

**DETERMINANTS OF FINANCIAL PERFORMANCE FOR LIFE  
INSURANCE COMPANIES IN KENYA**

**BY**

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## **DECLARATION**

This research project is my original work and has not been submitted for the award of a degree at the University of Nairobi or any other university.

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This research project has been submitted for the examination with my approval as the candidate's Supervisor.

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## **DEDICATION**

This piece of work is dedicated to my wife Margaret for her enormous encouragement and support throughout the course. Special dedication to our sons Faizel and Jaydon for allowing me the time to pursue this.

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## **ABBREVIATIONS**

AKI – Association of Kenya Insurers

ANOVA – Analysis of Variance

COMESA – Common Market for East and Southern Africa

EAC – East African Community

IRA – Insurance Regulatory Authority

ROA – Return on Assets

SADC – Southern African Development Community

SPSS – Statistical Package for Social Scientists

## **ABSTRACT**

The objective of this study was to establish the factors that affect the financial performance of life insurance companies in Kenya. The tested determinant variables were Solvency Margin, Growth of Premiums, Insurance Financial Leverage, Investment Ratio, Diversification, Company Size, and Retention Ratio. Financial performance was measured using ROA. The study employed multiple linear regression analysis with data for 24 life insurers that were operating in Kenya for the respective five year period 2010 - 2014. The study found that Diversification and Investment ratio showed a strong positive relationship to financial performance while Insurance Financial Leverage showed a moderate positive relationship to Financial Performance of life insurance companies in Kenya. Retention ratio showed a strong negative relationship to financial performance. Company Size and Growth of Premiums showed a weak negative relationship to financial performance while Solvency Margin showed a weak positive relationship to Financial Performance of life insurance companies in Kenya. The results emphasized the need for life insurance firms to focus more on diversifying into different business lines, allocate more assets into investments as well as keep retention ratios at reasonable levels.

# **CHAPTER ONE: INTRODUCTION**

## **1.1 Background of the Study**

Performance represents a difficult concept, both in terms of definition and quantification. It was defined as output of activity, and the appropriate measure selected to assess corporate performance is considered according to the organization type and objectives of evaluation. Researchers in strategic management have offered a variety of models that can be used to analyze financial performance. Nevertheless, there is no consensus on what constitutes a valid set of performance criteria (Ostroff and Schmidt, 1993).

Profitability, defined as proxy of financial performance, is one of the main objectives of insurance companies' management. Profit is an essential prerequisite for an increasing competitiveness of a company that operates in a globalized market. In addition, profit attracts investors and improves the level of solvency, and thus, strengthens consumers' confidence. The financial analysis of a life insurance company is an important tool used by actuaries in the process of decision-making on underwriting and investment activities of the insurance company as well as its long term survival. The financial performance of life insurance companies is also relevant within the macroeconomic context since the insurance industry is one of the financial system's components, fostering economic growth and stability.

Although there are numerous approaches, generally, insurers' profitability is estimated through the examination of premium and investment income and of the underwriting results or of the overall operating performance. In order to get an accurate picture of insurers' profitability, it is important to consider the total loss or benefit resulting from the operations performed during several years, as any insurance company can have one unprofitable year, which is compensated by a certain form of profitability achieved over several years (Kearney, 2010).

### **1.1.1 Financial Performance**

Financial performance consists of many different methods to assess how well an organization is using its assets to generate income (Richard, 2009). Common examples of financial performance comprise of operating income, earnings before interest and taxes, and net asset value. It is of great importance to note that no single measure of financial performance should be considered on its own. Rather, a thorough evaluation of a company's performance should take into account many different measures of its performance.

Companies must evaluate and monitor their profitability levels periodically so as to measure their financial performance through use of the profitability measures computed from the measures explained above. The two most popular measures of profitability are Return on Equity (ROE) and Return on Assets (ROA). ROE measures accounting earnings for a period per shilling of shareholders' equity while ROA measures return of each shilling invested in assets.

The performance of life insurance companies will be measured by Return on Assets (ROA). The ROA, defined as net income divided by total assets, reflects how well a company's management is using the company real investment resources to generate profits. ROA is widely used to compare the efficiency and operational performance of a company as it looks at the return generated from the assets financed by the company. The higher ROA and ROE reflects higher managerial efficiency of the company's resources and vice versa.

### **1.1.2 Determinants of Financial Performance**

The insurance financial leverage is calculated as the ratio of net technical reserves to equity, and reflects the potential impact of technical reserves' deficit on equity in the event of unexpected losses. A negative linkage between the insurance financial leverage and the insurers' financial performance is expected.

Firm size is one of the most influential characteristics in organizational studies. Chen and Hambrick (1995), and Mintzberg (1979) provide a summary and overview of the importance of firm size. Firm size has also been shown to be related to industry- sunk costs, concentration, vertical integration and overall industry profitability (Dean et al., 1998). Larger life insurance companies are more likely to have more layers of management, greater number of departments, increased specialization of skills and functions, greater centralization and greater bureaucracy than smaller life insurance companies (Daft, 1995).

Research has found an association between firm size and inertia defined as slow adaptation to change or resistance to fundamental changes in conducting business (Miller and Chen, 1994). Inertia can be caused by constraints on action associated with firm age and size (Miller and Chen, 1994; Hannan and Freeman, 1984; Aldrich and Austen, 1986; Meyer and Zucker, 1989). Starbuck (1985) argues that inertia can make change more costly and harder to achieve and maintain. Larger life insurance companies may also find it more difficult to maintain an atmosphere of continuous change than smaller life insurance companies (Starbuck, 1985).

The growth of the gross written premiums is expected to have a positive influence on financial performance as a result of an increased underwriting activity and market share expansion.

Firm diversification is a corporate strategy to increase sales volume from new products and new markets. Many researchers have studied the relationship between firm diversification and performance. Datta et al. (1991), Hoskisson and Hitt (1990), and Ramanujam and Varadarajan (1990), provide excellent surveys, analyses, and critiques of previous findings. The observation is that there does not seem to be any consistent or conclusive findings between firm diversification and performance. Stimpert and Duhaine (1997), argue that the inconsistencies are due to the fact the diversification impacts other variables, which in turn determines firm performance. Since firm size and diversification are positively correlated (Daft, 1995), the arguments about inertia and constraints on action related to firm size could also apply to diversification.

