample population. The data collected for this study was annual in nature from the selected institutions and it covered a ten year period 1995-2005.A positive relationship was shown to exist between the leverage and performance of the institutions. This study was the first kind of study to be undertaken in the sector thus it will give a path for future researchers to have an in-depth understanding of the issues at hand.

Abor (2007) conducted a study that sought to examine what relationship exists between the debt policy and performance of SMEs in South Africa and Ghana. The results concluded that long term debt and total debt level have a negative relationship with performance. For this study performance was measured using the market and accounting measures. This study analyzed data that may not be representative of the real situation as the country did suffer from the Gulf crisis which was in the year 1990-1991. Thus the results may not be well representative.

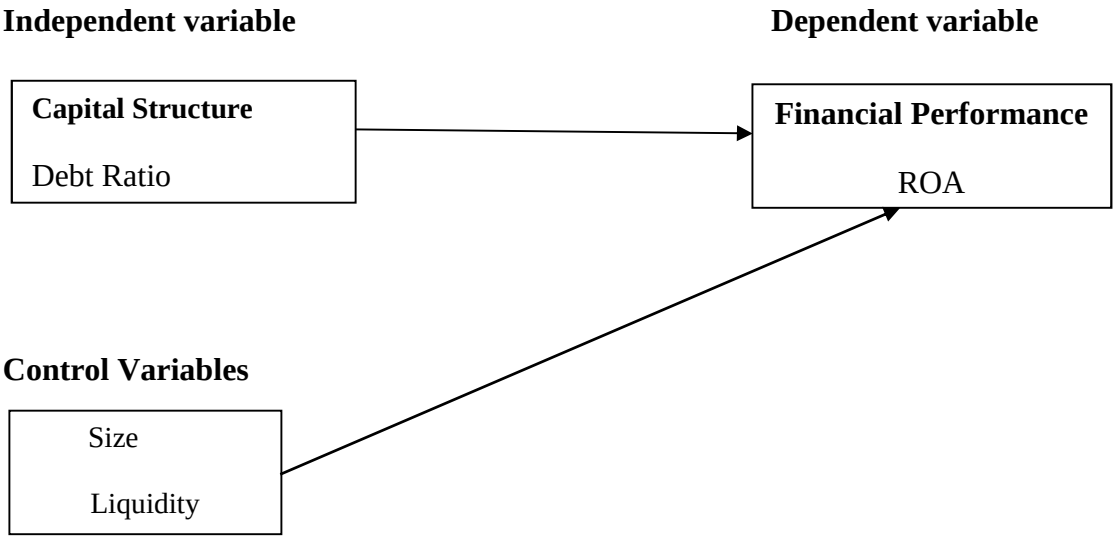
Munene (2006) examined the effect of profitability on the capital structure of firms listed at the NSE. A positive relationship that is weak was shown to exist between the two variables. The period under study was from 1999-2004. The study also established that firms quoted at the NSE during this period relied more on external financing rather than retained earnings. It is important to note that not only profit can have an influence of the capital structure of a firm but also other variables like growth.

Abor (2005) undertook an empirical study on the relationship that exists between capital structure and profitability of listed firms in Ghana. The study sampled all firms that had been quoted over the period under study. Twenty two firms were sampled to be in the sample population. Profitability and leverage ratios were the variables used in the analysis. Other variables like size of the firms and growth of sales were also used. Data analysis was done using regression analysis to see what relationship exists between ROE and capital structure measures. The results indicated that a significate positive relationship between short term debt to total assets ratio and performance of firm exists. For long term debt to assets ratio and firm performance a negative relationship was recorded.

2.5 Conceptual Framework

The study sought to evaluate the effect of capital structure on financial performance of insurance firms listed at NSE. The independent variable was capital structure while the dependent variable was financial performance. Even though the study focused on the effect of capital structure and financial performance, there are other factors that also affect the performance for instance size and liquidity of the firm. It is essential therefore to include them in the model as control variables so as to avoid the omitted variable problem. Size was measured by log of total assets of the firm while liquidity was measured by current ratio.

Figure 1 Conceptual Model



Source: Researcher, 2017

2.6 Summary of Literature Review

Theoretical and empirical reviews on capital structure was extensively looked at in this chapter. The researcher examined critically the theories of capital structure which acts as the foundation in this study.

