

**EFFECT OF FIRM CHARACTERISTICS ON THE FINANCIAL  
PERFORMANCE OF INSURANCE COMPANIES IN KENYA**

**BY**

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**A DISERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENT OF MASTER OF SCIENCE IN COMMERCE (ECONOMICS  
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**DECLARATION**

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

Monica W. Macharia

16/09289

Signature.....

Date.....

I do hereby ratify that I have examined the master’s dissertation of Monica W. Macharia and have approved it for examination.

Signature.....

Date.....

Dr Peter Kariuki

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## TABLE OF CONTENTS

DECLARATION .....	iii
ACKNOWLEDGMENT.....	iv
TABLE OF CONTENTS.....	v
DEDICATION .....	ix
LIST OF TABLES .....	x
LIST OF FIGURES .....	xi
LIST OF ACRONYMS AND ABBREVIATION.....	xii
OPERATIONAL DEFINITION OF TERMS .....	xiii
ABSTRACT.....	1
CHAPTER ONE .....	2
INTRODUCTION .....	2
1.1 Background of the study .....	2
1.1.1 Firm Characteristics .....	5
<b>1.1.2 Financial performance</b> .....	12
<b>1.1.3 Global Insurance Industry Performance</b> .....	14
<b>1.1.4 Insurance Industry in Kenya</b> .....	17
<b>1.2 Statement of the problem</b> .....	19
<b>1.3 Research Objectives</b> .....	21
<b>1.3.1 General Objective</b> .....	21
<b>1.3.2 Specific objectives</b> .....	22

<b>1.4 Research Hypotheses .....</b>	<b>22</b>
<b>1.5 Significance of the study .....</b>	<b>22</b>
<b>1.5.1 Academicians.....</b>	<b>22</b>
<b>1.5.2 Managers of Insurance Firms.....</b>	<b>23</b>
<b>1.5.3 Government Policy Makers .....</b>	<b>23</b>
<b>1.6 Scope of the study.....</b>	<b>24</b>
<b>CHAPTER TWO .....</b>	<b>25</b>
<b>LITERATURE REVIEW .....</b>	<b>25</b>
2.1 Introduction.....	25
2.2 Theoretical review .....	25
2.2.1 Pecking Order Theory.....	25
2.2.2 Trade-Off Theory.....	28
2.2.3 Agency Theory.....	29
2.3 Empirical Review.....	32
2.3.1 Firm Size and financial Performance.....	33
2.3.2 Liquidity and performance of insurance companies.....	36
2.3.3 Leverage and performance of insurance companies.....	40
2.3.4 Diversification and performance of insurance companies.....	42
2.4 Conceptual Framework.....	49
2.6 Summary of Literature Review.....	52
<b>CHAPTER THREE .....</b>	<b>54</b>

RESEARCH METHODOLOGY .....	54
3.1. Introduction.....	54
3.2. Research Design.....	54
3.3. Target Population.....	54
3.5 Research instruments .....	55
3.6 Data collection .....	55
3.7 Data Analysis .....	55
3.8 Diagnostic Tests.....	57
3.8.1 Breusch-Pagan Lagrange multiplier (LM) test .....	57
3.8.2 Hausman Test.....	57
3.8.3 Heteroscedasticity .....	58
3.8.4 Autocorrelation .....	58
3.9 Ethical Consideration.....	59
CHAPTER FOUR.....	60
RESULTS AND DISCUSSIONS.....	60
4.2 Descriptive statistics .....	60
4.3 Correlation .....	61
4.4 Exploratory Analysis .....	62
4.5 Panel Data Diagnostic Tests .....	64
4.5.1 Testing for random effects.....	64
4.5.2 Test for heteroscedasticity .....	65

4.5.3 Test for Fixed or Random Effects.....	65
4.5.4 Testing for time-fixed effects.....	66
4.5.5 Test for autocorrelation.....	67
4.6 Regression Analysis.....	67
CHAPTER FIVE .....	71
SUMMARY, CONCLUSION AND RECOMMENDATIONS.....	71
5.1 Introduction.....	71
5.2 Summary of Findings.....	71
5.3 Conclusion .....	72
5.4 Recommendations.....	73
5.5 Suggestions for Further Research .....	74
REFERENCES .....	75
APPENDICES .....	83
APPENDIX I: LETTER OF INTRODUCTION .....	83
APPENDIX II: SECONDARY DATA COLLECTION SHEET GUIDE .....	84
APPENDIX III: LICENCED INSURANCE COMPANIES .....	85

## **DEDICATION**

I dedicate this study to my father James, mother Priscilla and my daughter Sasha for the support they gave me all the time as I prepared and worked on this research.

## LIST OF TABLES

Table 1: Operational framework.....	51
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## LIST OF FIGURES

Figure 1: Conceptual framework .....	50
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## **LIST OF ACRONYMS AND ABBREVIATION**

AKI	Association of Kenya Insurers
BCAR	Best's Capital Adequacy Ratio
GDP	Gross Domestic Product
GDP	Gross Domestic Product
GDP	Gross Domestic Product
IRA	Insurance Regulatory Authority
LA	Liquid Assets
NSE	Nairobi Securities Exchange
POT	Pecking Order Theory
ROA	Return on Assets
ROE	Return on Equities
TD	Total Deposits
P/L	Property-Liability

## **OPERATIONAL DEFINITION OF TERMS**

<b>Bancassurance</b>	The provision of insurance products and services through banks and distribution channels to the same client base. It is a tailor-made strategic alliance in the financial industry (Leepsa and Sign, 2017)
<b>Diversification</b>	It is a strategy an insurance organization uses to increase performance (Githira, 2008).
<b>Insurance Penetration</b>	This is the ratio of percentage of total insurance premiums to the gross domestic product (Association of Kenya Insurers, 2017)
<b>Leverage</b>	is the ratio of the firm's debts to its assets of an insurance company (Rainer, 2016)
<b>Ownership structure</b>	Ownership structure is the identity of company ownership involving the distribution of equity and capital (Venard and Cummins, 2007)
<b>Penetration</b>	This is the successful gaining of a specific market share in a given geographical region or group/class of people through the selling of a product or service in the said market (Insurance Regulatory Authority, 2017).
<b>Underwriting</b>	Refers to the process of selecting and applications for insurance. The decision to accept or reject the application (AKI, 2016)

## ABSTRACT

Insurance makes a noteworthy contribution to financial development and improvement of the economy and is a vital part in cultivating business investment and infrastructural progression and expansion. Insurance facilitates economic dealings by providing indemnification and risk transfer. It also encourages management of risks while promoting safe practices in business transactions, encourages financial steadiness by offering long-lasting investment in the economy. Insurance also stimulates steady and viable savings and in provision of pension. The performance of insurance is, therefore, a critical component that warrants attention. In light of the above preceding, the foundation of the study was to evaluate the effects of firm characteristics on the performance of insurance companies in Kenya. The objectives of the research were to evaluate the effects of size, liquidity, leverage and diversification on the financial performance of insurance companies in Kenya. The research was guided by agency theory, trade-off theory, and the pecking order theory. This research problem adopted the use of a descriptive design. The target population was 53 insurance companies operating in Kenya. Secondary data of the period 2013-2017 obtained from insurance regulatory authority was used. The panel data collected was analyzed through descriptive and inferable statistics like multiple regression to find the effect between the predictor and predicted variables. Panel data analysis using STATA software was carried out. Diagnostic tests were carried out on the model. The results were presented using graphs, charts, and tables. The research established that the firm size had no significant effect on the financial performance of the insurance companies in Kenya. The study further established that liquidity positively affected the financial performance of the insurance companies in Kenya. The effect was however not significant. The effect of leverage on the financial performance was negative and significant. Finally, diversity negatively affected the financial performance of insurance companies in Kenya insignificantly. The study recommended that smaller firms should consider merging to reap from the economies of scale. The insurance companies should strengthen their liquidity to enhance their financial performance. Further, Insurance companies should keep low their debts and maximise their equity to enhance their financial performance. Lastly, insurance companies need to specialize of few products that will maximize their profitability.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the study

The insurance sector in Kenya makes significant contribution to the progress of the economy and its expansion. It is essential in facilitating financial transactions as well as provides indemnification and risk transfer. Through insurance services, people can take the necessary measures to mitigate risks and promote financial stability. It also plays a significant role in enhancing long-term economic improvement and encouraging the values of saving in a sustainable manner (Dionne, 2013). Insurance firms are critical in promoting businesses in building stable infrastructures that can sustain them for long. They are essential players in the economic development of the society as it offers people an opportunity to invest.

The insurance industry is a key player in fostering economic development of a nation and encourages corporations and industries to flourish without the need to worry about uncertainties and accidents. It is essential in setting the pace for the development of other industries and spurring economic growth. The insurance industry should be financially solvent and strong structures that promote profitability in operations. Performance is best measure for development and growth of any organization in a given industry. It is crucial for insurance companies to be at the forefront in leading the overall success of the economy by increasing organizational development and helping in overcoming obstacles in the expansion of the industry (Perez *et al.* 2014).

Majority of the players in the financial sector have come to understand the importance of performance measuring in aiding the success of various institutions. They play a fundamental role of intermediation. They also provide the mechanism of saving money and transferring risks as well as to channel funds appropriately from surplus to deficient economic units that provides essential support in investments (Kaya, 2015).

The insurance industry can be viewed in different ways depending on an individual's perspective. One of the ways it can be perceived is through lenses of transferring risks from the entity being insured to the insurer. Companies in the insurance industry are crucial since they provide financial services that help the economy to expand (Louberge,2013). The specific contributions of the industry in economic growth of a nation have continued to be unveiled as it is connected to the wellbeing of the poor (Outreville, 2012).

Furthermore, several researches done focus on the relation, which subsists with reference to insurance companies and the growth of the economy. However, there is no single conclusion to what could be the specific impact of insurance as a service to the growth of the economy. Besides, the quantity of practical works that have been directed on the subject is relatively small. Indeed, a majority of the existing studies on the growth of the insurance industry as well as its performance are only focused on developed nations. There is limited knowledge on the same in Kenya and other developing nations in the sub-Saharan Africa.

The small size of the insurance sector in the developing nations is the main impediment to the success of services in those regions. Moreover, the industry has experienced

minimal reforms since the early 80s and that has made it difficult for researchers to have accurate statistics on the progress of the sector. Similarly, limited works on the performance of the insurance sector in Kenya has made it difficult for researchers to develop the required knowledge on the same. However, a few studies have been conducted that have delved into the issues of the insurance sector in the country and that has played a crucial role in providing the necessary answers to fill gaps in literature. It is therefore imperative to delve into the effect of firm characteristics on the performance of the insurance sector in Kenya.

Several studies agree that firm characteristics are essential in the success of an emergent nation because the common organizations are micro and SMEs. It is vital to examine the financial performance of insurance companies to identify their strengths and weaknesses. Doing this involves exploring several items associated with the profitability of the organizations as well as the balance sheet (Mahfoudh, 2014). The financial performance of a business is a key feature of any organization and different scholars have advanced significant interest in the same. It is also the main concern for all business stakeholders in the insurance industry. Furthermore, it is an essential ingredient to the prosperity of an organization and it determines its financial performance and the success in the field. When a firm performs highly in consecutive years, it is a reflection of effectiveness and efficiency in management. It shows the capacity of the managers to ingest resources in a competent manner and contribute to a positive trajectory of the company (Mwangi & Murigu, 2015).

One of the simplest ways of measuring the financial performance of a company is through the evaluation of its profitability, solvency, and liquidity (Kiruri, 2013).

Profitability can easily be measured by the return on equity (ROE) and the return on assets (ROA) of a company. According to Charumathi (2012), monitoring the profitability of a firm can easily be ascertained through its financial performance over a particular period. Mumo (2017) argues that the performance of insurance companies in monetary expressions is generally expressed as the net premium earned, underwriting income, annual turnover, ROE and ROI. It is easy to classify the measures into either profit or investment performance engagements.

Nevertheless, many scholars in the insurance sector who have studied their profitability have pointed out that the significant pointer of a company's profitability is ROA. It is expressed as the before-tax revenues divided by the total assets (Ngwili, 2014). According to Cekrezi (2015), performance in an organization can be described as the ultimate outcome of all the operations and strategies devised by the firm. Accurate measurement of performance is essential when it comes to accounting purposes. It has remained a crucial part of many organizations because it provides the foundation for companies to create strategic plans, measure its completeness of objectives and ascertain how managers will be compensated. For the purposes of the research, financial performance will be quantified with pecuniary ratios of ROA since they are used as important indicators of profitability or lack of it in insurance companies.

### **1.1.1 Firm Characteristics**

Firms play a crucial part in influencing the economy of a nation and it is vital for economist understand how they are formed and managed. Deep familiarity of firm's characteristics is crucial for anyone who aims to understand the business environment.

Firm characteristics can be hypothesized differently depending on the various studies used to define it. Majority of researchers confirm that firm characteristics are related to both the firm objectives and the resources. The preceding two can undergo further analysis using the three criteria, which are the market, capital and the structure related firm characteristics. Some of the market related firm characteristics comprise variable such as the market environment, experience, industry type and the environmental uncertainty. The capital related firm features contain variables including liquidity, leverage and capital intensity while the structural firm characteristics include variables such as the age, growth, size, diversification, innovation and ownership. The study will focus on two capital related firm characteristics which are liquidity and leverage and two structural firm characteristics which are size and diversification.