Diversification is measured through Herfindahl index, which is computed as:

$$I_H = \text{SUM}(PBS_i/TPBS)^2$$

where  $PBS_i$  represents the gross written premiums of the business line “i” of the insurer and TPBS represents the total gross written premiums of the insurer. The higher the Herfindahl index is, the higher the business concentration and the lower the diversification is, and vice versa.

The investment ratio is computed by dividing investments to total assets, being expected a positive influence of this variable on the financial performance, as investments generate investment income (Burca and Bartrinca, 2014).

The retention ratio is computed as ratio of net written premiums to gross written premiums, and reflects the proportion of the underwritten risk retained by the insurer, the difference being ceded in reinsurance. This variable is expected to have a positive influence on the insurer’s financial performance, as reinsurance involves a certain cost (Adams and Buckle, 2003).

The solvency margin is calculated as ratio of net assets to net written premiums, and represents a key indicator of the insurer’s financial stability. A positive linkage between this variable and the insurer’s financial performance is expected, since the insurer’s financial stability is an important benchmark to potential customers (Burca and Bartrinca, 2014).

### **1.1.3 Life Insurance Companies in Kenya**

The insurance industry in Kenya is regulated by the Insurance Regulatory Authority (IRA), a State Corporation whose mandate is to regulate, supervise and develop the industry. According to IRA as at end of 2014 there were a total of 49 insurance companies in Kenya. Out of these, 25 companies wrote non-life insurance business only, 13 wrote life insurance business only while 11 were composite (both life and non-life).

The penetration of insurance in the year 2014 was 2.93% compared to 3.44% in 2013. Life insurance recorded a penetration ratio of 1.06% (2013: 1.16%) while non-life insurance recorded 1.87% (2013: 2.28%). The decrease in the penetration ratio (premium as a proportion of GDP) is due to the rebasing of the GDP in 2014. GDP (at market prices) increased by a factor of 41% from 3,798 to 5,357. The penetration in Kenya is still better compared to the rest of Africa where the average penetration is at 2.8%. However, South Africa, Namibia and Mauritius continue to show better penetration levels with all countries recording penetration levels above 6%. (AKI 2014 Annual Report)

Kenya insurance companies have been spreading their foothold in the region covering EAC, COMESA and SADC. This has been necessitated by insured's in Kenya with interests in manufacturing, tourism, transport & communication, building and construction across the region to be covered by the same insurer. Insurers have found it necessary to establish offices across East, Central and to a certain extent Southern African. Many Kenyan insurance companies have also taken advantage of growth opportunities and ease of doing business in Rwanda and lack of local insurance companies in Southern Sudan. Mergers and Acquisitions have also played key role in the expansion.

The industry recorded gross written premium of Kshs. 157.21 billion compared to Kshs.130.65 billion in 2013, representing a growth of 20.3%. The gross written premium for non-life insurance was Kshs.100.24 billion (2013: Kshs. 86.64 billion) while that for life insurance was Kshs. 56.97 billion (2013: Kshs. 44.01 billion).

Non-Life insurance premium grew by 15.6% while life insurance premium and contributions from deposit administration & investments/unit linked contracts grew by 29.4%.

Industry earnings from investments and other income increased by 6.5% from Kshs. 42.76 billion in 2013 to Kshs. 45.55 billion in 2014. Combined industry profit before taxation decreased by 13.1% from Kshs. 17.79 billion in 2013 to Kshs. 15.46 billion in 2014.

Total assets held by the industry increased by 16.3% to Kshs. 417.43 billion in 2014 (2013: Kshs. 358.82 billion). Total liabilities increased by 15.6% to Kshs.328.70 billion in 2014 (2013:Kshs. 284.33 billion). Net assets increased by 18.6% to Kshs. 88.73 billion in 2014(2013: Kshs. 74.79 billion). (AKI, 2014 Annual Report)

## **1.2 Research Problem**

Company performance varies among economic sectors, countries and regions. It is influenced by a very large number of factors. Financial performance is important in measuring the efficiency with which the managers employed in an organization are utilizing the resources of the organization for the benefit of the shareholders. Insurance companies have several stakeholders. First the long term insurance contracts are normally future oriented and the funds are invested to accumulate and be paid out to the policy holder upon maturity. As such, the funds need to be invested in a manner that would maximize the returns on such investment.

Other than the 49 insurance companies that were operating in Kenya as at end of 2014, the IRA reported that there were 198 licensed insurance brokers, 29 medical insurance providers (MIPs) and 5,155 insurance agents. Other licensed players included 133 investigators, 108 motor assessors, 25 loss adjusters and 24 insurance surveyors. (IRA Annual Report, 2014). All these are stakeholders supported by the industry thus creating massive jobs as well as bolstering the economy. Measuring financial performance therefore would be important in order to ensure long term sustainability of the life insurance companies and by extension the sustainability and vibrancy of the stakeholders mentioned above.

Measuring financial performance in the insurance industry is important in determining the value addition for the shareholders. The Long term insurance business is unique due to the long term nature of the funds invested. If not well managed and invested, the performance of the insurance company will be low thereby leading to low growth in the policyholders' funds. The stability of the long term insurance companies is important because of its key role on the economy.

Identifying the key success indicators of insurance companies can help in facilitating the design of policies that may improve the profitability of the insurance industry.

Hence, the determinants of insurers' profitability have attracted a keen interest of investors, scientific researchers, financial markets analysts and insurance regulators (Asimakopoulos, Samitas, and Papadogonas, 2009). The scientific knowledge of the determinants of insurers' profitability has further been reinvigorated by the 2007/2009 global economic and financial crises.

Several studies have looked at the concept of financial performance and their determinants. Capon, Farley and Hoenig (1990) studied determinants of financial performance: a meta-analysis. In their findings, market share is positively correlated with financial performance, size of the firm appeared unrelated to financial performance, and capital performance intensity was positively related to financial performance.

Within the context of rapid growth and development of offshore financial centres, Adams and Buckle (2003) examine the determinants of operational performance in the Bermudian insurance market, during 1993–1997. By applying a model of panel data to 47 insurance companies, the authors highlight the fact that firms with high leverage, low liquidity and reinsurers have better operational performance than those situated to the opposite pole. In terms of underwriting risk, contrary to expectations, the results indicate a positive relationship between this type of risk and insurers' operational performance. Also, it was shown that company size and scope of activities are not factors with explanatory power.