The empirical review focused on the determinants of financial performance. From the study the researcher can conclude that evidence exists empirically on the influence capital structure has on various determinants of performance. Ebaid (2009), Abor (2005) and Kibet (2013) are among other researchers who concluded that a relationship like that exists.

After Modigliani and Miller theorem in 1958, much emphasis has been given to capital structure the field of finance. Other theories were developed after modification of the original theory. Due to the different results and conclusion researcher have found this topic very appealing. During the review of the literature on capital structure theories, a relationship between financial performance of a firm and capital structure was discovered to be worthy of a research. Thus, an in-depth literature was started and a research gap found on the relationship between the capital structure and financial performance of a firm with respect to insurance firms that are listed at the NSE in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter the various research methods and procedures the researcher had used to carry out the study for the purpose of finding solutions to questions raised in chapter one. Some of the topics discussed are the research design used by the researcher the target population, the sample and sampling techniques was also be identified. Data collection method will be discussed and the data analysis techniques to be used will also be discussed.

3.2 Research Design

According to Burns and Grove (2003), research design is a "blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings". Descriptive research design was applied in this study. This type of design is appropriate in justifying current practice and make judgments. It allows one to measure the significance of results concluded on the overall population under study. It also attempts to determine, describe or identify what is. The aim of this study was to establish the correlation between the various variables in this case, capital structure and financial performance. The data was obtained from NSE. The study relies purely on accounting data of insurance firms listed from year 2011 up to year 2016.The annual reports for the firms was used to extract information on debt ratio, size of firm liquidity of the firms and the return on assets of each of the firms.

3.3 Population

Population of a study is bringing together the various elements with which an assumption can be made (Cooper & Schindler, 2003). Insurance companies listed at the NSE in the periods under study were six. For this study the researcher is of the opinion that since only six firms are listed ta the NSE there was no need of any sampling to be carried out. All the six firms were selected to form part of the target population. (Appendix).

3.4 Data Collection

Data collection makes mention of the organization of data in such a way that it can be used to give results. For this study the researcher used secondary data .This type of data is readily available in the annual reports of the firms and NSE published handbooks. Data collected from the financial statement of the insurance firms included, total assets, total liabilities, net income, current assets and current liabilities. The data was used to derive the four variables to be used in data analysis.

3.5 Diagnostic Tests

Diagnostic tests were undertaken to verify the goodness of fit of the data. A number of tests were conducted to ensure that all the data is well represented. An auto correlation test was done to ensure no outliers are present. Durbin Watson test was used to verify this. Multicollinearity test was undertaken to ensure that no correlation exists among explanatory variables. VIF was applied to test for any multicollinearity problem. Normality tests was conducted to reveal if there is normal distribution in the data. Shapiro Wilk test was used to validate normality of error term. Error terms in a model are normally assumed to have a constant variance, but if the variance is not constant then heteroscedasticity exists.

The Breusch Pagan test was used to test for this. Ramsey Reset Test was undertaken to check for any misspecification errors. This aids in ensuring that the model is free from any biasness. ADF test was undertaken to test for panel unit root.

3.6 Data Analysis

Data analysis involves collection of data, validating the data, coding it and finally checking for any exclusions and mistakes. A Statistical software was used for data analysis. For this study the researcher used Stata version 11 for this exercise. Computation of regression analysis was done to achieve this study's objective. Annual reports published was used to extract data from the financial statements for the years under review which is 2010-2015. Multiple regression was used to assess what effect capital structure has on ROA and also check influence of variables.

3.6.1 Analytical Model

The model for this study is specified as:

$$Y = \beta_0 + \beta_1 DR + \beta_2 LQ + \beta_3 SZ + \varepsilon$$

Where;

Y= Financial performance to be measured by the firms ROA given by Net income/Average TA

β_0= the y-intercept which is a constant and its weight on the model is not significant

$\beta_1 \ldots . \beta_3$= represents degree with which the firm's performance fluctuates as the X variable changes by one unit variable

DR = Debt Ratio to be measured by TL/TA

LQ = Liquidity (current assets/current liabilities)

SZ = Size of firm. To be measured using Log of total assets

ε = error term

3.6.2 Test of Significance

H_0: Null Hypothesis. No relationship exists between capital structure and financial performance of insurance firms listed.