The size of the firm is the most crucial trait since it determines its vertical integration and the profitability of the industry at large. Firm size has a direct correlation with the financial performance of an organization as it aids in achieving the economies of scale (Cordeiro & Tewari, (2015). Waweru & Riro (2013) argue that, bigger companies are more efficient and perform better than smaller ones. The size of the firm can determine its investment opportunities. Large firms can access more capital due to their market power as compared to small companies.

The size of a firm can be measured by the amount and the different production capacity and ability a company has. It can also be ascertained by the quantity as well as the different services the company can offer its clients. The increase in firm size is aimed at gaining from economies of scale. Economies of scale exist when a particular proportionate improvement in inputs leads to a larger than proportionate increase in

output. Insurance firm size exhibits a mutual relationship with the company's capability to produce products that are highly competitive technologically. These products have the capacity to counter those of competitors and hence fetch significant profits. That is why some of the largest firms have a direct access to the most profitable market segment of the economy.

The practical studies conducted on how the size of the firm relates with, structure, and profitability has shown a correlation existing between size and firm profitability (Mehari & Aemiro, 2013). Moreover, it found out that, the profit rate of the market has a positive correlation with the concentration ratio and negatively correlated with the marginal concentration ratio.

Mehari and Aemiro (2013) argues that the positive association that exists between firm size and profitability is because of the implementation of greater differentiation and specialization strategies. They claim that the association should yield higher efficiency and positive results. Firm size is an essential component that enhances the success of a company and forms part of the organization characteristics. The best indicator of growth in an organization is the magnitude of the group that is dealing with its management. The most common measure of firm size is the gross sales or gross value of assets, number of employees and sales turnover.

Liquidity is another important firm characteristic of financial institutions (Kong, 2005). According to Adam & Buckle (2013), liquidity can be used to determine whether managers in different insurance firms can fulfil their promises to the shareholders, creditors as well as policyholders who depend on the company to increase their returns. It

also enables reinsurances to fulfil their commitments without increasing profits from underwriting investments since liquidity is not a significant determinant of insurance assets (Schimmer, 2012). High liquidity is necessary and makes it obvious for insurance firm management to enhance their ability to create wealth. Similarly, the environment does not permit investors to have an expectation that shows a direct connection between liquidity and an increase in performance. It is important for insurance companies to take calculated measures that can hedge the liquidity risk. Doing this, will ensure that there are a high percentage of funds being invested in activities that have a high-income return. It will in turn put the organizations in a perfect position to be profitable and enhance its performance (Perez *et al.*, 2014). Liquidity is measured using financial ratios, for instance, liquid assets to total deposits (LA/TD) measures the liquidity available to the total deposits of the financial institution. A liquid asset to total assets (LA/TA) measures the overall liquidity position of the financial institution (Mahfoudh, 2014). It is crucial that companies in the insurance business create an elaborate portfolio putting their assets against their liabilities. Furthermore, they should establish an environment that helps generate a positive cash flow in the market and develop extra reserves that can help them overcome the hurdles of high interest rates to reduce discrepancies in their earnings (Gonga & Sakaka, 2017).

The debt-to-equity ratio captures a universal definition of financial leverage. Insurance leverage is a term that refers to the ratio of deferred insurance liabilities to shareholder equity (Kunga, 2015). On the other hand, net leverage is identified as the total premiums written ratio belonging to companies in the insurance sector and the total liability ratio. It is the sum of an insurance company's net premiums written ratio and its net liability ratio.

It is mostly used to determine the exposure of an insurers to the issues of pricing and error estimation. Net leverage is calculated as  $(\text{net premiums written} / \text{policyholders' surplus}) + (\text{net liabilities} / \text{policyholders' surplus})$ . Leverage is the ratio of the firm's debts to its assets ( Foong & Idris, 2012).

Financing risk plays an essential role in the insurance industry and is a significant determinant of the risk-taking capacity of firms and has a bearing on the insurance business capacity. Within the competitive industry, high levels of leverage is a great constraint to firms. As a financial obligation, debt consumes the insurance firm's cash flow and often makes it to be restricted from engaging in investment. Firms that are highly leveraged has the risk of failing to honour their debtors putting them at high risk of undergoing bankruptcy. Similarly, when a company leverage is too much its long-term sustainability and success can be hindered because it becomes unattractive to investors (Schimmer, 2012).

Therefore, it depends on how a company uses leverage, it could either be beneficial to the firm or hurt how firms in the general insurance sector in the country generate revenues (Foong & Idris, 2012). Net leverage ratio is essential because it unveils the degree of exposure to risk and uncertainties as well as errors to estimations. A high value serves to indicate that a given firm relies on its ability to accumulate enough reserve funds. The goal of an insurance company is to balance between investing the premiums it has received from the clients to return a profit and limiting risk exposure. Moreover, it is a common practice for majority of reinsurance firms to give up their premiums and shift some of the risks. Unlike gross leverage, net leverage does not include reinsurance leverage that has been ceded (Wanjugu, 2014).

The net leverage of an insurer is an indication of the management of its reserves whether well or poorly according to the views of the policyholders' surplus to address claims. One of the aims of this arrangement is to create a surplus economy to enable the firms to pay all the possible debts and claims while gaining some revenues. The goal is to have surplus reserves to be able to pay all possible claims while retaining a profit. A majority of the companies out there achieve this outcome ensuring that the extent of the underwriting activities is controlled to prevent jeopardizing the firm's reserves. It is crucial that net written premium are maintained at an equilibrium not to exceed the policyholders' surplus, which are the assets an insurer owns (Louberge, 2013).

According to Mahfoudh (2014), a net leverage ratio that is acceptable is dependent on the type of the firm in the insurance sector that considers underwriting. However, the acceptable range fall below 6.0. Typically, the leverage range level of a company in the insurance industry should fall under its gross leverage because the net leverage ratio does not include ceded reinsurance leverage. The insurance industry uses other leverage ratios which include gross leverage, reinsurance recoverable to policyholders' surplus, and Best's Capital Adequacy Ratio (BCAR). Companies that have a higher leverage ratio before the onset of industry economic distress have a high likelihood of experiencing declining profits. Financial leverage has a positive effect on the performance of a company because it offers discipline in management as well as provides tax shields. Similarly, financial leverage negatively affects stock returns. Chen-Ying Lee (2017) agrees that reducing leverage ratios result in better performance of insurance companies.

Diversification is a form of growth marketing strategy for an organization and seeks to increase profitability through higher sales volume obtained from new products and new

markets (Githira, 2008). Diversification is the ability of a company to create new lines of activities, services and products that can be used to accelerate the success of an organization. It also results to changes in the administrative structure of a company as well as its management to increase productivity and enhance service delivery to customers. Companies can acquire many advantages from engaging in diversification. They can reduce investment risks, as a firm is capable of investing in a variety of assets and engage in different business ventures. Moreover, diversity increases synergies among business people and investors to expand their ventures and improve the long-term success of their organizations as well improve regional development (Mumo, 2017).

In essence, diversification can be described as having alternative plans of investments that can augment the conventional way of investment. Moreover, diversification also entails creating synergy in financial systems and creating a good working relationship between insurance companies and other investors in the industry. Investment operations can face the risk of forced liquidation if insurance companies encounter a problem that can result in reduced assets (Kunga, 2015). Diversification by mainstream in insurance companies in Kenya is influenced by some factors including, availability of finances, government regulatory policies, attractiveness of the industry and market, entry costs in the insurance industry, access to distribution channels for insurance services and availability of workforce resources. In the same vein, business risk due to uncertainty in the new markets, limited knowledge of the new services, lack of human resource to facilitate investment in new service, increased competition from new entrants in the insurance industry, for example, insurtechs brought about by a change in information communication technology. This makes it difficult for insurance companies in the

determination of the present or future value of the firm and making diversification a successful strategy (Githira 2008).

### **1.1.2 Financial performance**

Business performance has attracted researchers' attention in decades. However, in the context of the insurance industry it is considered when looking at specialized financial services than companies' consumers. The different financial services that are specialized such as underwriting of inherited risks as well as harnessing massive funds through premiums make businesses attractive. The ability of an insurance firm to continue covering economic risks is dependent on its capacity to create a positive value for its shareholders (Venard & Cummins, 2007). Indeed, an insurance sector that is well developed can provide support and long-term results that can contribute to economic development. Research shows a positive correlating between a nation's level of development and insurance coverage (Caratelli, 2012). Cekrezi (2015) argues that financial management focuses on profitability and it is essential that organizations in the sector endeavor to increase the returns of the investors and improve their income since it will be a sign that the company is performing well.

According to Kiruri (2013), the financial performance of an organization can be established by examining the firm's profitability, solvency and liquidity. Some of the common measures of profitability are the return on equity (ROE) and the return on assets (ROA) (Charumathi, 2012). Mumo (2017) claims that the performance of an insurance firm when it comes to financial aspects can be measured through net premiums earned, return on equity, annual turnover, return on investment and underwriting activities. The

components are classified as profit as well as investment performance measures. The majority of researchers conducting studies in the field of insurance have done study on how the industry can become profitable. Ngwili (2014) argues that, the primary indication for profitability of a company in the sector is ROA defined as the before-tax profits divided by total assets. As stated by Cekrezi (2015) performance is said to be the outcome of all of the organization's operations and strategies. Performance measuring is a critical aspect of the development of an organization because it helps to establish the financial position of an organization. It is critical in providing a foundational strategy that will yield plans to remunerate managers and accomplish the required objectives. For the research, financial performance will be measured using financial ratios such as ROA to show the capacity of an insurer to generate income and become profitable.

Financial performance is a measure of how well an organization can utilize the available resources and assets to boost the firm's ability to generate revenues. Players in the insurance sector such as investors, employees and management have different interest in the profitability of the firm. According to Ngwili (2014), the financial performance of a company in the insurance sector has a negative relationship with leverage. Firm management and its effectiveness in contributing to financial performance is a reflection of growth and development within an organization. Most of the organization in the insurance sector measure profitability through liquidity, firm size and leverage. In a broader sense, financial performance ensures that the objectives of the company are accomplished and the goals are achieved successfully. The overall financial health of a

firm is determined by the profitability of the firm, which is as a result of a well-managed balance sheet and income statement.

### **1.1.3 Global Insurance Industry Performance**

The global insurance industry continued to register strong performance and has continued to enjoy profitability especially in the better part of 2016. The returns on Equity remained positive and there was an increase in the shareholder's equity. In the same year, Return on Equity (ROE) also had a positive trajectory and was higher in all types of insurances (i.e., life, non-life, and composite insurers) in the majority of the countries (OECD, 2017). Furthermore, there was an average increase of 3.7% of the gross premiums in the life sector and a further 2.0% in the non-life. The samples were picked among about 40 reporting nations that are open members and part of the Organizations for Economic Corporation and development (OECD).

The performance is as a result of increased gross premiums in a majority of the countries that supersedes the amount of claims, payment and expenses. Some of the highest changes took place in Turkey, Costa Rica, and Russia since their gross premiums shot up by more than 30% in real terms between 2015 and 2016 (OECD, 2017).

According to OECD (2017), factors such as the type of insurance product and the customers are essential in the development of insurance markets. They play a significant role in enhancing client perception about the industry. The firm characteristics context can considerably influence the growth and performance of insurance industry. The good performance of the sector makes it attractive to customers resulting to a high demand of the services when the economy is performing well and decelerates when there are hurdles in the economy (Ahmad, 2017).

The European insurance industry takes the lion's share of the market with 32% of the global market, it was closely followed by North America at a 31% and Asia which had a 30%. In the year 2015, around 3700 insurance companies were operating in Europe employing 975 000 people directly ((Insurance Europe, 2016). Between 2014 and 2015, the total European direct gross written premiums escalated by 1.3% to reach €1 200bn. In 2015, insurance penetration (gross written premiums as a percentage of GDP) reduced by a small percentage point of about 0.2 to approximately 7.4% but ranged from 0.9% in Latvia to 11.4% in Finland (Insurance Europe, 2016). An average of €2 010 per capita was spent on insurance in Europe in 2015, compared to €1 993 in 2014. Of the per capita spent in 2015, €1 223 was on life insurance, €574 on non-life and €207 on health (Insurance Europe, 2016).

In the same vein, European insurers paid out €976bn in claims and benefits to insured, representing a 2.0% increase in the previous year. Life insurers paid out €649bn in benefits to insured, providing them with capital and annuities. This represents a 1.7% increase year-on-year (Insurance Europe, 2016). Nonlife claims paid increased by 2.3% to €222bn and health benefits paid increased by 4.3% to €101bn. In the same year under review, there was a slight decrease in the penetration of life insurance from about 4.6% to 4.5% in 2014 (Insurance Europe, 2016). However, it ranged from 0.2% in Iceland, Latvia and Turkey to 9.3% in Finland, which translates to 34% of 2015 global life premiums and 30% of 2015 global non-life premiums (Insurance Europe, 2016).