Life insurance companies manage significant amounts of money and, therefore, supervisory authorities monitor their financial performance. The first study of the financial performance of the Indian life insurers belongs to Charumathi (2012), who took into account a number of 6 independent variables. In India, life insurers' profitability is significantly and positively influenced by company size and liquidity, while leverage, growth of gross written premiums and volume of equity have a negative and significant influence. Moreover, it can be noticed that there is no linkage between underwriting risk and profitability.

Mutugi (2012) sought to establish factors that influence financial performance of life assurance companies in Kenya. He however chose to dwell on the qualitative factors determining financial performance including innovation, organizational culture and ownership structure.

He concluded that capital structure, innovation and ownership structure are determinants of financial performance.

Mwangi and Iraya (2014) sought to establish the determinants of financial performance of General Insurance Underwriters in Kenya. They looked at seven factors namely; growth of premiums; size of insurer; retention ratio; earning assets; investment yield; loss ratio; and expense ratio. The results were that financial performance was positively related to earning assets and investment yield. Financial performance was negatively related to loss ratio and expense ratio. Growth of premiums, size of underwriter and retention ratio were not significantly related to financial performance.

Literatures from past studies reveal that the findings from most researchers have not reached to a common conclusion. A research focusing on the quantitative factors affecting the financial performance of the life insurance industry has never been conducted in Kenya. Studies elsewhere reveal that the factors that influence organizational performance are specific and different in different markets. The question that really begs and is the subject of this study is what are the determinants of financial performance of life insurance companies in Kenya?

### **1.3 Research Objective**

The study aims to establish the determinants of financial performance for life insurance companies in Kenya.

### **1.4 Value of this Study**

The study will be useful to academics, regulators and industry players by giving a multidimensional view to financial performance, informing policy and enhancing life insurance practice. It will enrich the theory of financial performance by providing insights on the underlying determinants once evaluated by an industry in application.

The study would be useful to managers of life assurance offices including actuaries to better understand the determinants of financial performance. Financial performance of the long term assurance companies is important in economic stability because of its role in promoting long term investments.

To the government and policy makers the study would be useful on matters of policy formulation relating to determinants of financial performance.

Insights into technical reserves, solvency margins and the investment behavior of life assurance firms could thus assist government and policymakers in determining whether tighter regulations should be introduced or not.

To scholars this study would add to the literature on the topic of determinants of financial performance and even point out areas of further study.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter highlights major theories and seeks to evaluate previous studies in relation to financial performance for insurance companies: Section 2.2 Presents theoretical review of financial performance; Section 2.3 Presents the determinants of financial performance; Section 2.4 Presents a review of selected major empirical studies on financial performance for insurance firms and ends with a review of local studies that have captured aspects of the subject. The review presents objective, methodology findings and implications of these studies; Section 2.5 Contains a summary of the literature review.

### **2.2 Theoretical Review**

There exist several theories in the area of financial performance. Some important theories that relate to this subject include; The Agency Theory; The Stakeholder Theory; The Stewardship Theory; The Resource based Theory to mention a few.

#### **2.2.1 The Agency Theory**

According to the Agency theory developed by Jensen and Meckling, agency costs arise from conflicts of interest between shareholders and managers of the company. Agency costs are defined as the sum of monitoring costs incurred by the principal, bonding costs incurred by the agent, and residual loss. Lower agency costs are associated with better performances and thus higher firm values, all other things being equal. Agency theory states that management and owners have different interests (Jensen and Meckling, 1976). Companies that separate the functions of management and ownership will be susceptible to agency conflicts (Lambert, 2001). They show that regardless of who makes the monitoring expenditures, the cost is borne by stake holders. Debt holders, anticipating monitoring costs, charge higher interest. The higher the probable monitoring costs, the higher the interest rate and the lower the value of the firm to its shareholders all other things being the same. There are three types of agency costs which can help explain financial performance.

Asset substitute effect: as debt to equity increases, management has an increased incentive to undertake risky projects. This is because if the project is successful, shareholders get all the upside, where as if it is unsuccessful, debt holders get all the downside.

If the projects are 18 undertaken, there's a chance of firm value decreasing and a wealth transfer from debt holders to shareholders. Underinvestment problem: if debt is risky, the gain from the project will accrue to debt holders rather than shareholders. Thus, management has an incentive to reject positive net present value projects, even though they have the potential to increase firm value.

Free cash flow: unless free cash flow is given back to investors, management has an incentive to destroy firm value through empire building and perks etc. Increasing leverage imposes financial discipline on management.

Complete protection would require the specification of extremely detailed protective covenants and extra ordinary enforcement costs. As residual owners of the firm, the stock holders have an incentive to see that monitoring costs are minimized up to a point. Monitoring costs may limit the amount of debt that's optimal for a firm to issue. It's likely that beyond a point the amount of monitoring required by debt holders increases with the amount of debt outstanding. When there's little or no debt, lenders may engage in only limited monitoring. Costs associated with protective covenants are substantial and rise with the amount of debt financing. Shareholders incur monitoring costs to ensure manager's actions are based on maximizing the firm's value. Jensen and Meckling (1976) noted that with increasing costs associated with higher levels of debt and equity an optimal combination of debt and equity might exist that minimizes total agency costs.

### **2.2.2 The Stakeholder Theory**

There have been many queries on what organizational leaders should pursue as a goal of the firm in order to attain the optimal organizational performance. Laplume (2008), notes that most scholarly works on stakeholder theory generally credit R. Edward Freeman as the "father of Stakeholder Theory." Freeman's *Strategic Management: A Stakeholder Approach* is widely cited in the field as being the foundation of Stakeholder Theory, although Freeman himself credits several other bodies of literature in the development of his approach which includes Strategic Management, Corporate Planning, Organization Theory, and Corporate Social Responsibility.

At the heart of stakeholder theory, is the investigation of the relationship between corporate social performance (CSP) and corporate financial performance.