H_1: Alternative Hypothesis. A positive or negative relationship exists between capital structure and financial performance of insurance firms listed.

For this study, the researcher will utilize the F test to assess the significance of the model. An analysis of variance was undertaken. If the p value is greater than .05 we fail to reject the null hypothesis but if it's less than .05 we reject the null hypothesis and confirm that indeed a relationship does exist between capital structure and financial performance of firms.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter summarizes the results and findings of the researcher. The main aim of this study was to determine the effect of capital structure on financial performance of insurance firms listed at the NSE. Secondary data was collected from the six firms listed. The data was collected for the financial periods of 2011, 2012, 2013, 2014, 2015 and 2016. Data was collected from NSE handbooks and audited financial statements of the insurance firms listed at the NSE.

4.2 Response rate

The researcher was able to get all the information required thus 100% response rate.

4.3 Diagnostic Tests

Various tests were undertaken to verify validity of the regression results. These tests include multicollinearity, auto correlation, normality and heteroscedasticity tests.

4.3.1 Multicollinearity diagnostics

As shown in Table 4.1 below, all the regressors reported a VIF value of less than 10, while the mean VIF is 1.03. This means that in the current study, the problem of multicollinearity is not present between the explanatory variables. Thus the research finding scan be interpreted with much confidence.

Table 4. 1 Multicollinearity Test

Variable	VIF	1/VIF	COMMENT
Size of Firm	1.03	0.968002	No Multicollinearity present
Debt Ratio	1.03	0.972122	No Multicollinearity present
Liquidity	1.02	0.980962	No Multicollinearity present
Mean VIF	**1.03**		

4.3.2 Testing for Normality

The Shapiro Wilk test was used to verify if normality exists. As indicated in Table 4.2 below, data collected for analysis is normally distributed. Results indicated that the null hypothesis was rejected as the p value was greater than .05.

Table 4. 2 Shapiro-Wilk Test

Variable	Obs	W	V	z	Prob>z
roa	**36**	**0.96377**	**1.321**	**0.582**	**0.28022**

4.3.3 Heteroscedasticity Tests

Breusch-Pagan test was applied in order to test for heteroscedasticity. This test is conducted on the basis that there is a normal distribution in the error terms. The null hypothesis of the test is a constant variance. Consequently if the *p*-value is very significant, the null hypothesis is rejected in support of alternative hypothesis that is variance is not constant. Results below show that the p value is greater than .05 thus the error term is constant.

Table 4. 3 Heteroscedasticity Tests

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity

Ho: Constant variance

Variables: fitted values of ROA

chi2 (1) = 1.34

Prob > chi2 = 0.2476

4.3.4 Testing for Model Misspecification Errors

If the model is correctly specified, then no additional independent variables should be significant. The model is said to have no omitted variables if the probability is greater than 0.05. Results from the test indicated F value of 0.0725 thus it isn't necessary to increase the number of the regressors in the model. This result thus supports the fact this this model is well specified and the estimates form the regression analysis are unbiased

Table 4. 4 Model Specification Test

Ramsey RESET test using powers of the fitted values of ROA

Ho: model has no omitted variables

F (3, 29) = 4.89

Prob > F = 0.0725

4.3.5 Autocorrelation Test

Durbin-Watson d-statistic (4, 36) = 1.404164

The study used the Durbin Watson test to test for autocorrelation presence. The Ho of this test was that autocorrelation exists. Results indicated that reject the null hypothesis thus no autocorrelation.

4.3.6 Unit Root Test

The study used the ADF test to test for unit root test. Results as shown in Table 4.5 below indicated that the all the variables i.e. ROA, debt ratio, liquidity and size of firm were stationary. This shows that the result will hold in the future.

Table 4. 5 Unit Root Test

Variables		Statistic	p-value
ROA	Adjusted t*	-5.3484	0.0000
Debt Ratio	Adjusted t*	-5.3333	0.0000
Size of Firm	Adjusted t*	-7.9304	0.0000
Liquidity	Adjusted t*	-4.4546	0.0000

4.4. Descriptive Statistics

ROA was the dependent variables of the firm while debt ratio, size and liquidity of the firm are the independent variables during the period 2011-2016 for Insurance firms listed at the NSE. Results of descriptive statistics are shown in Table 4.6 below.