Over the past two decades, European insurance companies have undergone a significant change in operations because of the deregulation in Europe that were directed on banking institutions (Ricci, 2014). The liberalization of this sector has enabled the institutions

under mergers and acquisition activities. It has also enhanced cross-border trade in the insurance industry changing the structure and performance of the European insurance sector. It is therefore believed that the increased consolidation and alterations in the firm characteristics has accelerated competition and forced companies to seek for various ways of increasing their performance. Different firms use various methodologies to survive in the sector. Some have invested in technological improvements others have enhanced their managerial efficiency to survive in the ever changing economic landscape and finding alternative channels. All these firm-specific factors combined would have had a significant or considerable effect on the profitability of the firms in the insurance sector (Ricci, 2014). The Indian insurance industry has performed well with the insurance density at 11.23, and the insurance penetration reached 3.4% in the year 2016. The total insurance market expanded from USD23 billion in 2005 to USD 75.68 billion in 2015. The total gross written premiums had a cumulative growth of 12.6% (India Brand Equity Foundation, 2017).

The global insurance market continues to face challenges, especially in the growth and performance of life and non-life sectors. Some of the countries that experienced growth in the industry are those that had low insurance penetration. Many claim that the insurance sector has a significant role to play in the growth and performance of the economy. In 2017, there was a massive margin pressure, but the global insurance premium growth improved by 3% despite the interest rates staying low. Ahmad (2017) argues that improvement observed in 2017 was mainly due to savings products, mostly in the emerging market. One of the main concerns for the global insurance market was low yields as a result of large life insurance firms in the global market.

#### **1.1.4 Insurance Industry in Kenya**

According to the Insurance Regulatory Authority (2017), there were 55 insurance companies in Kenya by the year 2017 that include life insurance companies, and purely non-life insurance companies. The Insurance Regulatory Authority (IRA) is the industry regulatory body in Kenya, which has the mandate to regulate and oversee the players in the insurance sector. The regulatory authority is governed by a board of directors who have the fiduciary responsibility of providing oversight to operations. It is also responsible for providing rules and guidelines, which ensure that insurance firms are acting in consistent with provisions of the Insurance Act.

The industry has also established self-regulation through the Association of Kenya Insurers (AKI), which was established in 1987 to be consultative and advisory body to the insurance firms in the country. It is duly registered under the Society Act Cap 108 of Kenyan laws. The Insurance Institute of Kenya (ISK) is the professional body of the industry in the country, which deals mainly with training and professional education (Kiragu, 2014). According to the Kenya National Bureau of Statistics (2017) in Economic survey report indicated that the Kenyan GDP to grow at 5.5 % in the year 2017. The insurance sector recorded a growth of 5.3 percent in 2016 compared to 5.0 percent in the previous year. In Kenya today, the insurance penetration is about 2.73%, which is considered low when compared with the world average of 6.28% (Insurance Regulatory Authority, 2017).

In 2017, the insurance penetration rate was approximately 3.39 % of the Gross National Product (Insurance Regulatory Authority, 2017). The total liabilities of life insurance

increased by 11.8 percent to Ksh 260.1 billion in 2016 down from Ksh 232.7 billion in 2015, while total assets grew by 13.5 percent to Ksh 305.4 billion in 2016 (Insurance Regulatory Authority, 2017). In the same vein, gross premium income grew by 19.3 percent to Ksh 73.1 billion in 2016 compared to 8.4 percent growth recorded in 2015 while the net premium income registered an accelerated growth of 19.6 percent in 2016 (Insurance Regulatory Authority, 2017). The Insurance Density was 4,948, which is projected to be about 10,423 by the year 2020. The Association of Kenya Insurers 2016-2020 Strategic Plan focuses on having an increase of 6% penetration as well as increase gross premiums to Ksh500 billion by 2020. According to Kenya National Bureau of Statistics (2017) Kenya's GDP was about Sh7.158 trillion in 2016 and its gross direct premium was Sh195.2 billion. This is an indication of the growth in the sector and meaningful contribution to the Gross Domestic Product. Kenya recorded a five-year high of 2.9 percent in 2014. Even so, the industry's gross written premium increased to Sh196.6 billion in the year 2017 from Sh174.06 billion recorded the previous year, signalling a 13 percent growth (Insurance Regulatory Authority, 2017). The general insurance business in the country contributed approximately two-thirds of the total gross premium income. Industry asset base grew by 10.4 percent from Sh478.75 billion in 2015 to Sh 528.75 billion in 2016 (Insurance Regulatory Authority, 2017).

Numerous studies undertaken by the Association of Kenya Insurers, Insurance Regulatory Authority, and other organizations have confirmed there are significant challenges faced by insurers. Some of the challenges in the industry include technology adoption, awareness levels, cost of insurance, product suitability, competition and undercutting, distribution mechanisms among others (Association of Kenya Insurers,

2017). Therefore, this research aims to fill the gap of knowledge on how the firm characteristics affect the performance of insurance company.

The year 2017 was a difficult one for companies in the Kenyan insurance industry as firms posted an 18% decline in profits, which was the lowest in the sector. According to AKI (2016), profitability in the insurance industry in Kenya dropped by a margin of \$ 26.6 million from a high of \$144.8 to \$118.2 million. The drastic drop has been because of government interfering with the financial sector that led to the capping of banks interest rates. The banking sector in the country has experienced a slowdown in lending, which has made it difficult for investors to have growth in their various economic areas. The AKI (2016) report claims that the gross written insurance premiums in Kenya in 2017 had a marginal of 6.5 per cent growth as compared to the previous year. The insurance industry in Kenya has been experiencing turbulent moments as the overall penetration of products and growth of firms in the sector in Kenya dropped by 0.04% from a 2.75 % in 2016 to 2.71% in 2017(Insurance Regulatory Authority, 2017) . Besides, a significant decrease in profits was observed in medical insurance as well as the motor private and commercial sector. The industry experienced considerably high losses due to the high number of claims leading to a decline of the gross written premiums (Insurance Regulatory Authority, 2017).

## **1.2 Statement of the problem**

The insurance industry plays a crucial role in the advancement of any economy owing to the essential nature of the financial sector in the development and growth of industries (Venard & Cummins, 2007). While the Kenyan insurance industry aspires to grow

regarding gross premiums, the penetration of insurance products in the country remains to be as low as 2.9%. The percentage presents a figure that is about two times lower compared to the global average of 6.28 per cent (OECD, 2017). According to the Insurance Regulatory Authority (2017) the rate of insurance penetration in Kenya lost momentum in 2016 having slowed to a three-year low of 2.73 per cent down from 2.88 recorded the previous year. IRA report attributes this decline to the high nominal growth in Gross Domestic Product (GDP) of 14.3 percent compared to nominal growth in gross direct premium which was at 13.2 percent. Among the issues cited for low penetration are customer situation, low innovation, lack of market orientation, skills gaps well as other cross-cutting issues such as undervaluation of assets and unethical practices (Insurance Regulatory Authority, 2017).

Previous empirical studies in Kenya focused on the performance of the listed companies, banks for instance, Mwangi (2014) studied 43 commercial banks Using Capital adequacy, management, earning performance, and liquidity. He used profitability as a measure of performance and noted that liquidity and capital adequacy affect performance but did not specifically state their relationship. Mahfoudh (2014) conducted a study on six out of seven firms listed under the agricultural category at the Nairobi Securities Exchange (NSE) for the period 2007 to 2012. Mwangi and Murigu (2015) considered all the general insurance companies in Kenya for the period 2009-2012 using leverage, equity capital, management competence, size, and ownership structure as variables. They noted that equity capital, leverage, management competence index were positively related to profitability but negatively related to both size and ownership structure.

Furthemore, Kaguri (2013) also researched on the relationship of firm characteristics and the development as well as growth of financial performance of life insurance companies in Kenya. She studied variables such as age, diversification, leverage, liquidity, size, premium growth and claims experience from 17 of them in the country for the period between 2008-2012. The variables had a significant influence on the performance of the life companies in Kenya.

Few studies in Kenya have focused on firm characteristics that influence the financial performance of insurance companies and they provide inconclusive results. The study on the effect of firm characteristics on the performance of insurance companies will be a good basis for providing data for comparison purposes between insurance companies in the developed companies and those in the developing countries. Other studies also reveal that the factors that affect the performance of an organization are different in every sector of the economy. This study was therefore, intended to fill this knowledge gap by determining the firm characteristics that influence the financial performance of insurance companies in Kenya in recognizing their crucial role they play in enhancing the economy of the country.

### **1.3 Research Objectives**

#### **1.3.1 General Objective**

To determine the effect of firm characteristics on the financial performance of insurance companies in Kenya

### **1.3.2 Specific objectives**

1. To evaluate the effect of firm size on the financial performance of insurance companies in Kenya.
2. To determine the effect of liquidity on the financial performance of insurance companies in Kenya.
3. To establish the effect of leverage on the financial performance of insurance companies in Kenya.
4. To find out the effect of diversification on the financial performance of insurance companies in Kenya.

### **1.4 Research Hypotheses**

- H<sub>01</sub> Firm size has no significant effect on the financial performance of insurance companies in Kenya.
- H<sub>02</sub> Liquidity has no significant effect on the financial performance of insurance companies in Kenya
- H<sub>03</sub> Leverage has no significant effect on the financial performance of insurance companies in Kenya.
- H<sub>04</sub> Diversification has no significant effect on the financial performance of insurance companies in Kenya.

### **1.5 Significance of the study**

This study hopes to enhance understanding on the issue by finding out how the firm characteristics affect the financial performance of insurance companies in Kenya and will assist the following groups.

#### **1.5.1 Academicians**

The study may contribute to the existing body of knowledge on firms characteristic and is a good starting point for students and researchers as well as scholars who may use the study to reveal gaps and advance the topic. Researchers and academicians may, therefore,

use the study findings as the reference during future studies particularly regarding the insurance sector. The findings of this study may also add new information to the existing body of literature on firm characteristics that can be referenced to in future, therefore benefitting academic scholars and researchers.

### **1.5.2 Managers of Insurance Firms**

The study may provide analysis into the firm characteristics in the insurance industry for managers and practitioners can acquire valuable information to use in their prospects in countering competition in the financial services sector and provide more opportunities for growth and revenue generation. The study may benefit insurance companies to improve performance and increase uptake of insurance products. It may provide the necessary knowledge and understanding of firm characteristics influence on the financial performance of insurance companies. The findings of this study may provide new knowledge useful in enhancing the knowhow on pros and cons of institutional ownership and the likely outcomes of such structures. The firm management may benefit from the study as they may acquire information that directly relates to their decision-making paradigm and be able to carry out their day-to-day operations.

### **1.5.3 Government Policy Makers**

Government policymakers who help power insurance sector in Kenya may use the study. The government of Kenya may also find the findings of the study very valuable. The government regulators and policymakers within the insurance sector such as Insurance Regulatory Authority and Ministry of Planning and Treasury among others will gain insights on the firm's characteristics hence use the findings as the basis guide in

regulation and policy development. The government may craft innovative policies that may address the constraints and improve overall growth of the economy.

### **1.6 Scope of the study**

The study covered only four characteristics as variables, the firm size, liquidity, leverage, and diversification. The research was confined to 53 insurance companies operating in Kenya operating in Kenya for the period 2013-2017.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The chapter contains information on some of the literature review concerning firm characteristics that has been derived from other researchers who have conducted similar studies in the same field. The chapter will also present a theoretical and empirical review on firm characteristics.

#### **2.2 Theoretical review**

This section reviews some of the theories to understand how they relate to firm performance. Several theories exist that attempt to highlight the firm ownership and how the firm's performance is affected by these characteristics when meeting its obligations. The study considers three key theories that inform the study that includes the pecking order theory, trade-off theory, and agency theory.

##### **2.2.1 Pecking Order Theory**

This theory relates to the capital structure having been suggested for the first time in 1961 by Donaldson. Stewart C. Myers and Majiluf later modified the theory in 1984. The proponents of the theory explain the differences between internal and external finances and why the former is much more popular than the later as well as why debt is the most desired choice for obtaining funds externally ( Surhone, Tennoe, & Henssonow, 2011). Pecking order can be explained as being a hierarchy of financing where internal sources

of funds comes first which are retained earnings, then debt financing comes second while the external equity financing comes as the last option.

Companies always rank their sources of finances in accordance to the principle of least resistance or least effort, desiring to issue equity as the last financing option. This means that the internal capital is first utilized and after it is exhausted then issuing of debt follows. When it is impractical for an organization to issue any more debt, it results to issuing of equity instead (Surhone et al., 2011).

The theory is crucial in financial management of companies because it claims that firms that are high in profitability normally use less debt compared to companies that have low profitability levels. This is because the high profitable companies have a lesser need to raise additional capital externally and may use minimal debts compared to other firms because of their minimal need of raising funds externally (Surhone, Tennoe, & Henssonow, 2011). Also, for the external sources of finance, debt is more attractive and cheaper to issue when compared to equity. Additionally, the concept outlays that managers have a preferred plan on the issue of budgeting the company's investment opportunities (Surhone, Tennoe, & Henssonow, 2011).

Firstly, retained earnings are used to finance investment opportunities as the first option because there are no floatation costs and also the company is shielded from the scrutiny of the financiers. Secondly, straight debt comes after the retained earnings. This is because floatation costs are less as compared to when equity is issued and there is less public scrutiny in the management of the company and its operations by the financiers. When debt is issued, the financiers have to take into consideration financial signalling

and asymmetric information to avoid instances of information hoarding. The third source of finance in the hierarchy is the preferred stock, which possess some characteristics of debt. Also, convertible bonds and capital notes are all in this category which are all examples of hybrid securities. This is because they are all debt instruments that possess equity-like features. Final in the rank is straight equity. This is because it is the least desirable to issue due to high floatation costs. Also, there will instances of collision between the managers and the investors in the company in terms of the strategic decisions that the managers make on behalf of the investors. Also, the company is open to public scrutiny in terms of dividends they are paying to their investors and the profits/losses that the company makes.