As a “theory of organizations”, stakeholder theory helps to nourish a relational model of organizations by revisiting questions about “who” is actually working with (and in) the firm and hence who should, as a cardinal principle be given priority in order to achieve the maximum value of the firm both today and in the long-run (Freeman, 1984). Stakeholder theory is part of a comprehensive project that views the organization-group relationship as both a foundation and a norm (Bernadette, Krishnamurty, Brown, Janny, and Karen, 2001). It provides a framework for investigating the relationship between corporate social performance (CSP) and corporate financial performance. Studies from empirical studies have supported stakeholder theory which asserts that the dominant stakeholder group – shareholders, financially benefit when management meets the demands of multiple stakeholders (Bernadette, Krishnamurty, Brown, Janny, and Karen, 2001).

Specifically, change in CSP has been positively linked with growth in sales for the current and subsequent years (Laplume, Karan, and Reginald, 2008). This implies that there are short-term and long-term benefits obtained from improving CSP. However, the stakeholder theory has been criticized. The political philosopher Charles Blattberg criticized the theory for assuming that the interests of the various stakeholders can be, at best, compromised or balanced against each other (Blattberg, 2004). He argues that its emphasis on negotiation as the chief mode of dialogue for dealing with conflicts between stakeholder interests is far-fetched. He recommends conversation instead and this leads him to defend what he calls a 'patriotic' conception of the corporation as an alternative to that associated with stakeholder theory.

### **2.2.3 The Stewardship Theory**

Davis, Schoorman and Donaldson (1997) developed the stewardship theory of management as a counter strategy to agency theory. Stewardship theory of management and agency theory have both focused on the leadership philosophies adopted by the owners of an organization. It grew out of the seminal work by Donaldson and Davis (1989, 1991) and was developed as a model where senior executives act as stewards for the organization and in the best interests of the principals. The model of man in stewardship theory is based upon the assumption that the manager will make decisions in the best interest of the organization, putting collectivist options above self-servicing options. This type of person is motivated by doing what is right for the organization, because she believes that she will ultimately benefit when the organization thrives. The steward manager maximizes the performance of the organization, working under the premise that both the steward and the principal benefit from a strong organization (Mallin, 2010).

According to Donaldson and Davis (1994), managers are good stewards of the corporations and diligently work to attain high levels of corporate profit and shareholders returns. Those financial managers are principally motivated by achievement and responsibility needs. The finance managers will always strive to invest their resources under their custody optimally so as to maximize the shareholders' wealth.

## **2.2.4 The Resource based Theory**

Mahoney and Pandian (1992) states a resource based view of a firm explains its ability to deliver sustainable competitive advantage when resources are managed such that their outcomes cannot be imitated by competitors, which ultimately creates a competitive barrier. Barney (1991) summarizes the criteria for evaluating resources as VRIN that is, Valuable, Rare, In-imitable and Non substitutable.

Resource based view provides the understanding that certain unique existing resources will result in superior performance and ultimately build a competitive advantage. Sustainability of such advantage will be determined by the ability of competitors to imitate such resources. However, the existing resources of a firm may not be adequate to facilitate the future market requirement, due to volatility of the contemporary markets. There is a vital need to modify and develop resources in order to encounter the future market competition.

Makadok (2001) emphasizes the distinction between capabilities and resources by defining capabilities as a special type of resource, specially an organizationally embedded non-transferable firm specific resource whose sole purpose is to improve the productivity of the other resources possessed by the firm. The resource based view has been a common interest for management researchers and numerous writings could be found for the same. A resource based view of a firm explains its ability to deliver sustainable competitive advantage when resources are managed such that their outcomes cannot be imitated by competitors, which ultimately creates a competitive barrier (Mahoney and Pandian 1992).

## **2.3 Determinants of Financial Performance**

Seven determinants of financial performance for life insurance companies in Kenya were studied, namely: insurance financial leverage, company size, growth of gross written premiums, diversification, investment ratio, retention ratio, and solvency margin.

### **2.3.1 Insurance Financial Leverage**

The insurance financial leverage is calculated as the ratio of net technical reserves to equity, and reflects the potential impact of technical reserves' deficit on equity in the event of unexpected losses. A negative linkage between the insurance financial leverage and the insurers' financial performance is expected.

### **2.3.2 Firm Size**

Firm size is one of the most influential characteristics in organizational studies. Chen and Hambrick (1995), and Mintzberg (1979) provide a summary and overview of the importance of firm size. Firm size has also been shown to be related to industry- sunk costs, concentration, vertical integration and overall industry profitability (Dean et al., 1998). Larger life insurance companies are more likely to have more layers of management, greater number of departments, increased specialization of skills and functions, greater centralization and greater bureaucracy than smaller life insurance companies (Daft, 1995).

Research has found an association between firm size and inertia defined as slow adaptation to change or resistance to fundamental changes in conducting business (Miller and Chen, 1994). Inertia can be caused by constraints on action associated with firm age and size (Miller and Chen, 1994; Hannan and Freeman, 1984; Aldrich and Austen, 1986; Meyer and Zucker, 1989). Starbuck (1985) argues that inertia can make change more costly and harder to achieve and maintain. Larger life insurance companies may also find it more difficult to maintain an atmosphere of continuous change than smaller life insurance companies (Starbuck, 1985).

### **2.3.3 Growth of Gross Written Premiums**

The growth of the gross written premiums is expected to have a positive influence on financial performance as a result of an increased underwriting activity and market share expansion.

### **2.3.4 Diversification**

Firm diversification is a corporate strategy to increase sales volume from new products and new markets. Many researchers have studied the relationship between firm diversification and performance. Datta et al. (1991), Hoskisson and Hitt (1990), and Ramanujam and Varadarajan (1990), provide excellent surveys, analyses, and critiques of previous findings.

The observation is that there does not seem to be any consistent or conclusive findings between firm diversification and performance. Stimpert and Duhaine (1997), argue that the inconsistencies are due to the fact the diversification impacts other variables, which in turn determines firm performance. Since firm size and diversification are positively correlated (Daft, 1995), the arguments about inertia and constraints on action related to firm size could also apply to diversification.

Diversification is measured through Herfindahl index, which is computed as:

$$IH = \text{SUM}(\text{PBSi}/\text{TPBS})^2$$

where PBSi represents the gross written premiums of the business line “i” of the insurer and TPBS represents the total gross written premiums of the insurer. The higher the Herfindahl index is, the higher the business concentration and the lower the diversification is, and vice versa.