Table 4. 6 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Roa	**36**	**.049417**	**.0379033**	**.0585**	**.1326**
Debtratio	**36**	**.701775**	**.1614019**	**.3662**	**.8617**
Sizeoffirm	**36**	**7.506628**	**.2387187**	**7.0461**	**7.957**
Liquidity	**36**	**2.353383**	**1.064465**	**.6962**	**4.7458**

As presented in table 4.6 the average value of the performance of the firms measured by ROA, for 36 observations was 4.94 percent (0.0494167) with a standard deviation of 0.0379033, maximum value of 0.1326 and -0.0585 minimum value. The positive ROA indicate that the firms were in average profitable. The standard deviation for the mean value depicts the existence of less disparity across insurance firms listed at NSE.

The results indicated that the average debt ratio is 0.701775 with a maximum of 0.8617 and a minimum of 0.03662. This indicates that all the insurance firms finance their operations by a certain level of debt hence they are highly geared. The standard deviation was 0.1614019.Size of firm as measured by log of total assets had a 7.506628average, a maximum of 7.957 and a minimum value of 7.0461. The variation from the average was found to be 0.2387187.

The liquidity of the firm as measured by current ratio, had a mean of 2.353383, maximum value was found to be 4.74568 and 0.6962 was the lowest value of liquidity in the analysis. The variation from the average was found to be 1.064465.

4.5 Correlation Analysis

The relationship between the dependent variable and each of the independent variable is tested here. This is shown in table 4.7 below.

The financial performance of the insurance firms measured by ROA was negatively correlated by debt ratio and size of firm and positively correlated with liquidity. The highest correlation is between liquidity and ROA. Size of the firm resulted to a negative correlation with ROA.

Table 4. 7 Correlation Analysis

	roa	debt~ratio	size~of~firm	liquidity
roa	**1.0000**			
debt~ratio	**-0.7085***			
	0.0000			
size~of~firm	**-0.2079**	**0.1479**	**1.0000**	
	0.2237	**0.3892**		
Liquidity	**0.3033**	**-0.0938**	**-0.1140**	**1.0000**
	0.0722	**0.5865**	**0.5080**	

*correlation is significant at 0.05 level

4.6 Regression analysis and Hypothesis Testing

A regression analysis between the dependent and independent variables was carried out where the debt ratio, size of firm and liquidity were the independent variables while return on assets was the dependent variable. Table 4.8 indicate that the r-squared for the model

was 0.5650 with an f value of 13.86 which is significant at 0.0000 levels. These implies that the independent variables can be used to explain about 56.5% of the disparity in the ROA of insurance firms.

Table 4. 8 Goodness of Fit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.75194	0.5650	0.5242	0.02614

Table 4.8 shows the results generated by the regression estimate on the analysis of variance for the study model. The model reveals a statistically significant relationship between capital structure and financial performance as the (Sig. =<0.05). The multiple regression model had an adjusted R^2 of 0.5242, F= 13.86 and a standard error of 0.02614. Results indicate the overall regression model is statistically significant and is useful for prediction purposes at 5% significance level. This further indicates that the independent variables i.e. debt ratio, size of firm and liquidity used are statistically significant in predicting financial performance of insurance firms listed at the NSE.

Table 4. 9 Analysis of Variance

Model	Sum of Squares	Df	Mean Square	F	Sig.	Std. Error
Regression	**.028410919**	**3**	**.009470306**	**13.86**	**0.00000575**	**0.02614**
Residual	**.02187231**	**32**	**.00068351**			
Total	**.050283229**	**35**	**.001436664**			

Table 4.9 indicate the analysis of variance results. It indicates that the regression has a sum of squares of 0.28410919 compared to the model residual of 0.02187231 for the residual. The results produced an *F*- significance value of $p<0.05$ which means that there is statistical relationship between the dependent and independent variable.