However, the pecking order hypothesis suggests that most firms lack a capital structure that is well laid out (Ramlall, 2017). Instead, a company in the long run finances with the option that possess minimal management resistance, and also, where the manager's behaviors have minimal capital trade regulations. The capital composition that is formed is therefore a by-product of the former two and it is prone to change subject to imbalances that can be observed between capital investments and cash flows.

The ranking, however, originates from various reasons which includes floatation costs, taxes and agency conflicts just to mention a few. A particular firm upholds the rules of the pecking order when it prefers retained earnings to sourcing funds externally and when these external sources are the only option debt is more preferred to equity. In view of this, the POT affirms that insurance companies prefer internal financing which in turn affect the financial leverage of the firm. Therefore this theory is important in explaining the financial leverage of the firm and hence the performance of the insurance company.

### **2.2.2 Trade-Off Theory**

The trade-off theory was first suggested by Myers (1984) and it puts more emphasis on the balance between tax shields which arise from debt, bankruptcy costs, a decrease in agent cost and financial distress costs. The theory suggests that there always exists an ideal capital formation, which capitalizes on the worth of the company by matching the benefits and costs of issuing an extra portion of debt, which are considered as representations of equilibrium. Insolvency expenses can either be direct or ancillary costs. The direct charges arise from the legitimate and administrative fees that the firm will incur if it becomes bankrupt while the indirect costs arise from the decline in the market value of the firm after it fails to service its debt obligations. Considering the optimal debt from various points of view; it is possible to have the trade-off model put into three categories which are: representations of trade-off that are correspondingly associated to the bankruptcy expenditures and agency expenses (Zoppa & McMahon, 2013).

On the other hand, Adair and Adaskou (2015) stated that Trade-Off theory focuses on selecting a particular capital structure, which increases the value of the firm while at the same time, minimizes the costs of prevailing market imperfections. The Trade-Off theory is the oldest theory and is connected to the theory from Miller and Modigliani on a firm that emphasizes the optimal capital structure. Through the Trade-off Theory, it is implied that the benefits of tax shield is through the modified MM preposition and it is offset by agency cost as well as that of financial. In another word, the optimal level of leverage is achieved by balancing the benefits from interest payments and the costs of issuing debt (Ghazouani, 2013).

The primary argument in the trade-off theory describes that managers running a company entails the evaluation of the diverse advantages and expenses of other leverage methods. Besides, it is always presumed that obtaining an inner resolution is a strategy that leads to the balancing of marginal costs and benefits. To avoid the extreme prediction of MM theorem (100% equity), an offsetting cost of debt is needed. Furthermore, an insurance company follows the static trade-off theory when it is clear that its leverage is fixed on a single duration trade-off around the debt tax advantages and the liquidation deadweight expenses. On the other hand, a company exhibits target adjustment behavior if it has a target level of leverage and also if some of the deviations from that target are eliminated gradually over a specific period. Trade-off theory is related to the optimum capital composition of the firm that affect the company performance.

### **2.2.3 Agency Theory**

Stephen Ross and Barry Mitnick first created the Agency theory in 1973 both autonomously but incompletely simultaneously. Ross is credited for the creation of the economic agency theory while the institution theory of agency is credited to Mitnick. The two approaches to agency theory use similar basic concepts and thus are complementary. Jensen and Meckling (1976) later advanced the agency theory of the firm. The concept presents a basic challenge for distant owners that hire managers who have been tried and tested over to perform specific duties on their behalf. The theory is founded on the concept that managers will not always act in the vital welfare of the investors. There exist three kinds of clashes in a firm. The first misunderstanding in the theory is between managers and shareholders while the second conflict exists between the creditors and the investors. The basic assumption of the theory is that the role of firms is to significantly

increase the wealth of the shareholders. This is always not the case and as a result, agency costs will arise from a case of conflicting interest of the servant and the proprietors of the company. Agency cost is a combination of monitoring costs which are incurred by the proprietors and the agreement expenses which are borne by workers. When the agency costs are low, there is high performance of the firm leading to high profitability when all other factors are held constant. Agency theory states that managers and investors of the company have varied interests (Panda & Leepsa, 2017). For firms which have distinct functions of investors and managers have a high likelihood of having agency costs. Therefore, it means that the total cost will be borne by shareholders notwithstanding who makes the monitoring expenditures. Debt holders who anticipate cost on monitoring expenses will always charge an exorbitant interest.

There are three kinds of agency costs that are crucial in explaining the relevance of capital structure in a firm (Muneer, Bajuri, & Saif-ur-Rehman, 2013). First is the asset substitute effect. This occurs where managers have an incentive to undertake in risky projects when debt to equity increases. In this case, if the project becomes a success, the investors will get all the upside, but if the project fails, the borrowers would get losses. When the project is undertaken, there is a likelihood of the firm's income reducing and an income shift would occur to proprietors from the debt holders. The second agency cost would arise from the underinvestment problem (Muneer et. al, 2013). This scenario occurs where there is risky debt and thus the project's proceeds would amass to the borrowers instead of the owners. Therefore, managers can reject some of the positive net present value projects without considering whether they are capable of increasing the value of the company. The third agency cost would arise from the free cash flow (Muneer

et. al, 2013). Managers can reduce the value of the firm by assigning themselves huge pay and empire building. This can be prevented by giving back free cash flow to investors (Muneer et. al, 2013).

High leverage leads to a concrete monetary control on managers. Total shield should necessitate the definition of comprehensive contracts and extraordinary execution expenses. The shareholders being the residual owners of the firm have a key interest in seeing that monitoring costs are as low as possible. Investors in a firm often pay for the monitoring costs to ensure that the actions of the people in the management level are such that they maximize the value of the firm. According to Panda and Leepsa (2017), increased costs can mean the firm has a high level of debts. For total agency expenses to be reduced, there should be an equilibrium between equity and debt. Monitoring costs sometimes limits the amount of debt issued that is optimal to a firm. The monitoring costs incurred by debt holders is proportional to the amount of outstanding debt. Where the amount of debt outstanding is less, the lenders incur less monitoring costs and vice versa. There is an increased cost associated with costs that are related to concrete agreements and these expenses increase proportionately with the quantity of funds borrowed.

Most companies function under situations of uncertainty and imperfect information which exposes them to two main agency problems which are moral hazard and adverse selection. Adverse selection occurs in a situation where investors cannot ascertain whether a professional accurately signifies his skills to perform the task which he is employed to do while moral hazard is a situation where investors are uncertain if an agent (manager) has applied maximum exertion in their duties (Panda & Leepsa, 2017). These differing demands validate actions that may be criticized as unethical based on

stakeholder group and this study will focus on how such conflicts influence the financial performance of different insurance firms in Kenya. Conferring to Eisenhardt (1989) agency theory is associated with evaluating and solving complications that ensue in the relationship between investors and the managers. Further, it attempts to appreciate how to establish good relations between the owners and the professionals, defines the tasks which the agents ought to undertake while explaining the arrangements the investors should put in place to improve their returns.

According to Firth, Fung, and Rui, (2006), the agency problems arise because managers are unwilling to accept accountability for their choices. This is because in most cases they do not own stock in the firms that they manage and therefore are not concerned with the objective of wealth maximization. Therefore, executives will not increase revenues to the owners without suitable control arrangements being instigated to protect shareholders' interests. Agency theory is consequently embraced in this study as it concentrates on the relationship between shareholders and their professional agents existing in different leverage options and how they affect the financial performance of insurance companies in Kenya.

### **2.3 Empirical Review**

Within literature in different terms or different sectors, there are various studies carried out about firm characteristics and business performance. Past research literature has shown how pecuniary firm characteristics, such as assets, age, diversification, capital, leverage, board composition, institutional shareholding, profitability, liquidity, growth,

and environmental, economic variables make an influence on a business's financial, monetary performance and progress.

### **2.3.1 Firm Size and financial Performance**

The majority of the studies that investigate the relationship between firm size and financial performance adopts a resource-based view, which cohere with the theoretical arguments underlying the classification of firm size as an internal determinant of financial performance in the preliminary theoretical model. Most financial performance studies use firm size as a proxy of organizational resources, because the size of a firm constitutes a good indicator of its level of organizational capabilities for various expansion activities (e.g. innovation in products or geographic markets). Organizational capabilities is defined as non-imitable and valuable managerial abilities that transmute physical and financial resources into competences. The rationale behind the resource-based view is essentially that the level of firm competences corresponds partially to performance barriers and by this firm size influence financial performance.

The fundamental assumption is that larger firms by virtue of a larger resource stock outperform smaller firms in international markets. Through a resource-based lens, a large firm is contrary to a small firm able to exercise more bargaining power, overcome bureaucratic red-tape, undertake costly market research, develop more effective marketing strategies due to a larger talent pool and to a higher degree utilize unused capacity in the market (Kigen, 2014). The author also suggests that a large firm size increases a firm's likelihood of performing better. Large firms have a relatively larger stock of human capital that enables larger firms to initiate products more efficiently than smaller firms (Mutugi, 2012). The more experienced and technical employees available

for expansion, the more likely is the firm to innovate and produce products that yield a competitive advantage abroad. Similar, firm size largely captures the economies of scale of production costs.

The influence of company size on performance therefore depends on a firm's ability to realize untapped economies of scale in production, because it allows the firm to trade its goods at competitive prices abroad. If economies of scale are present, the average production costs decrease along with output growth, which enable larger firms to have lower per unit costs than smaller firms.

Some studies report a positive association amongst insurance performance intensity and firm size measured as number of employees. The only way a small firm can overcome the lack of economies of scale in its international operations is through the development of competitive advantages in relation to product uniqueness or technological niche products.

Burca and Batrinca (2014) conducted a study in the Romanian insurance marketplace using statistics for the period 2008-2001. They verified 13 descriptive variables: company size, insurance financial leverage, growth of the gross written premiums, the years they have been operational in the Romanian market, total market share, equity, innovation, underwriting risk, growth of GDP per capita, investment ratio, solvency margin, retained risk ratio, and re-insurance dependence. Their study findings concluded that a positive correlation existed between the firm size and profitability.

Kaya (2015) also conducted research study to find out which are some of the firm specific factors that affect profitability of general insurance companies that are operational in Turkey. Data was collected for the period between the year 2006 – 2013

from 24 general insurance companies and he obtained 192 data sets. In his investigation, profitability was calculated using both sales and technical profitability ratio. From his study findings, the company definite features that affected profitability of Turkish general insurance companies were age of the company, size of the company, premium growth rate, current ratio and loss ratio (Kaya 2015).

Furthermore, Cekrezi 2015 conducted a study to find out factors that affect the financial performance of Albanian Insurance Companies. Specific characteristics of the various companies were analysed at microeconomic level to ascertain their financial performance. The survey period was between the year 2008-2013 and 5 insurance companies were studied which were privately owned and a total of 30 data sets was collected. Secondary data was gathered from the specific insurance companies' annual publications, balance sheet, published information from the companies' websites and the official documents delivered to the State Tax office. Cross sectional time series data analysis method was used. From the study results, leverage often defined as total debts to total assets and risk (defined by standard deviation of sales to the average value of sales) had a negative effect on the financial performance of Albanian companies in the insurance industry. Contrary, tangibility, which is defined by fixed assets to total assets, had a positive effect on the financial performance of Albanian Insurance companies (Cekrezi, 2015).

Kigen (2014) studied the influence of leverage, market share and total assets on profitability (ROA). He did a survey of 48 insurance companies dealing with both life and general products between the years 2009 -2013. He used secondary data from the yearly reports filled with Insurance Regulatory Authority (IRA) and from the specific

companies' financial statements. The study found out that there existed no relationship between profitability and total assets of the insurance firms and there is a significant positive relationship between size of the insurance companies and profitability. In the study, firm size was calculated using the total market share. The study recommended that insurance companies should recruit more agents to increase their market share and increase their marketing through social and print media.

Kollie (2014) conducted a research study on what determines the performance of insurance companies in Kenya. She used a census of all longterm and general insurance in Kenya. Her study findings were that firm size, liquidity and cashflow influenced performance positively.

### **2.3.2 Liquidity and performance of insurance companies**

Ologbenla (2018) did a research on the effect of liquidity management on the financial performance of insurance companies in Nigeria. The research period was between the years 2003 and 2012. The independent variables that were evaluated included equity capital, liquid asset, working capital, dividend, size of the firm, underwriting risk and investment. The study used ROA as the dependent value to measure financial performance. Data analysis was carried out using panel regression analysis. The academician found out that liquidity management did not influence the financial performance of insurance companies in Nigeria while equity management had a significant effect as it affects the stability of the firm in the long-term. Other firm characteristics that had a positive effect on the financial performance of insurance companies in Nigeria were working capital and investment. Ologbenla (2018)

recommended that insurance companies in Nigeria should prioritize equity capital as it influenced the financial performance of the insurance companies negatively compared to liquidity management as they are not involved with liquid cash like commercial banks.

Omondi and Muturi (2013) carried out a study to establish which factors influence the profitability of companies' engaged in general insurance in Kenya. They had some interesting findings as they realized that liquidity has a crucial part in the improvement of the company's financial performance. Liquidity is a further aspect that influences the level of firm profitability. Liquidity relates to the capacity of the organization to realize its cash commitments, as and when falling due.