### **2.3.5 Investment Ratio**

The investment ratio is computed by dividing investments to total assets, being expected a positive influence of this variable on the financial performance, as investments generate investment income.

### **2.3.6 Retention Ratio**

The retention ratio is computed as ratio of net written premiums to gross written premiums, and reflects the proportion of the underwritten risk retained by the insurer, the difference being ceded in reinsurance. This variable is expected to have a positive influence on the insurer’s financial performance, as reinsurance involves a certain cost.

### **2.3.7 Solvency Margin**

The solvency margin is calculated as ratio of net assets to net written premiums, and represents a key indicator of the insurer’s financial stability. A positive linkage between this variable and the insurer’s financial performance is expected, since the insurer’s financial stability is an important benchmark to potential customers.

## 2.4 Review of Empirical Studies

Within the context of rapid growth and development of offshore financial centres, Adams and Buckle (2003) examine the determinants of operational performance in the Bermudian insurance market, during 1993–1997.

By applying a model of panel data to 47 insurance companies, the authors highlight the fact that firms with high leverage, low liquidity and reinsurers have better operational performance than those situated to the opposite pole. In terms of underwriting risk, contrary to expectations, the results indicate a positive relationship between this type of risk and insurers' operational performance. Also, it was shown that company size and scope of activities are not factors with explanatory power.

Shiu (2004) analyzes the determinants of the performance of the UK general insurance companies, over the period 1986–1999, by using three key indicators: investment yield, percentage change in shareholders' funds and return on shareholders' funds. Based on a panel data set, the author empirically tested 12 explanatory variables and showed that the performance of insurers have a positive correlation with the interest rate, return on equity, solvency margin and liquidity, and a negative correlation with inflation and reinsurance dependence.

Ćurak et al. (2011) examine the determinants of the financial performance of the Croatian composite insurers, between 2004 and 2009. The determinants of profitability, selected as explanatory variables include both internal factors specific to insurance companies and external factors specific to the economic environment. By applying panel data technique, the authors show that company size, underwriting risk, inflation and return on equity have a significant influence on insurers' profitability. The final results indicate that the Croatian insurance market has a low level of development, but it is very dynamic.

Nowadays, insurance is one of the most profitable activities in European economies. Based on this reality, Ikonić et al. (2011) analyze the profitability of the Serbian insurance companies by applying the IMF CARMEL methodology. Thus, by determining 4 indicators related to the capital adequacy of insurers, the authors highlight that capital adequacy is vital for a company, as it may generate a good level of profitability. Their analysis indicates that the Serbian insurance market falls into the category of developed markets and that there are good perspectives of evolution.

The integration of a country's financial system within the EU markets significantly affects the profitability of the insurance sector. Based on these major changes, Kozak (2011) analyzes the determinants of the profitability of 25 general insurance companies from Poland during 2002–2009.

By applying a regression model, the author notices that the reduction of motor insurance and simultaneously the increase of other classes of insurance, growth of gross written premiums, operating costs reduction, GDP growth and growth of the market share of the companies with foreign ownership have a positive impact on insurance companies during the period of integration. In contrast, providing a wide range of insurance classes affects negatively the profitability and the expenses efficiency.

For a better understanding of the financial performance of the insurance sector from Pakistan, Malik (2011) examines 35 insurance companies, during the interval 2005–2009, by applying a multiple regression with 6 variables. Results emphasize that company size and volume of equity affects positively and significantly the profitability of insurers, while leverage and loss ratio have a negative influence. The last variable tested, company age, does not affect the profitability of insurance companies.

In countries with less developed economy, the insurance industry does not have an essential role in fostering economic growth due to the weak financial performance of insurers. In order to identify the factors that affect the financial performance of the Jordanian insurance market, Almajali *et al.* (2012) analyze the insurance companies listed on the Amman Stock Exchange during 2002-2007, by applying tests and multiple regressions. Their study shows that, in terms of financial performance, liquidity, leverage, company size and management competence index have a statistical positive effect on insurers. In this context, their recommendations include increasing of assets' number and hiring competent managers.

Life insurance companies manage significant amounts of money and, therefore, supervisory authorities monitor their financial performance. The first study of the financial performance of the Indian life insurers belongs to Charumathi (2012), who took into account a number of 6 independent variables. In India, life insurers' profitability is significantly and positively influenced by company size and liquidity, while leverage, growth of gross written premiums and volume of equity have a negative and significant influence. Moreover, it can be noticed that there is no linkage between underwriting risk and profitability.

Concluding, in order to improve the performance of insurance companies, the author provides certain recommendations regarding the supervisory authority and competition in the insurance market, capital market participation, strengthening connections with banks and increasing foreign direct investment.

Bosnia – Herzegovina is another developing country whose insurance sector is examined in terms of performance. Pervan *et al.* (2012) studied the factors that affected the profitability of the insurance companies between 2005 and 2010, in the context of the radical changes that occurred within this industry. By using a dynamic panel model with GMM estimator, the empirical analysis shows a significant and negative influence of the loss ratio on profitability and a significant and positive influence of age, market share and past performance on current performance. It was also found that diversification does not significantly influence profitability, and foreign-owned companies were more efficient.

In developing countries, the importance of the insurance industry as an essential component of the financial system it is not fairly appreciated. In this context, Mehari and Aemiro (2013) assess the impact of the Ethiopian insurance companies' characteristics on their performance. The study includes 9 insurance companies which are analyzed through panel data technique, during 2005–2010. According to the results, company size, loss ratio, tangibility and leverage represent important determinants of insurers' performance, while growth of gross written premiums, age and liquidity have an insignificant statistical power.

Burca and Batrinca (2014) studied the determinants of financial performance in the Romanian insurance market during the period 2008 to 2012. According to the final results achieved by applying specific panel data techniques, the determinants of the financial performance in the Romanian insurance market are the financial leverage in insurance, company size, growth of gross written premiums, underwriting risk, risk retention ratio and solvency margin.

Coming back to Kenya, Mutugi (2012) sought to establish factors that influence financial performance of life assurance companies in Kenya. He however chose to dwell on the qualitative factors determining financial performance including innovation, organizational culture and ownership structure. He concluded that capital structure, innovation and ownership structure are determinants of financial performance.

Mwangi and Iraya (2014) sought to establish the determinants of financial performance of General Insurance Underwriters in Kenya.