Table 4. 10 Statistical Tests

Roa	Coef.	Std. Err.	T	P>|t|	[95% Conf.	Interval]	Beta
_cons	**.238773**	**.1414015**	**.169**	**0.101**	**-.0492525**	**.5267984**	**.**
Debtratio	**-.158458**	**.0277696**	**-5.71**	**0.000**	**-.2150233**	**-.1018938**	**-.6747562**
Sizeoffirm	**-.012986**	**.0188154**	**-0.69**	**0.495**	**-.0513122**	**.0253392**	**-.0817901**
Liquidity	**.008214**	**.0041916**	**1.96**	**0.059**	**-.000324**	**.016752**	**.2306794**

Results of regression model in Table 4.10 above indicates that the explanatory variables have differing associations with the dependent variable. The model provided a constant with a positive coefficient at 0.238 (t= 1.69) with p-value of 0.101. Standard error explains more about the mean. When the standard error is mall, it means that the sample mean can more accurately reflect the actual population mean. This is evidenced by the small standard error of 0.0278. The model confirmed a statistically significant factor of debt ratio in determining the change in financial performance with a negative coefficient of -0.15845 (t=-5.71) and a p-value of 0.000 which is less than .05). The size of firm also recorded a

coefficient of -0.0129865 (t=-0.69) and p>0.05 (i.e. 0.495) thus not significant. Meanwhile, liquidity showed a coefficient of 0.008214 (t=1.96) with a p>0.05.

The regression model therefore can be summarized as follows from the analysis results.

$$ROA=0.238773-0.1584586DR-0.0129865SZ+0.08214LQ+\varepsilon$$

This model can be summarized as a one-percent increase in the debt ratio results to a reduction in the financial performance of the firm (ROA) by 15.84%, a 1% increment in the size of firm will also reduce ROA by 1.29% while an increase in liquidity by 1% will increase the performance of the firm by 8.21%.

4.7 Discussion of Research Findings

This chapter carried out data analysis to establish the relationship between capital structure and financial performance. The study results indicated that the independent variables of capital structure (debt ratio, size of firm and liquidity) explain and can predict financial performance of insurance firms listed at the NSE. These variables could explain the financial performance as measured by ROA of the insurance firms. Debt ratio was found to influence ROA of insurance firms listed at NSE negatively. Results can be interpreted as increase in debt in the insurance firms would lead to a lower financial performance. This results are in agreement with Jensen (1986) that states if a firms leverage i.e. debt ratio acts pushes the managers to commit its free cash flows for servicing of the debt, then higher debts will lead to the available funds being lower thus resulting to lower performance. This results are also consistent with the findings of Tian and Zeitun (2007) who established that debt ratio has a negative influence on firm performance.

The results also indicate a negative relationship between size of firm and financial performance of the firms that is insignificant. Due to diversification of investment and economies of scale, large firms are assumed to earn higher returns as compared to smaller firms. This result is not supported by the trade-off theory which argued that size reflects diversification, economics of scale production, greater access to new technology and cheaper sources of funds, thus implying a positive relationship between size of firm and performances.

The findings from the regression model showed an insignificant positive relationship between liquidity and financial performance of insurance firms listed ta the NSE. This indicated that an increasing liquidity leads to higher performance of the insurance firms. The pecking order theory suggest that firms with high liquidity would prefer using external financing as they have ability to pay off their liabilities and claims. On the other hand the trade of theory suggests that a high liquidity in a firm shows that a firm is capable of facing any financial difficulties whether in the long term or short term hence increasing its performance. As explained above it can be seen that the results of liquidity support pecking order and trade-off theories

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter illustrates a summary of research findings, conclusions, recommendations, limitations and suggestion for further research.

5.2 Summary

This study sought to establish whether capital structure explains the variation in the performance of insurance firms listed at the NSE. The study focused on capital structure as the independent variable and incorporated firm size and liquidity as the control variable while financial performance measured using ROA was the dependent variable. The study targeted 6 insurance firms that are listed on the NSE. Out of the targeted six insurance firms, the researcher was able to obtain complete data from all the six thus a response rate of 100%. It was noted that the insurance firms had a high liquidity as their assets were more than current liabilities. The fact that the firms were operating under loss in some of the years, the assets value were increasing, thus the return on assets having different values. Result indicated that the capital structure variables i.e. debt ratio, liquidity and size of firm explained 56.5% of the financial performance variables i.e. ROA for the insurance firms listed on the NSE. The coefficients of the debt ratio was found to be - 0.1584586 and was significant at $p<0.05$. This indicated that debt ratio influence financial performance of insurance firms listed ta the NSE negatively. Size of firm also reported a negative relationship while liquidity was found to positively influence the financial performance as

measured by ROA. It can be seen that debt ratio had a significant relationship with ROA while size of firm and liquidity had an insignificant relationship with ROA.