Ngwili (2014) carried out a study to test the relationship between liquidity of companies in the insurance business in Kenya and their profitability. The study population consisted of 49 insurance companies registered with IRA as of 31st December 2013. Using census of all the 49 insurance firms for five years period (1st January 2009 to 31st December 2013 and secondary data from audited financial statements. Profitability was measured by ROA, while Quick ratio and Leverage Ratio measured liquidity. Firm size as measured by the log of net premium and loss ratio were the variables. The t-test was employed to resolve the significance of the constant term and the coefficients terms for each of the regressions. The importance of each of the regressions was determined by carrying out the F-test at 95% confidence level. The coefficient of determination R<sup>2</sup> was utilized as a measure of strength to which independent variables expound the variations in the dependent variables. The study recognized a positive relationship amid the quick ratio and the log of net premiums and profitability of insurance companies in Kenya. Additionally, the study revealed that the leverage ratio has a negative influence on ROA.

Finally, the research indicated a negative but significant relationship between loss ratio and profitability of the insurance industry in Kenya. Ngwili, (2014) recommends that managers should maintain a trade-off between profitability and liquidity, invest in liquid assets to improve liquidity as well as focus on exploring opportunities for growth and diversification and proper management of investment portfolios.

Maina (2011) in a study to assess the liquidity of oil companies in Kenya found the relationship between liquidity and profitability was weak and also that all the independent variables had a significant relationship with Return on assets except the quick ratio and cash conversion cycle. The results further showed that there was a strong negative relationship between firm leverage and quick ratio with its Return on assets.

Mahfoudh (2014) conducted a study on Six out of seven firms listed under the agricultural category at the Nairobi Securities Exchange (NSE) for the period 2007 to 2012. The main aim was to investigate the effects of selected firm characteristics on financial performance regarding returns on assets (ROA). The variables considered were firm size, leverage, firm age, liquidity and board size. Using correlational research design then running a multivariate linear regression analysis it was found that firm size, leverage, firm age, and liquidity were positively related to firm financial performance.

Mwangi and Murigu (2015) carried out a research to find out the determining profitability factors of general insurance companies in Kenya for the period 2009-2012. In their investigation, they employed multiple linear regression analysis, using return on assets as the explained variable. The study findings concluded that profitability of general insurance companies in Kenya was positively related to equity capital, leverage, and

management competence index. On the other hand, profitability was found to be negatively related to ownership structure and size. The study also found no link between profitability of general insurance companies in Kenya and liquidity, age, retention ratio and underwriting risk. The research study made recommendations that for those firms dealing with general insurance in Kenya to boost their profitability, they should increase on equity capital, leverage and the quality of their staff (Mwangi & Murigu, 2015).

Gonga and Sakaka (2017) did a research on the determinants of financial performance of a selection of insurance firms within Nairobi County. They used 55 insurance companies. Data was collected both from the secondary and primary sources and was analysed quantitatively and qualitatively using frequencies, means and percentages. From the study findings, they concluded that insurance companies invested in liquid reserves, which assisted them to pay their obligations during instances where their underwriting incomes earned could not cover the claims reported. This occurred by the firms having to sell part of their investments if they had inadequate capital to settle claims. The research also concluded that most of the firms had a high reliance on their underwriting incomes to manage their liquidity.

Kaguri (2013) carried out a research on the influence of firm characteristics on the profitability of life insurance companies in Kenya. From her study findings, she resolved that underwriting premiums had a positive influence on how insurance companies perform financially. The study findings further showed that life insurance firm's characteristics evaluated were basically associated with profitability as well as performance of companies dealing with life insurance.

### **2.3.3 Leverage and performance of insurance companies**

When the company's price of debt is lesser than the company's rate of return on its assets, then shareholders' return in the form of EPS and return on equity increase and hence, leverage will have a favorable impact on profitability. However, the shareholders' return will fall, when the firm obtains the debt at a higher cost than the rate of return on its assets. There is evidence available in the studies on the correlation relating leverage and financial performance.

Almajali (2012) did a research study to investigate the factors affecting the financial performance of insurance companies in Jordan. The independent variables under the research were age, leverage, size, liquidity, size and management competence index. The dependent variable under study was the financial performance of Jordanian insurance companies. The study population comprised of 25 firms in the insurance sector that have been duly registered at Amman Stock Exchange and have been in operation from the year 2002 to 2007. Various statistical techniques were employed including the multiple regression analysis and T-test. The results showed that management competence index, liquidity, leverage and size had a positive statistical effect on the ROA and therefore the financial performance of Jordanian Insurance Companies. The study made a recommendation on increasing the insurance company's chattels to improve financial performance.

Cudiamat and Siy (2017) carried out a research to examine the profitability of the Philippine life insurance industry. They used pooled ordinary least squares composed of a panel of 23 insurance companies for the period 2000-2012. Return on Assets was used as the dependent variable as a measure of profitability while the industry level, the selected

firm level, and macroeconomic factors were used as the predictor variables. The investigation results depicted that most of the firm level factors influenced ROA while macroeconomic factors and industry level had a negligible effect on ROA.

Mehari and Aemiro ( 2013) carried out a research to explore the influence of company-level features on the financial performance of insurance companies in Ethiopia. The explanatory variables studied were leverage, size, risk (loss ratio), liquidity, tangibility, growth in underwriting premiums and age of the firm. The explained variable studied was return on total assets. A sample of nine insurance companies was studied which operated in Ethiopia between the year 2005 – 2010. Secondary data was collected from publications and the audited annual results submitted to the regulators. The study found out that leverage, firm size and tangibility were not only statistically significant but also positively associated with return on total asset. The study also found out that loss ratio (risk) was statistically significant but negatively related with ROA. Therefore, insurance companies' firm size, tangibility, leverage and Loss ratio (risk) are key determinants of performance of insurance companies in Ethiopia. On the contrary, age of the company, advance in underwriting incomes, and liquidity were found to have a statistically insignificant relationship with ROA.

Kunga (2015) researched on the subject to try to establish the relationship that exists between financial leverage and profitability of firms listed at the Nairobi Securities Exchange. He used descriptive research method and studied 47 firms listed on the NSE for the period 2010-2015. The data obtained was analysed using descriptive statistics, correlation, and regression analysis. The research found out that liquidity and leverage portrayed a negative relationship with profitability. Furthermore, she investigated the

extent that tangibility, capital structure choice, flexibility, risk and size had on firm performance for insurance companies. From her research findings, financial leverage and liquidity influenced profitability negatively. According to Kunga (2015), there is a negative association between leverage and profitability and revealed that profitability was not correlated with the financial leverage of listed firms in Kenya. Financial leverage might lead to poor performance of firms due to excessive costs of financing debt that might override the returns obtained from investing in projects.

#### **2.3.4 Diversification and performance of insurance companies**

Krivokapica, Njegomirb, and Dragan (2017) carried out a research on the relationship between business lines diversification and performance for the insurance companies in the Serbia. The study was conducted for the period 2004–2014. The research also found a positive significant relationship between risk-adjusted returns and business line diversification and performance of insurance companies in the republic of Serbia. Both ROE and ROA were used to measure the risk-adjusted returns while entropy measured the line of business diversification. This means that insurers that were more diversified performed better than the undiversified ones and therefore insurance companies should employ diversification as a business strategy to improve their performance and market positioning.

Chen-Ying Lee (2017) carried out a research to assess the effects of business structure, product diversification, and company performance in Taiwanese property and liability insurance companies. The study used panel data analysis as well as the OLS regression model, random and fixed effect models. The specific insurer's performance was measured via the ROE and ROA. The results of the study showed that there existed a

considerably negative relationship between product diversification and performance of property and liability insurance companies in Taiwan. The study also revealed that product ranks especially marine and fire insurances had a substantial effect on the performance of Taiwan property and liability insurers. Also, product diversification had a positive impression on the financial performance of large sized insurance companies. The study recommended that managers should have clear goals and should consider the company's assets critically when engaging with business structure and product differentiation.

Elango and Ma (2003) carried out a research to study the relationship between property-liability insurers' product diversification in Illinois and their risk-adjusted return. They used time series and cross-section data for the period 1992 - 2000. The results of the study showed a non-linear connection between the magnitude of product diversification and risk-adjusted returns. The study concluded that the amount of diversification offsets the key benefit of diversification and therefore result in decreased financial performance. Conversely, they oppose that as companies expand further; extra benefits of diversification are attained, leading to a positive influence on financial earnings. Moreover, the study concluded that the link between the diversification of products and the performance of the company is influenced in a significant way by levels of geographic diversification (Elango & Ma, 2003).

Oscar, Sackey, Amoah and Frimpong (2013) conducted a research on the financial performance of insurance companies in Ghana to find out how the corporations in the sector are faring on in the emerging economy. The study is categorical on the some of the primary elements of profitability in the life insurance industry in Ghana. The authors of

the research surveyed the relationship that exists between the three types of profitability, namely, whole profit, investment proceeds, and underwriting returns. The study uses fiscal testimonials of 10 firms in the life insurance sector that cover an era of 11 years (2000 – 2010). Panel regression was utilized in the research to sample and analyze the data. The study concluded that the gross written premiums can influence the insurer's sales profitability. On the other hand, it had a negative relationship with investment income. Moreover, the study indicated that some of the major life insurance firms in the country had been incurring massive underwriting losses caused by overtrading as well as price undercutting. The study concluded that insurance firms that undergo significant underwriting losses can become insolvent, especially during the period of cluster claims.

Tait and Nienaber (2010) conducted a study on exploring the strategy-to-performance gap in some of the life insurance companies in South Africa. In their research, the two researchers have investigated what creates differences in the performance of different companies in the insurance business in the country and found out that execution barrier is the leading cause of underperformance for the majority of these companies. This research has incorporated the perspectives of 4 CEOs of South African life insurance on why the firms' perform dimly while others are successful. Strategy formulation, as well as the execution of duty in the insurance companies, was ranked the number one determinant of successful performance of the firms. Similarly, poor strategy execution is one of the essential reasons why financial institutions, as well as life insurance firms, break down. This study concludes that the strategy to performance gap is divergent and complex, and their relationship seems elusive.

Bassiouny, Soliman and Ragab (2016) researched the influence of firm characteristics on the proceeds of several Egyptian listed companies. The study aims at accessing the effect that firm characteristics partake on the profitability and management of listed enterprises in the stock exchange. All the firms used in the analysis have their financial statements disclosed from 2007 to 2011. This research fails to include the financial statements for banks and other life insurance companies in the country for having different rules on disclosure. Random effect generalized least square regression model has been utilized in this study to execute the test for the research using STATA. The investigation revealed a significant positive relationship between the financial leverage of a firm and some of the firm characteristics such as firm size, age and audit quality.

Ogbonna and Ogwo (2013) conducted a research on marketplace positioning and company performance of life insurance companies in Nigeria. In their study, the two authors adopted survey research methodologies to help in determining the market orientation strategies adopted by various insurance firms to attain their desired achievement. Spearman's rank correlation coefficient, together with multiple regression, was undertaken to evaluate the tightness of the relationship. The results of the study revealed that age as a firm characteristic has a less effective influence on the market information system. The researchers have found out that most of the insurance firms in the Nigerian industry require customer focus as well as competitor focus to enhance their financial performance. It concludes that companies in the insurance sector can increase their performance through market orientation as well as customer orientation, which is crucial in assessing the financial performance of a company.

Olaosebikan (2013) investigated on the causes of the business success of Micro-Life insurers in the Nigerian market. The study utilizes a panel data design over a span of 6 years, 2004 - 2009. The outcomes of the exploration show that aspects including ownership, leverage and size of the firm are not the primary influencers of profitability of a firm in micro-life insurance firms in Nigeria. Additionally, profitability and financial performance of life insurance firms in the country is significantly affected by the interest rates in the economy. Most of the life insurers have a diversified range of products for their customers and enjoy economies of scale that enable them to reduce the cost of risk.

According to the research conducted by Kaguri (2013) on the relationship that exists between firm characteristics and the performance of life insurance firms in Kenya, it is crucial to access and define the performance of underwriters in Kenya to enable the industry to grow. The author claims that insurance firms, especially those offering life insurance, perform a substantial part in the country's economy because they provide social, economic benefits to society. Furthermore, the research agrees that there is a substantial relationship between the growths of premiums in the country and the positive results of life insurance firms in Kenya. The outcomes from the research also show that characteristics of insurance companies are closely related to the financial performance of these firms and that is indicated by the positive mean value as well as the standard deviation of the respective companies in the industry. Kaguri (2013) in the research on firm characteristics, concludes that age, size, liquidity, leverage and premium growth among other characteristics have a significant correlation with ROA, used as a measure of financial performance. It means that the increase in premiums of a life insurance company plays a strong portion in gauging performance and growth in the business.

Chepkoech and Omwenga (2016) have also conducted a research on the influence of bancassurance on the performance of firms in Kenya. The research determined the distribution of some of the insurance products across the banking segment in the country. The two researchers utilized profitability, customer base and liquidity as the primary variables to determine the effects of banc assurance on the way insurance firms perform financially. In the research, a descriptive approach was used to permit generality of the discoveries to a large group of general insurance companies. Furthermore, the study uses questionnaires to collect the required data from about ten registered insurance firms in Kenya. Chepkoech and Omwenga (2016) used SPSS, which is qualitative data analysis software, to analyse the data conducting tests at 95% level of confidence. The results of the study revealed that more than 40% of the insurance companies had the required liquidity to meet their claims in time. The liquidity due to the adoption of banc assurance helped the firms achieve good profitability ratio. The report also introduces some of the steps general insurance companies in Kenya have taken to develop a localized profit performance that enables the firms to meet and overcome the challenges of banks. The report concludes that it will be reasonable for firms in the insurance industry to work closely with banks to experience a rise in sales leading to profitability.