They looked at seven factors namely; growth of premiums; size of insurer; retention ratio; earning assets; investment yield; loss ratio; and expense ratio. The results were that financial performance was positively related to earning assets and investment yield. Financial performance was negatively related to loss ratio and expense ratio. Growth of premiums, size of underwriter and retention ratio were not significantly related to financial performance.

## **2.5 Summary of Literature Review**

Literatures from past studies reveal that the findings from most researchers have not reached to a common conclusion. For instance, Burca and Batrinca (2014) concluded that growth of premiums, company size and retention ratio among other factors affect the performance of insurers in the Romanian market. Mwangi and Iraya (2014) on their part, conclude that the aforementioned factors have nothing to do with the financial performance of general insurance underwriters in Kenya.

A research focusing on the quantitative factors affecting the financial performance of the life insurance industry has never been conducted in Kenya. Studies elsewhere reveal that the factors that influence organizational performance are specific and different in different markets. In this study I seek to establish the determinants of financial performance of life insurance companies in Kenya.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter highlights the research methods and techniques that would be employed to carry out the study: Section 3.2 Presents the research design; Section 3.3 Presents the population of the study; Section 3.4 Presents the data collection techniques; finally Section 3.5 Presents the data analysis;

### **3.2 Research Design**

Research design constitutes the blue print for collection, measurement, and analysis of data (Cooper and Schindler, 2001). This research study adopts descriptive research design in the study and focused on the Life Insurance Industry. Descriptive design is used to obtain information concerning the current status of the phenomena to describe what exists with respect to variables or conditions in a situation. In the study, the design sought to establish factors affecting profitability of the life insurance firms in Kenya.

### **3.3 Population of Study**

Cooper and Schindler (2001), define a population as the total collection of elements about which we wish to make some inferences. The population of this study comprised all the 24 life insurance firms that were operating in the Kenyan market for the 5 year period 2010 - 2014. The study was therefore a census.

### **3.4 Data Collection Techniques**

This study used secondary data. Secondary data is data that has been collected by someone else other than the user (Donald and McBurney, 2009). Bryman and Bell (2007) states that common sources of secondary data for social science include censuses, surveys, organizational records and data collected through qualitative methodologies or qualitative research. Primary data, by contrast, are collected by the investigator conducting the research.

Secondary data analysis saves time that would otherwise be spent collecting data and particularly in the case of quantitative data, provides larger and higher-quality databases than would be unfeasible for any individual researcher to collect on their own.

In addition to that, analysts of social and economic change consider secondary data essential, since it is impossible to conduct a new survey that can adequately capture past change and/or developments (Corti and Bishop (2005).

The study used data available for the last five years (2010-2014) in the life insurance industry. The data required was drawn from the Insurance Regulatory Authority as per the audited financial statements submitted to the authority manning the insurance industry in Kenya.

### **3.5 Data Analysis**

In order to determine the factors that influence the financial performance in the Kenyan life insurance market during the interval 2010 – 2014, 7 explanatory variables were tested, namely: insurance financial leverage, company size, growth of gross written premiums, diversification, investment ratio, retention ratio, and solvency margin. As for the dependent variable, the financial performance of the life insurance companies was measured through the return on total assets ratio (ROA).

Based on the above variables the study employed a multiple regression analysis model given by;

$$FP_i = \alpha + \beta_1 IL_i + \beta_2 SZ_i + \beta_3 GP_i + \beta_4 DV_i + \beta_5 IR_i + \beta_6 RR_i + \beta_7 SM_i + \varepsilon$$

Where,

FP = Financial performance of a life insurance company

$\alpha$  = Intercept, a sample-wide constant

IL = Insurance Financial Leverage

SZ = Size of insurer

GP = Growth of gross written premiums

DV = Diversification

IR = Investment ratio

RR = Retention ratio

SM = Solvency margin

$\varepsilon$  = error term

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$  = coefficients for the respective determinants.

The variables were operationalized as follows:

**Table 3.1: Operationalization of variables**

	<b>Variable</b>	<b>How measured</b>
1	Financial performance of a life insurance company	ROA = Profit before tax/Total assets
2	Insurance Financial Leverage	Net technical reserves/Equity
3	Size of insurer	Logarithm of total assets
4	Growth of gross written premiums	Annual growth rate
5	Diversification	Measured through Herfindahl index, which is computed as: $I_H = \text{SUM}(\text{PBS}_i/\text{TPBS})^2$  Where, $\text{PBS}_i$ represents the gross written premiums of the business line “i” of the insurer and TPBS represents the total gross written premiums of the insurer.
6	Investment ratio	Investments/Total assets
7	Retention ratio	Net written premiums/Gross written premiums
8	Solvency margin	Net assets/Net written premiums

The collected secondary data was analyzed using Statistical Package for Social Scientists (SPSS) version 20. A regression analysis was conducted on the data set. The Pearson Product Moment Correlation was used to analyze the association between the variables. The findings from the analysis were organized, summarized and presented using tables, and used to answer the study question.

## CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

### 4.1 Introduction

This chapter presents the study analysis which includes results, findings and interpretation of the analyzed data: Section 4.2 Presents Descriptive Statistics; Section 4.3 Presents Correlation analysis of the study variables; Section 4.4 Presents Regression results of financial performance as the dependent variable and the selected explanatory variables; Section 4.5 Presents Discussion of the research findings.

### 4.2 Descriptive Statistics

The study covered 24 life insurance companies in Kenya for the respective five year period 2010 – 2014. However, 3 life insurance companies were finally excluded from the study namely; Kenya Orient Life Assurance which did not write any life business prior to 2014; GA Life Assurance which did not write any life business prior to 2013; and Prudential Life Assurance (formerly Shield Assurance) which was not in operation in 2010.

The descriptive statistics are shown in table 2 below.

**Table 4.1: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Return on Assets	105	-.22	1.48	.0933	.22410
Company Size	105	12.54	17.62	14.8106	1.59435
Diversification	105	.23	1.00	.5642	.21523
Insurance Financial Leverage	105	.00	159.57	10.6523	25.80677
Growth of Premiums	105	-.75	4.20	.2286	.50042
Investment Ratio	105	.09	.99	.8593	.16634
Retention Ratio	105	.09	1.01	.8345	.21826
Solvency Margin	105	.04	41.62	4.6650	8.89127
Valid N (listwise)	105				

Source: Researcher – SPSS Output

The financial performance measured by ROA ranged from a low of negative 22% to a high of 148% per annum with a mean of 9.3% and a standard deviation of 22.4%.