5.3 Conclusion

The insurance industry is beneficial to the business world in that without the insurance firms business may end up facing insolvency due to unsustainability of the business, the dynamic environment of business and the various risk likely to occur in the business world. Capital structure is a very important aspect in the insurance firms, because these firms need funds to finance their operations, settle their claims or pay damages at the time of loss. Its effect on the financial performance of the firm is very critical as it gives the managers of the firms an insight on how to go about when structuring their capital. This study empirically examined the effect of capital structure on financial performance of insurance firms listed at the NSE.

Panel regression model was employed in examining the effect of capital structure for the insurance firms that were listed at the NSE with financial statements of six firms covering the period of six years, from 2011 to 2016.

The study concluded that capital structure has a significant impact in the financial performance i.e. ROA of insurance firms listed at the NSE. In this case therefore from the independent variables involved debt ratio was found to have a negative relationship with ROA this means that the firms have more in debt than equity stocks in their capital structure. Findings by Simerly and Li (2003) support this conclusions when they argue that capital structure affects financial performance negatively. Fama and Fench (2000) also

support the argument. Debt ratio and size were negatively related to ROA while liquidity was found to be positively correlated.

5.4 Recommendations

The study found that debt ratio has a significant negative relationship with ROA of insurance firms at the NSE. Despite this results insurance firms should not shy away from taking debts to finance their projects as this is critical in purchase of things like new buildings and equipment. It is also recommended that firms' should try as much as possible to finance their operations using equity and reduce their debt uptake in order to improve their financial performance. Other empirical studies have also revealed that debt ratio negatively influences return on assets of the firms. This results shows that with increase in debt, the performance of the firms reduces thus an inverse relationship.

Liquidity was positively related to ROA which means that the firms are able to pay up their obligations in time, focus should be more on ensuring that they have more assets than liabilities to ensure the relationship doesn't change. The negative relationship between size and ROA could be due to diseconomies of scale therefore firms need to focus on performance instead of growth for their own sake. This findings concur with those of (Mwangi & Murigu, 2015).

5.5 Limitation

A number of challenges were encountered by the researcher especially during data collection. One of the variables was quite difficult to get as the industry operates in a different way. Getting liquidity for an insurance company is tricky as items under assets

and liabilities were not well defined and varied from firm to firm. Another challenge was that the insurance firms underwent some changes in terms of mergers and acquisitions. Getting information for the year before the merger was quite tricky due to the different names. Some of the insurance firms reported losses in some years therefore becoming quite difficult to get ROA.

Data used was extracted the financial statements of the insurance firms listed. These proved to be difficult to get as not all information was readily available at first. These annual reports are usually prepared under underlying assumptions and concepts. The assumption are biased thus non-standardization of their applicability especially in terms of provisions and estimates. Data reported historical, therefore unable to adequately predict the future due to the volatility in the market. Finally, most of the financial statements having been restated in the previous year lead to misstatement of the firm's performance hence creating an opportunity for prior year adjustments and the public is not informed adequately on the same. This implies that the pattern portrayed may affect the conclusions established.

5.6 Suggestions for Further Research

The study can be extended to all insurance firms so as to give a more informed result for the insurance industry.

Similar studies can also be replicated in a few years to determine the effect of capital structure on the financial performance of insurance firms listed at the NSE. This is due to the fact that with time, technology improves and operations at the NSE could be conducted in a different way thus a need to monitor the effect of capital structure on the financial performance of insurance firms listed at the NSE.

This study focused on effect of capital structure on financial performance of insurance firms listed at the NSE, thus generalization cannot be extended to all other sectors. Further studies could be undertaken in sectors like commercial or financial institutions. Also studies on other aspects of a firm that affect the financial performance can be looked into. For instance corporate governance and also management efficiency.