Isabella and Eddie (2018) researched on how firm characteristics affected financial performance of general insurance companies in Kenya. The study uses a target population of 47 general insurance firms in the country and panel data was also utilized from some of the financial institutions in Kenya as secondary data. The study carried out by Isabella and Eddie (2018) was also descriptive and the data was analyzed by SPSS statistical software mostly used in qualitative research. The researchers found that capital

structure was the most crucial firm characteristics and had a considerable influence on how a company performs financially in the industry. Moreover, the researchers find out that the second and third most influential firm characteristics are size and age, which contributes to the profitability of the insurance companies. The study concludes that the market share of the insurance firm in Kenya influences the relationship between their financial performance and firm characteristics. Furthermore, the research concludes that the ownership structure of a company in the Kenyan insurance industry has a significant influence in boosting the profitability of the firm.

The study carried out by Kiragu (2014) on the challenges of insurance firms in building a competitive advantage in Kenya utilized a target population of 44 companies in the insurance sector which have their headquarters in Nairobi. The researcher collected both primary and secondary data and used descriptive statistics to help analyse the data. The study cites the increased pressure in the provision of financial services in the country due to differences in internal compatibility of companies and their strategies. Kiragu (2014), in this study, concludes that government regulations have a major role in influencing the competitiveness of assurance firms in Kenya. The sector requires a massive capital investment, to achieve adequate controls and caution companies from incurring substantial losses.

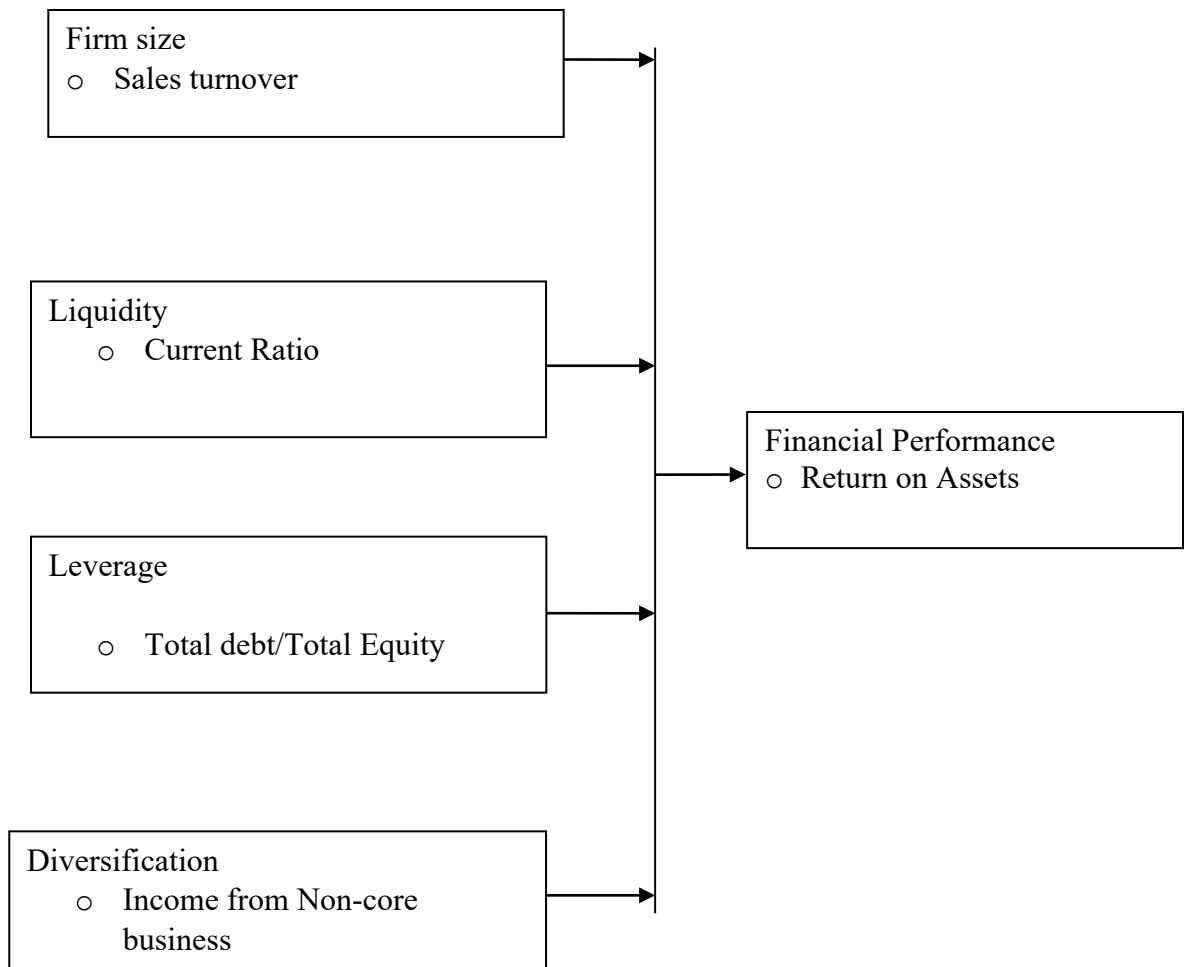
Mwangi and Murigu (2015) conducted a study on factors that influence the performance of insurance firms in Kenya. The research was focused on establishing some of the issues that upset the profitability and growth of general insurers in Kenya. In the research, the authors applied multiple linear regressions and the data of the insurance firms used in their research was from 2009 to 2012. The study found out that, leverage, equity capital

and management competence index have a positive correlation with the profitability of any of the insurance firms in Kenya. Contrary, the researchers found a negative relationship between the profitability of an insurance company in Kenya with size and ownership. Nonetheless, the research study fails to find a convergence between the financial performances of companies in the general insurance sector in Kenya and age, liquidity as well as retention ratio. In their study, Mwangi and Murigu (2015) conclude that the higher the leverage, equity capital and management is, the more an institution will be financially successful. Insurance firms are advised not to over-leverage since they can quickly run bankrupt or fail to honour their debt repayment. It is evident from the research that companies should focus on the performance of its products in the market instead of growth.

## **2.4 Conceptual Framework**

A conceptual framework is a brief depiction of the phenomenon under investigation characterised by a chart description of the main parameters of the study. It is a diagrammatic representation showing the relationship between the dependent and predictor variables. The formulation of variables in hypothetical education is critical as it articulates the foundation for the testing model and forthcoming with summaries in the conclusions of the exploration.

For this research, the conceptual framework looked at the firm characteristics and how they affected their financial performance of insurance companies.



**Independent Variables**

**Dependent Variable**

**Figure 1: Conceptual framework**

**Source: Author 2017**

## 2.5 Operationalization of variables

The operational framework provides the measurable parameters of the variable as indicated by the conceptual framework.

**Table 1: Operational framework**

<b>INDEPENDENT VARIABLES</b>			
<b>Objective</b>	<b>Variables</b>	<b>Indicators</b>	<b>Measurements</b>
To evaluate the effect of firm size	size	○ Sales turnover	○ Log of sales
To determine the effect liquidity	Liquidity	○ Current ratio	○ Current assets / Current liabilities
To establish the effect leverage	Leverage	Total Debt / Total Equity	Total Debt / Total Equity
To find out the effect of diversification	Diversification	○ Income from non-core business	○ Non-premium income/total income
<b>DEPENDENT VARIABLES</b>			
Performance	Performance	• Return on assets	• Net income/Total Assets

## **2.6 Summary of Literature Review**

Many researchers have examined the firm characteristics and firm performance in some industries. Few studies, however, have targeted the insurance industry for example, (Adams & Buckle 2013, (Cekrezi, 2015) ). However, the results are mixed, internationally; the majority of the authors have focused on variables such as liquidity, leverage, ownership in an attempt to find out the relationship on profitability. Some examine only the impact of some firm characteristic on performance, while others investigate the influence of several other factors together. Most of these empirical studies have concentrated on the performance of companies in other industries such as banking, for example, (Kiptis & Wanyoike, 2016) (Kiruri, 2013) (Mokaya & Jagongo, 2015) (Omondi & Muturi, 2013). Summing up the empirical literature regarding the relationship between company diversification and performance, it is possible to perceive their inconsistency (Githira, 2008) (Elango & Ma, 2003) (Chen-Ying Lee, 2017).

While some studies find that the effect of diversification on company profitability is positive and statistically significant, others arrive to contrary results that show a negative statistically relationship. Therefore, the general conclusion of studies in this area continues to be unclear. This phenomenon reveals a gap that exists since none of them covers the effects of firm characteristics on the financial performance of firms in the insurance industry, specifically in Kenya. In the same line, the studies done on the topic are highly conflicting, and there is no clear direction of the effects on the performance of insurance companies. The academician found it crucial to research on firm features and their influence on the financial performance of insurance companies due to the significant

gaps that have been left by the various people who tried to research on the same to bridge the gap of literature that exists.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1. Introduction**

This chapter presents the research design, the target population, sampling, method of data collection and data analysis.

#### **3.2. Research Design**

According to Shajahan (2004), a research design is a kind of a master plan that highlights the methods as well as procedures that are required in the study to collect and analyze the information required. Mugenda and Mugenda (2003) define a research design as a logical sequence that inter-relates the empirical data gathered to the initial research questions of a study. Creswell (2012), opined that a research design comprises the procedures and methodology used to conduct scientific research. This study adopted a descriptive research design. A descriptive design seeks to describe a phenomenon as it exists. It is used for identifying and obtaining information about the characteristics of a specific issue (Kothari & Garg, 2014). The collected data were usually qualitative and statistical techniques are normally used to summarize the information.

#### **3.3. Target Population**

According to Kombo and Tromp (2009), a population is a group of people, items or even objects where samples are drawn for the purpose of measurement in research. It can also be defined as the whole group of people or elements, which possess or at least share a particular common characteristic or that have at least share one thing in common. The target population of the study was 53 insurance companies operating in Kenya as of the year 2017. Census method was used where the 53 insurance companies were studied.

### **3.5 Research instruments**

The data collection was done from secondary sources to achieve the objectives of the study. Secondary data published on IRA and the firm's specific results. A data collection sheet was used. Panel data was used for the study. It entailed data published on IRA report from 2013 to 2017 which entails the annual observations on the variables annual observations on firm characteristics, firm size, liquidity, leverage, and diversification.

### **3.6 Data collection**

Secondary data was gathered of numerical information and quantitative information was obtained. The use of this method is essential because it saves time and excludes the probability of collecting biased data from some of the primary sources. Besides, this method provides a large and highly quality database which can be used to help individual researchers gather the required information in the shortest time (Mugenda & Mugenda, 2003). Furthermore, the method entailed collecting and analyzing of published data on the government's intervention in the insurance industry. Specifically, relevant data on insurance was obtained from the Insurance regulatory authority.

### **3.7 Data Analysis**

Panel data analysis was applied to the data to determine the effect of firm characteristics on the performance of insurance companies. This is because the data had both time series and cross-section characteristics. Gujarati (2012) asserts that combinations of cross-section observations, panel data always provides better results with valuable information, with reduced collinearity among variables and offer more degree of freedom as well as efficiency. The model was developed from data from published reports from years 2013

to 2017. The firm characteristics were the bases for forming the relationship between the dependent and dependent variables.

$$\text{Performance} = f(\text{firm Size, Liquidity, Leverage, Diversification, } \epsilon)$$

The model specifically takes the following form;

$$Y_{it} = \beta_{0i} + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \epsilon_{it}$$

Whereby;

$Y_{it}$  = Performance

$X_{1it}$  = firm size

$X_{2it}$  = liquidity

$X_{3it}$  = leverage

$X_{4it}$  = Diversification

$B_0$  = Constant

$\beta_1, \beta_2, \beta_3$  and  $\beta_4$  = Slope of the regression equation

t = time effect

$\epsilon_{it}$  = Error

The F-test was used in the research to specifically determine the significance of the regression. The coefficient of determination, R<sup>2</sup>, was used to establish how much X explains variation in Y. It was done at a 95% confidence level. Moreover, a correlation analysis was done to determine the direction of the relationship between ownership structure, liquidity, leverage, Diversification, and Performance. STATA was used to analyze the data.

### **3.8 Diagnostic Tests**

Different estimation models were carried out on panel data. They include Pooled Ordinary Least Square method (POLS), Random Effect Model (REM) and Fixed Effect Model (FEM). The diagnostic tests were carried out to determine the best estimation models to be carried out.

#### **3.8.1 Breusch-Pagan Lagrange multiplier (LM) test**

The test was carried out to determine whether to use the pooled OLS regression or the random effect regression (Torres, 2007). The null hypothesis in the LM test is that variances across entities are zero. It means that there is no panel effect or a considerable difference across units does not exist. If the test is carried out and the P value is less than the critical p-value of 0.05, then it shows that there was panel effects. The effect of this result is the rejection of the null hypothesis, and consequently the acceptance of the alternative hypothesis.