Company size measured by natural log of assets ranged from a low of 12.54 to a high of 17.62 with a mean of 14.8 and a standard deviation of 1.59. Diversification index ranged from a low of 23% (most diversified life insurer) to a high of 100% (least diversified life insurer) with a mean of 56% and standard deviation of 21%. Insurance financial leverage ranged from a low of zero to a high of 159 with a mean of 10.6 and a standard deviation of 25.8.

Life insurance Premiums grew at an average of 22.8% pa with a high of 420% and a low negative growth of (75%). The Investment ratio which is a ratio of assets invested to total assets ranged from a high of 99% to a low of 9% with a mean of 85.9% and standard deviation of 16.6%. Retention ratio for life insurers averaged at 83.4% with a low of 9% and a high of 100%. Solvency margin ranged from a low of 4% to a high of 4162% with a mean of 466% and standard deviation of 889%.

The data showed a reasonably normal distribution.

### **4.3 Correlation Analysis of the Study Variables**

The study further determined the correlation between the independent variables used in the study and also between the independent variables and the dependent variable. For this analysis the Pearson Product Moment Correlation was used. The analysis of these correlations seems to support the hypothesis that each independent variable in the model has its own particular informative value in the ability to explain financial performance of life insurance companies in Kenya. The results of the correlation analysis are shown in Table 4.2.

**Table 4.2: Correlations**

	Return on Assets	Insurance Financial Leverage	Company Size	Growth of Premiums	Diversification	Investment Ratio	Retention Ratio	Solvency Margin
Return on Assets	1.000							
Insurance Financial Leverage	.126	1.000						
Company Size	-.333**	.187	1.000					
Growth of Premiums	-.027	-.060	-.058	1.000				
Diversification	.366**	-.116	-.604**	.026	1.000			
Investment Ratio	.045	.171	.395**	.092	-.295**	1.000		
Retention Ratio	-.478**	.086	.486**	-.084	-.287**	.232*	1.000	
Solvency Margin	.456**	-.102	-.522**	-.088	.506**	-.323**	-.768**	1.000

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

\* . Correlation is significant at the 0.05 level (2-tailed).

Source: Research findings – SPSS Output

The results from Table 4.2 indicate a strong positive relationship between Financial Performance of life insurance companies and Solvency Margin as well as Diversification. There is a moderate positive relationship between Financial Performance and Insurance Financial Leverage and weak positive association for Investment Ratio.

Company Size and Retention Ratio have a strong negative association to Financial Performance while Growth of Premiums showed a weak negative association to Financial Performance. There was no case of multi-collinearity among the explanatory variables.

## 4.4 Regression Results

Table 4.3 presents the model summary of the multiple regression analysis. The results estimate the fitness of the model used in the study.

**Table 4.3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.612 <sup>a</sup>	.374	.329	.18353

a. Predictors: (Constant), Solvency Margin, Growth of Premiums, Insurance Financial Leverage, Investment Ratio, Diversification, Company Size, Retention Ratio

From Table 4.3 the standard error of the regression was found to be 0.18 which means that the average distance of the data points from the fitted line is about 18% of ROA. The R Square shows that the model predicts 37.4% of the study variables while the Adjusted R Square shows that the model accounts for 32.9% of performance after adjusting for errors.

Table 4.4 shows the Analysis of Variance statistics.

**Table 4.4: ANOVA <sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.956	7	.279	8.295	.000 <sup>b</sup>
	Residual	3.267	97	.034		
	Total	5.223	104			

a. Dependent Variable: Return on Assets

b. Predictors: (Constant), Solvency Margin, Growth of Premiums, Insurance Financial Leverage, Investment Ratio, Diversification, Company Size, Retention Ratio

From Table 4.4 the model reveals a statistically significant relationship between financial performance and determinants (Sig.=<0.05) with  $F(7,97) = 8.295$ . This is an indication that Solvency Margin, Growth of Premiums, Insurance Financial Leverage, Investment Ratio, Diversification, Company Size, and Retention Ratio affect the profitability of life insurance companies in Kenya.

Table 4.5 shows the results of the coefficients of the model used in the study. The results in the table show which variables have a significant effect on performance and how each of the variables affects financial performance of life insurance firms.

**Table 4.5: Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.132	.272		.485	.629
Insurance Financial Leverage	.001	.001	.165	2.008	.047
Company Size	-.011	.016	-.081	-.709	.480
Growth of Premiums	-.034	.038	-.076	-.905	.368
Diversification	.273	.115	.262	2.375	.020
Investment Ratio	.333	.121	.247	2.754	.007
Retention Ratio	-.390	.141	-.380	-2.777	.007
Solvency Margin	.002	.004	.079	.531	.597

a. Dependent Variable: Return on Assets

Source: Research findings – SPSS Output

From Table 4.5, the findings indicate that the significant predictors of financial performance were; Diversification ( $\beta = 0.262$ ,  $p < 0.05$ ); Investment Ratio ( $\beta = 0.247$ ,  $p < 0.05$ ); Retention Ratio ( $\beta = -0.380$ ,  $p < 0.05$ ); and Insurance Financial Leverage ( $\beta = 0.165$ ,  $p < 0.05$ ). Financial performance for life insurance companies was not significantly predicted by; Company Size ( $\beta = -0.081$ ,  $p > 0.05$ ); Growth of Premiums ( $\beta = -0.076$ ,  $p > 0.05$ ); and Solvency Margin ( $\beta = 0.079$ ,  $p > 0.05$ ).

## 4.5 Discussion of Research Findings

The study explored the relationship between financial performance of life insurance companies and various determinants by suggesting that there is a statistically significant relationship between financial performance of life insurance companies and the selected factors.

Results of this study indicate that the relationship between financial performance of insurance companies and selected factors is statistically significant ( $p < 0.05$ ) for four predictor variables namely; Diversification, Investment Ratio, Retention Ratio and Insurance Financial leverage).