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APPENDICES

Appendix I: Data Collection Form

Variables	2011	2012	2013	2014	2015	2016
ROA						
Debt Ratio						
Size of Firm						
Liquidity						

Appendix II: Population List

No.	Insurance company	Date of Establishment
1	British Holdings Limited	1965
2	CIC Insurance Group Limited	1968
3	Jubilee Holdings Limited	1937
4	Kenya Re Insurance Holdings Limited	1971
5	Liberty Kenya Holdings Limited	1964
6	Pan Africa Insurance Holdings Limited	1946

Source (NSE)

Appendix III: List of values for Y, DR, SZ and LQ

Insurance Firms	Year	ROA	Debt Ratio	Size of Firm	Liquidity
		Y	DR	SZ	LQ
Britam	2011	-0.0585	0.6662	7.4089	1.1045
	2012	0.0820	0.6518	7.5541	4.0563
	2013	0.0560	0.6855	7.6712	3.4365
	2014	0.0419	0.7041	7.8600	1.0004
	2015	-0.0135	0.7723	7.8900	0.9707
	2016	0.0308	0.7863	7.9224	1.1343
CIC Insurance	2011	0.0628	0.6139	7.0461	2.3852
	2012	0.0895	0.6111	7.1483	2.7554
	2013	0.0733	0.6075	7.2314	2.5020
	2014	0.0535	0.6958	7.3746	0.6962
	2015	0.0469	0.6844	7.3947	0.9499
	2016	0.0073	0.7222	7.4302	0.8723
Jubilee Holdings	2011	0.0556	0.8236	7.5802	1.4950
	2012	0.0536	0.8159	7.6745	1.4112
	2013	0.0462	0.7819	7.7865	1.6208
	2014	0.0458	0.7788	7.8722	1.8599
	2015	0.0398	0.7526	7.9158	1.9872
	2016	0.0425	0.7635	7.9570	3.9757

Kenya Re	2011	0.1054	0.3964	7.2810	2.8371
	2012	0.1326	0.3974	7.3650	2.6406
	2013	0.1099	0.3849	7.4414	2.7475
	2014	0.1049	0.3787	7.5075	2.7937
	2015	0.1014	0.3868	7.5511	2.6116
	2016	0.0918	0.3662	7.5801	2.6619
Liberty Holdings	2011	0.0398	0.8416	7.3783	2.3125
	2012	0.0335	0.8336	7.4373	4.3564
	2013	0.0376	0.8262	7.4977	4.7458
	2014	0.0357	0.8145	7.5211	3.5246
	2015	0.0217	0.8195	7.5382	3.8570
	2016	0.0181	0.8054	7.5403	3.1792
Sanlam	2011	0.0400	0.8293	7.0612	2.4942
	2012	0.0429	0.8559	7.2168	2.7010
	2013	0.0665	0.8422	7.3255	2.0343
	2014	0.0381	0.8464	7.3909	1.6303
	2015	0.0011	0.8598	7.4331	1.7510
	2016	0.0025	0.8617	7.4540	1.6296

Appendix IV: Unit Root Test

```
Levin-Lin-Chu unit-root test for ROA
------------------------------

Ho: Panels contain unit roots              Number of panels  =      6
Ha: Panels are stationary                  Number of periods =      6

AR parameter: Common                       Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 5.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                 Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t       -6.1310
 Adjusted t*        -5.3484       0.0000
------------------------------------------------------------------------------


. xtunitroot llc DebtRatio

Levin-Lin-Chu unit-root test for DebtRatio
------------------------------

Ho: Panels contain unit roots              Number of panels  =      6
Ha: Panels are stationary                  Number of periods =      6

AR parameter: Common                       Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 5.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                 Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t       -5.7740
 Adjusted t*        -5.3333       0.0000
------------------------------------------------------------------------------
```

```
. xtunitroot llc SizeofFirm

Levin-Lin-Chu unit-root test for SizeofFirm
-----------------------------------------

Ho: Panels contain unit roots              Number of panels  =      6
Ha: Panels are stationary                  Number of periods =      6

AR parameter: Common                       Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 5.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                 Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t       -8.8788
 Adjusted t*        -7.9304       0.0000
------------------------------------------------------------------------------


. xtunitroot llc Liquidity

Levin-Lin-Chu unit-root test for Liquidity
----------------------------------------

Ho: Panels contain unit roots              Number of panels  =      6
Ha: Panels are stationary                  Number of periods =      6

AR parameter: Common                       Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 5.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                 Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t       -5.3912
 Adjusted t*        -4.4546       0.0000
------------------------------------------------------------------------------
```