#### **3.8.2 Hausman Test**

A Hausman test is always run to enable one to make a decision amidst the random or the fixed effects. The Durbin– Wu– Hausman test likewise called the Hausman specification test assesses the consistency of an estimator when compared to an alternative's less efficient estimator, which is already known to be consistent. The test enables one assess whether a particular statistical model relates to the statistics. A Hausman statistic is a critical component that is created as a part of the variance concerning the two appraisers. Furthermore, the test group of the Hausman statistic is a primary determinant of how significant a difference is as well as determining whether it is too big to be

compatible with the null hypothesis of correct specification. One can conduct a Hausman test by comparing the Hausman statistic to a critical value obtained from its sampling distribution and rejecting the null hypothesis of the correct specification if the Hausman statistic exceeds its critical value. If the p-value is greater than 0.05, use a random effects model.

### **3.8.3 Heteroscedasticity**

Heteroscedasticity is the absence of constant error variance. It is a problem that the disturbance term has unequal variance. It can emerge as a result of an outlier. The existence of heteroscedasticity problem may bring about overestimation of the model, test statistic becomes smaller and, in this way, cause the incorrect conclusion (Orme & Yamagata, 2014). Additionally, the presence of the heteroscedasticity problem will cause the variance to become standard error, indirectly impact the Test statistic and F statistic to become incorrect. Unless it is severe, heteroscedasticity ought not to be a bother since it doesn't result in biased parameter estimates. This study used White Cross-Section test to control the heteroscedasticity problem. The reason behind the choice of the White test is compelled by its applicability to both nonlinear models and non-normal error terms (Jina & Zhangb, 2015)

### **3.8.4 Autocorrelation**

Autocorrelation implies that the independent variable is correlated with the error term. Wooldridge F- statistic test was applied to detect the presence of autocorrelation in the model. Autocorrelation also known as serial correlation is a problem that influences the efficiency of the estimators such that the standard errors are distorted affecting the test

statistic and subsequently invalid significance test and conclusions. A p-value of less than 5% level of significance indicates the presence of serial correlation (Wooldridge, 2002).

### **3.9 Ethical Consideration**

Ethics are rules/norms that govern the conduct and have great influence on the welfare of human being. Bryman and Bell (2015) noted that it is a way of deciding the right and wrong behavior by a person. The secondary sources that was used for the purposed of the study was acknowledged through appropriate citations. Permissions were requested from relevant authorities in the insurance industry where published data was obtained. A research permit was obtained from the National Council of Science and Innovation (NACOSTI) and relevant government clearance sought.

## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

#### 4.1 Introduction

This chapter is about presentation of the study findings on the effect of firm characteristics on financial performance of insurance companies. It deals with the presentation and analysis of 265 annual observations from 2013 - 2017. Descriptive statistics including mean and standard deviation of the variables are analysed. The chapter also discusses their correlation. The results also include diagnostic tests for regression assumptions before presentation of the regression results and its interpretation.

#### 4.2 Descriptive statistics

The study findings in Table 1 show that the firms make a minimum of 0.0992676 losses and a maximum of 0.103143 returns on assets. On average, the firms gain 0.0326041 with deviation of 0.0395128. The results revealed that firms have minimum size of 4.648133 and a maximum size of 7.098352. The average size of the firms is 6.19974 with deviation of 0.5321221. Firms have minimum liquidity of 1.364433 and a maximum of 43.32346. The average liquidity of the firms is 6.895834 with a deviation of 7.138334. The results show that the firms have a minimum leverage of 0.2187611 and a maximum of 7.02399. The average leverage for the firms is 1.559934 with a deviation of 1.320564. The findings show that firms' diversification range between -1.354334 and 5.469402. The mean diversification by the firms was 0.8432002 with a deviation of 0.9347864.

**Table 4.1 Descriptive statistics of the study variables**

Variable		Mean	Std. Dev.	Min	Max	Observations	
ROA	overall	.0326041	.0686368	-.2545917	.5034046	N =	265
	between		.0395128	-.0992676	.103143	n =	53
	within		.056333	-.2635854	.4328657	T =	5
Size	overall	6.199749	.5498755	4.169616	7.262391	N =	265
	between		.5321221	4.648133	7.098352	n =	53
	within		.1532948	5.707495	7.047632	T =	5
Liquidity	overall	6.895834	9.886704	.0039316	119.2728	N =	265
	between		7.138334	1.364453	43.32346	n =	53
	within		6.896606	-30.68291	82.84519	T =	5
Leverage	overall	1.559934	1.426433	.0496552	8.162064	N =	265
	between		1.320564	.2187611	7.02399	n =	53
	within		.5632438	-.9935559	4.692855	T =	5
Diversification	overall	.8432002	2.382753	-16.30741	24.52657	N =	265
	between		.9347864	-1.354334	5.469402	n =	53
	within		2.19475	-14.10987	19.90037	T =	5

### 4.3 Correlation

In linear regression methodology, there should be no two variables with high correlation. The results in Table 4.2 show that there were no two variables with high correlation as the correlation coefficient for all the variables were less than 0.5. The results show that most relationships were negative as the correlation coefficients were negative save for firm size and RAO (correlation coefficient, 0.1213), firm size and leverage (correlation coefficient, 0.1900) and liquidity and leverage (correlation coefficient, 0.1666).

**Table 4.2 Correlation Matrix**

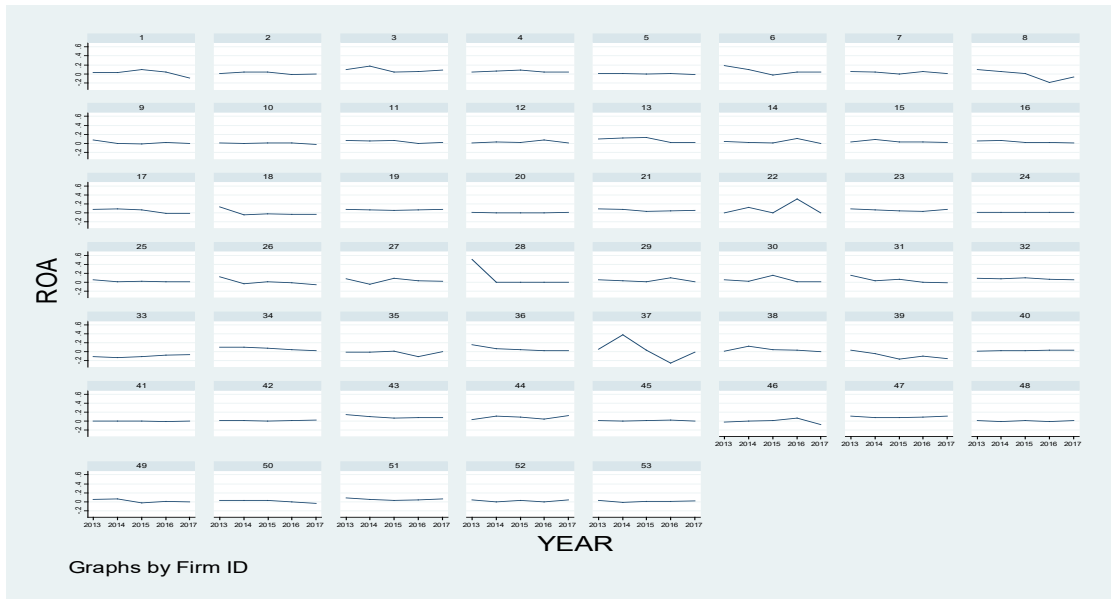
	ROA	SizeLogofS	LiquidL	Leverage	Diversif
ROA	1.0000				
SizeLogofS	0.1213	1.0000			
LiquidL	-0.0523	-0.0247	1.0000		
Leverage	-0.1884	0.1900	0.1666	1.0000	
Diversif	-0.0463	-0.0163	-0.0345	-0.0373	1.0000

#### **4.4 Exploratory Analysis**

##### **Trend Plots**

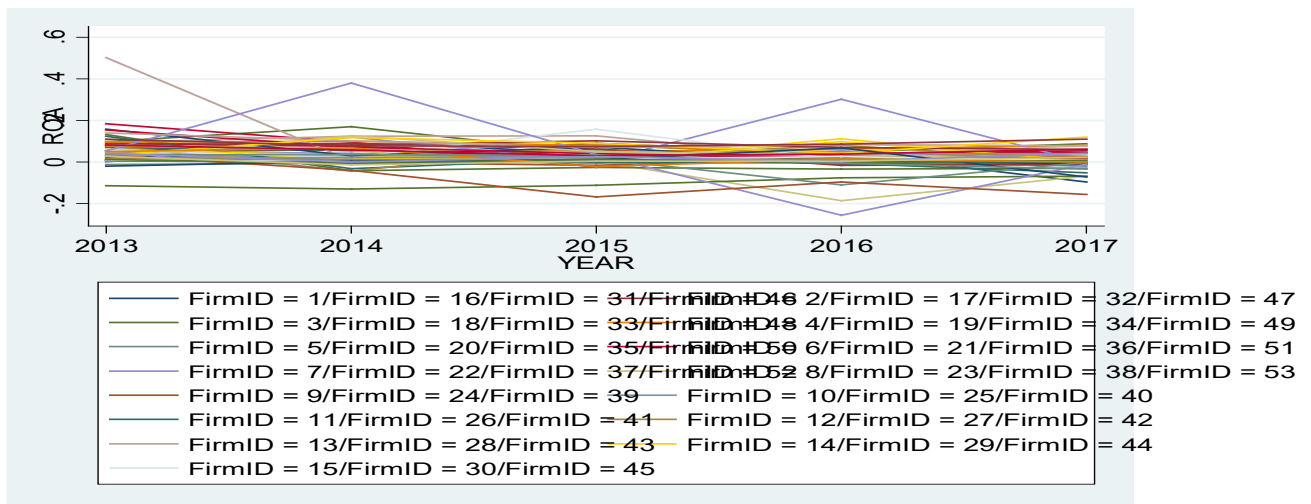
In order to gain an insight into the data, trend plots were drawn. The study was covered the periods from 2013 to 2017. According to the results in figure 4.1 the financial performance of the firms depicted fairly constant performance with regard to return on assets. The results however, show that firms 1, 8, 18, 39 and 46 were operating below the profitability margin. The findings show that firms 22 and 27 have big fluctuations in their performances over the years. Majority of the firms operated just above the profit margin.

**Figure 4.1: Trend Plots**



Further observation of the overlain characteristic plot indicated slopes being non-significantly different among majority of the insurance firms. Figure 4.2 below indicates the Overlain Plot of firm characteristics.

**Figure 4.1 Overlay Graph**



## 4.5 Panel Data Diagnostic Tests

In order to evaluate the correct model for estimation, some diagnostic tests were carried out. The results are presented below-;

### 4.5.1 Testing for random effects

The study used Breusch-Pagan Lagrange multiplier (LM) to test whether a panel model or simple OLS can be used. The null hypothesis in this test therefore is there is no significant difference across units since the variances across entities is zero (i.e. no panel effect).

Based on the findings, p-value < 0.05, hence reject the null hypothesis, hence random effects are appropriate. We therefore conclude that we cannot run simple OLS regression but a panel model.

**Table 4.3: Breusch and Pagan Lagrangian multiplier test for random effects**

$$ROA[\text{FirmID},t] = Xb + u[\text{FirmID}] + e[\text{FirmID},t]$$

Estimated results:

	Var	sd = sqrt(Var)
ROA	.004711	.0686368
e	.0036509	.0604223
u	.000678	.0260378

Test:  $\text{Var}(u) = 0$

$$\begin{aligned} \text{chibar2}(01) &= 8.77 \\ \text{Prob} > \text{chibar2} &= 0.0015 \end{aligned}$$

#### 4.5.2 Test for heteroscedasticity

Test of Wald was performed to detect the presence of heteroscedasticity between individuals in the data. The null hypothesis for this test is that the variance of the error is the same for all individuals. The results in Table 4.3 show that the p-value < 0.05 hence no presence of heteroscedasticity.

**Table 4.3: Modified Wald Test results**

<b>Model</b>	<b>Dependent variable</b>	<b><math>\chi^2</math>-value</b>	<b>p-value</b>
1	ROA	58059	0.000

#### 4.5.3 Test for Fixed or Random Effects

The study used Hausman test to determine whether to use the fixed or random effects. In this test, the null hypothesis is that the random effect is the preferred model (Green, 2008). That is that the unique errors ( $u_i$ ) are not correlated with the regressors. The results are presented in table 4.4. It can be observed that p value < 0.05 which results to the rejection of the null hypothesis. This implies that the fixed effects model is the appropriate model for analysis.

**Table 4.4: Hausman test results**

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fixed	(B) random		
SizeLogofS~s	-.0345122	.017003	-.0515152	.023143
LiquidityC~L	.0003501	.0000691	.000281	.0003121
Leverage	-.0275604	-.012868	-.0146924	.0057444
Diversific~n	-.0013505	-.0011905	-.00016	.0004227

b = consistent under Ho and Ha; obtained from xtreg  
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)' [(V\_b-V\_B)^(-1)] (b-B)  
 = 16.65  
 Prob>chi2 = 0.0023

**4.5.4 Testing for time-fixed effects**

Given the Hausman results have indicated that we run a fixed effect model, we use the Testparm test to establish if time fixed effects are needed when running a FE model. In this case the hypothesis is coefficients for all years are jointly equal to zero. The results have result (p<0.05) leads to rejection of the null hypothesis and it is concluded that time fixed effects are needed in the model. The model therefore incorporates dummies for the years

```
( 1) 2014.YEAR = 0
( 2) 2015.YEAR = 0
( 3) 2016.YEAR = 0
( 4) 2017.YEAR = 0

F( 4, 204) = 5.51
Prob > F = 0.0003
```

**Table 4.5 Testparm Test Results**

Model	F-value	p-value
1	5.51	<b>0.0003</b>

#### 4.5.5 Test for autocorrelation

The study used Wooldridge Drukker test for autocorrelation in panel data. The null hypothesis is that there is no first-order autocorrelation. The results are presented in table 4.5. It can be observed that  $p=0.2557 > 0.05$ . This implies that there is no autocorrelation.

```
H0: no first-order autocorrelation
      F( 1,      52) =      1.321
      Prob > F =      0.2557
```

**Table 4.5 Wooldridge Drukker test results**

<b>Model</b>	<b>Dependent variable</b>	<b>F-value</b>	<b>p-value</b>
1	ROA	1.321	<b>0.2557</b>

#### 4.6 Regression Analysis

Informed by the diagnostic test, the study used the fixed effects panel model for the analysis. The results are presented in table 4.6.

## Table 4.6 Fixed Effect Regression Results

```

Fixed-effects (within) regression
Group variable: FirmID
Number of obs      =      265
Number of groups   =       53
Obs per group: min =        5
                  avg =       5.0
                  max =        5

R-sq:  within = 0.1819
       between = 0.1287
       overall = 0.1282

corr(u_i, Xb) = -0.4799
F(8, 52)      =       4.97
Prob > F      =       0.0001

(Std. Err. adjusted for 53 clusters in FirmID)

```

ROA	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
Sizeofsales	.0548745	.0353932	1.55	0.127	-.016147	.1258961
LiquidityCA	.0001071	.0002722	0.39	0.696	-.0004391	.0006532
Leverage	-.0249217	.0069944	-3.56	0.001	-.038957	-.0108865
Diversification	-.0007287	.001006	-0.72	0.472	-.0027475	.00129
YEAR						
2014	-.0230277	.0125628	-1.83	0.073	-.0482367	.0021814
2015	-.0395894	.0115409	-3.43	0.001	-.062748	-.0164308
2016	-.0500336	.0146852	-3.41	0.001	-.0795017	-.0205656
2017	-.0628684	.0141863	-4.43	0.000	-.0913353	-.0344015
_cons	-.2337481	.2163572	-1.08	0.285	-.6679007	.2004044

The study established that the R-squared value for the test was 0.1287. This implies that 12.87% of the variance in the financial performance is explained by the independent variables. The panel regression results show that the constant was -0.2337481. However, this test was not statistically significant at the 5% significant level (p-value > 0.5). This implies that in the absence of the influence of the independent variable, the dependent variable is deemed to change with a value of -0.2337481. The study findings show that the coefficient for size of the firm was 0.0548745 with a p-value of 0.127. This implies that there was a statistically insignificant positive relationship between firm size and the firms' financial performance. Based on the findings of the study, we accept the null hypothesis that firm size has no effect on the financial performance of insurance companies in Kenya. The findings contradict Kollie (2014) who found that organizational size positively influenced the firms' performance. The study further contradicts Burea and Batrinca (2014) as there was a significant positive correlation between firm size and

firms' profitability. The results further disagreed with Kaya (2015) who observed that the size of the company affected the firms' profitability.

The study findings further show that the coefficient for liquidity was 0.0001071 with a p-value of 0.696. Based in the study findings, there is a positive relationship between the firms' liquidity and financial performance, this relationship is however, statistically insignificant as the p-value  $> 0.05$ . The study therefore fails to reject the null hypothesis that liquidity has no effect on the financial performance of insurance companies in Kenya are in agreement with Kigen (2014) who found in his study that there was no relationship between total asset and profitability of insurance companies. These findings however contradict Kollie (2014) who found that liquidity positively influenced performance of insurance companies. The results agree with Omondi and Muturi (2013) who found that liquidity influenced performance.

The coefficient for leverage according to the findings was -0.0249217 and a p-value of 0.001. The results mean that there was a statistically significant negative relationship between the leverage and firms' financial performance. This mean that a unit change in leverage would result into a 0.0249217 negative change in organizations' financial performance. The study therefore rejects the null hypothesis that leverage has no effect on the financial performance of insurance companies in Kenya. These findings are in support of Cekrezi (2015) who noted that leverage have a negative impact on the financial performance. The findings however, contradict Mahfoudl (2014) who noted that leverage had a positive relation with financial performance. The findings further

contradict Mwangi and Murigi (2015) who noted found that leverage was positively related to profitability.

The results show that diversification has a coefficient of -0.0007287 and p-value of 0.472. This implies that there is a statistically insignificant negative relationship between diversification and financial performance of insurance firms in Kenya. The study therefore fail to reject the null hypothesis that diversification has no effect on the financial performance of insurance companies in Kenya. The findings are in agreement with Elango and Ma (2003) who found a non-linear relationship between product diversity and organizational performance. The results of the study however, contrast with Krivokapica, Njegomirb and Dragan (2017) who found that diversity improves performance of the insurance firms.

*Model:*

$$\begin{aligned} \text{Financial performance}_t &= -0.2337481 + 0.0548745\text{Firm size} + 0.0001070\text{Liquidity}_t \\ &\quad - 0.0249217\text{Leverage}_t - 0.0007287\text{Diversification}_t \end{aligned}$$

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter summarizes the key findings from the collected data. The key findings are used to make conclusions. Recommendations emanating from the key findings are also presented. The suggestions for further studies are also indicated.

#### 5.2 Summary of Findings

The first objective of the study was to evaluate the effect of firm size on the financial performance of insurance companies in Kenya. The research established that firm size was positively related to firms' financial performance. However, the test was insignificant as the p-value was less than 0.05. The second objective of the study was to determine the effect of liquidity on the financial performance of insurance companies in Kenya. The findings revealed that the relationship between liquidity and financial performance was positive. This test was however not significant (p-value > 0.05). Thirdly, the aim of the study was to find out how leverage affected the insurance companies' financial performance in Kenya. The research established that leverage had negative significant relationship with the financial performance of insurance companies in Kenya (p-value < 0.05). Forth was to find out the effect of diversification on the insurance companies' financial performance in Kenya. The findings showed that there was a negative insignificant relationship between diversity and insurance companies' financial performance (p-value > 0.05).

### **5.3 Conclusion**

The study found no significant effect of the firm size on the insurance companies' financial performance in Kenya. The effect was however positive. Firm size is an essential component that enhances the success of a company. The best sign of development in an organization is the extent of the group that is dealing with its management. The gross sales are the most common measure of firm size. Most companies should consider increasing their size to improve their performance.

The study further established that liquidity positively affected the financial performance of the insurance companies in Kenya. The effect was however not significant. High liquidity is necessary and makes it obvious for insurance firm management to enhance their ability to create wealth. However, high liquidity can be detrimental to insurance companies and therefore it is important for insurance companies to take calculated measures that can hedge the liquidity risk. This ensures that there are a high percentage of funds being invested in activities that have a high-income return.

The findings revealed that the effect of leverage on the financial performance was negative and significant. The insurance industry is very competitive and a high level of leverage can be a great constraint to firms. High levels of debts often consumes the operating cash flows of a firm hence can restrict a firm from engaging in profitable investment options. High debt levels can also lead to bankruptcy putting some companies in the risk of being wound up. Also, its sustainability into the future is also endangered as it will become unattractive to new investors.

Finally, diversity negatively affected the financial performance of insurance companies in Kenya. This was however insignificant. Companies can acquire many advantages from engaging in diversification but if it is done in a bigger way, it can also result to negative results. The firm managers need to have clear goals when carrying out diversification to avoid its negative effects in the organization. In the insurance industry, due to the technical nature of the business, managers need to focus on specific lines of business to avoid running into losses.

#### **5.4 Recommendations**

From the study findings, larger firms seem to be performing better financially than the smaller firms. The study recommends that smaller firms should consider merging to reap from the economies of scale.

The study established that the liquidity positively influenced financial performance. The study recommends that there is need for the insurance companies to strengthen their liquidity with the view of enhancing firms' financial performance.

The study established that liquidity was negatively related to financial performance of the firm. The study recommends that insurance companies should keep low their debts and maximise their equity to enhance their financial performance.

The diversity of the firms negatively affected the financial performance of the firms. The study recommends that insurance companies need to specialize on few products that will maximize their profitability.

### **5.5 Suggestions for Further Research**

This study was done on the effect of firm characteristics of the financial performance of the insurance companies in Kenya. The study suggests that similar studies should be done in the other sectors of the economy with the aim of establishing the effect of firm characteristics on their financial performance.

### **5.6 Limitation of the study**

The findings of the study are limited to the considered independent variables, which include firm size, liquidity, leverage and diversification and not all the variables which could have influence on financial performance of insurance companies. The conclusions are made on the considered variables only.

The study was carried out for the period between January 2013 and December 2017 thus the findings are limited within the considered time period.

The study used secondary data which was collected from previous and existing published records. Secondary data is normally historical and does not reflect the current situation though past data can be used to predict the future.

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## APPENDICES

### APPENDIX I: LETTER OF INTRODUCTION

MONICAH MACHARIA

KCA UNIVERSITY

DEAR RESPONDENTS

**RE: EFFECT OF FIRM CHARACTERISTICS ON PERFORMANCE OF  
INSURANCE  
COMPANIES IN KENYA**

My name is Monica Macharia a Masters student at KCA University. This research aim at the effects of Firm Characteristics on Performance of Insurance Companies in Kenya. Your organization is chosen for this study. The purpose of the letter is to request for information and assure that all the information will be treated with utmost confidentiality and used for academic purposes.

I wish you all the time and look forward to your cooperation.

Thank you

Monica W. Macharia

## APPENDIX II: SECONDARY DATA COLLECTION SHEET GUIDE

This sheet will be used by the researcher to collect secondary data among the 52 insurance companies which formed the sample size of the study. The data collected will be based on, Sales, Total Assets, Profitability, Equity, Earnings per share, and Shares held by Management. The variables helped the researcher to analyze the financial performance regarding Return on Equity, Return on Assets and Earnings per share.

A table will be used to collect the data for the duration of the study.

Profitability/Return on Assets/Return on Equity

	2013	2014	2015	2016	2017
Equity share					
Current assets					
Current liabilities					
Total debt					
Total equity					
Non-premium income					
Total income					
Net income					
Shareholder's equity					
Total assets					

### APPENDIX III: LICENCED INSURANCE COMPANIES

1	AAR INSURANCE KENYA
2	AFRICAN MERCHANT ASSURANCE
3	AIG INSURANCE COMPANY
4	APA INSURANCE COMPANY
5	APA LIFE ASSURANCE COMPANY
6	BRITAM GENERAL INSURANCE
7	BRITAM LIFE INSURANCE CO LTD
8	CANNON ASSURANCE COMPANY
9	CANNON LIFE ASSURANCE COMPANY
10	CAPEX LIFE ASSURANCE COMPANY
11	CIC GENERAL INSURANCE COMPANY
12	CIC LIFE ASSURANCE COMPANY
13	CORPORATE INSURANCE COMPANY
14	CORPORATE LIFE ASSURANCE COMPANY
15	DIRECTLINE ASSURANCE COMPANY
16	FIDELITY SHIELD INSURANCE
17	FIRST ASSURANCE GENERALCOMPANY
18	FIRST ASSURANCE LIFE COMPANY
19	GA INSURANCE COMPANY
20	GA LIFE ASSURANCE COMPANY
21	GEMINIA GENERAL INSURANCE COMPANY
22	GEMINIA LIFE ASSURANCE COMPANY
23	ICEA LION GENERAL INSURANCE
24	ICEA LION LIFE ASSURANCE
25	INTRA-AFRICA ASSURANCE

26	INVESCO ASSURANCE COMPANY
27	KENINDIA ASSURANCE COMPANY
28	KENINDIA LIFE ASSURANCE COMPANY
29	KENYA ORIENT INSURANCE
30	MADISON GENERAL INSURANCE COMPANY
31	MADISON LIFE ASSURANCE COMPANY
32	MAYFAIR INSURANCE COMPANY
33	METROPOLITAN CANNON INSURANCE
34	OCCIDENTAL INSURANCE COMPANY
35	OLD MUTUAL LIFE ASSURANCE
36	PACIS INSURANCE COMPANY
37	PHOENIX OF EAST AFRICA
38	PIONEER ASSURANCE COMPANY
39	RESOLUTION INSURANCE COMPANY
40	SAHAM GENERAL INSURANCE COMPANY
41	SAHAM LIFE ASSURANCE COMPANY
42	SANLAM LIFE INSURANCE
43	HERITAGE INSURANCE COMPANY
44	THE JUBILEE GENERAL INSURANCE COMPANY
45	THE JUBILEE LIFE INSURANCE COMPANY
46	TAKAFUL INSURANCE OF AFRICA
47	TAUSI ASSURANCE COMPANY
48	THE KENYAN ALLIANCE INSURANCE
49	THE MONARCH INSURANCE
50	TRIDENT INSURANCE COMPANY
51	UAP GENERAL ASSURANCE COMPANY
52	UAP LIFE ASSURANCE COMPANY
53	XPLICO INSURANCE COMPANY