Diversification and Investment ratio showed a strong positive relationship to financial performance while Insurance Financial Leverage showed a moderate positive relationship to Financial Performance of life insurance companies in Kenya. Retention ratio showed a strong negative relationship to financial performance. Company Size and Growth of Premiums showed a weak negative relationship to financial performance while Solvency Margin showed a weak positive relationship to Financial Performance of life insurance companies in Kenya.

The null hypothesis was rejected and therefore the alternate one was accepted, meaning that there is a significant relationship between financial performance of life insurance companies and the selected determinants.

The analytical model which was:

$FP_i = \alpha + \beta_1 IL_i + \beta_2 SZ_i + \beta_3 GP_i + \beta_4 DV_i + \beta_5 IR_i + \beta_6 RR_i + \beta_7 SM_i + \epsilon$  is therefore specified as:

$FP_i = 0.132 + 0.165IL_i - 0.081SZ_i - 0.076GP_i + 0.262DV_i + 0.247IR_i - 0.380RR_i + 0.079SM_i + 0.272$

Where,

FP = Financial performance of a life insurance company

$\alpha$  = Intercept, a sample-wide constant

IL = Insurance Financial Leverage

SZ = Size of insurer

GP = Growth of gross written premiums

DV = Diversification

IR = Investment ratio

RR = Retention ratio

SM = Solvency margin

The regression coefficients for Company Size, Growth of Premiums, Solvency Margin and the constant are not statistically significant and therefore their beta regression coefficients are not different from zero. The regression model can thus be simplified to:

$$FP_i = 0.165IL_i + 0.262DV_i + 0.247IR_i - 0.380RR_i$$

# **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

## **5.1 Introduction**

This chapter gives the Summary, Conclusion and Recommendations based on the research findings as carried out: Section 5.2 Presents Summary of findings; Section 5.3 Presents Conclusion of this Study; Section 5.4 Presents Recommendations; Section 5.5 Looks at Limitations of the Study; and finally Section 5.6 Presents Suggestion for Further Research.

## **5.2 Summary of Findings**

This study sought to establish the determinants of financial performance of life insurance firms in Kenya. The tested variables were Solvency Margin, Growth of Premiums, Insurance Financial Leverage, Investment Ratio, Diversification, Company Size, and Retention Ratio. Financial performance was measured using ROA. Secondary data was collected on these variables from the IRA annual reports. The data was then organized in Excel spreadsheet and imported into Statistical Package for Social Scientists (SPSS) version 20 for analysis.

The descriptive statistics showed a mean of 9.3% ROA. Company Size measured by the natural log of total assets showed a mean of 14.8. Diversification index which explains how strong or weak a company has diversified into different business lines showed a mean of 56.4%. Insurance Financial Leverage measured in this study as a ratio of net technical reserves to Equity showed a mean of 10.6. Annual growth rate of premiums averaged at 22.8%. Investment ratio which was measured as a ratio of investment assets to total assets had a mean of 85.9%. Retention ratio which is a measure of how much risk is retained by the life insurers averaged at 83.4%. Solvency Margin which in this study was computed as the ratio of net assets to net written premiums had a mean of 466%.

The study further determined the correlation between the independent variables used in the study and also between the independent variables and the dependent variable. For this analysis the Pearson Product Moment Correlation was used. The analysis of these correlations seemed to support the hypothesis that each independent variable in the model has its own particular informative value in the ability to explain financial performance of life insurance companies in Kenya.

The results indicated a strong positive relationship between Financial Performance of life insurance companies and Solvency Margin as well as Diversification. There was a moderate positive relationship between Financial Performance and Insurance Financial Leverage and weak positive association for Investment Ratio.

Company Size and Retention Ratio had a strong negative association to Financial Performance while Growth of Premiums showed a weak negative association to Financial Performance. There was no case of multi-collinearity among the explanatory variables.

Results from the multiple regression analysis indicated that the relationship between financial performance of life insurance companies and selected factors is statistically significant ( $p < 0.05$ ) for four predictor variables namely; Diversification, Investment Ratio, Retention Ratio and Insurance Financial leverage).

Diversification and Investment ratio showed a strong positive relationship to financial performance while Insurance Financial Leverage showed a moderate positive relationship to Financial Performance of life insurance companies in Kenya. Retention ratio showed a strong negative relationship to financial performance. Company Size and Growth of Premiums showed a weak negative relationship to financial performance while Solvency Margin showed a weak positive relationship to Financial Performance of life insurance companies in Kenya.

The null hypothesis was rejected and therefore the alternate one was accepted, meaning that there is a significant relationship between financial performance of life insurance companies and the selected determinants.

### **5.3 Conclusion**

This study concludes that the financial performance of life insurers in Kenya is positively and significantly influenced by Diversification and Investment Ratio as expected. Mwangi and Iraya (2014) had a similar conclusion with regards to Investment Ratio as a determinant of financial performance for general insurance underwriters in Kenya. Burca and Batrinca (2014) on their part though, found no association of Diversification as a determinant factor of financial performance for the Romanian insurers.

The study found a positive moderate relationship between financial performance and Insurance Financial Leverage. Burca and Batrinca (2014) found a negative moderate relationship for the Romanian insurance market.

The study found no significant relationship between both Company Size and Growth of Premiums and the financial performance of life insurers in Kenya, similar to what was concluded by Mwangi and Iraya (2014) for the general insurers in Kenya. Solvency Margin also showed no significant relationship to the financial performance of life insurers in Kenya.

With regards to Retention Ratio, the study found a strong negative association of this variable to the financial performance of life insurers in Kenya. Mwangi and Iraya (2014) on their part found no relationship of this variable to the financial performance of the general insurance underwriters in Kenya. Burca and Batrinca (2014) found a strong positive association of Retention Ratio to the financial performance of insurers in Romania.

The study findings are that the more diversified a life insurer is, the better the financial performance and the higher the investment ratio the better the financial performance. A higher insurance financial leverage also shows better financial performance for life insurers in Kenya. A higher retention ratio for life insurance firms in Kenya would lead to a worse off financial performance. Having regard to the growth rate, size and solvency margin would not assist determine the financial performance of life insurance companies in Kenya.

## **5.4 Recommendations**

The study recommends that for life insurance firms in Kenya to experience better financial performance, they should focus more into diversifying to different business lines. Diversification improves the financial performance of life insurers in Kenya. Managers of life insurance companies should also ensure that most of the assets are invested as a higher investment ratio would lead to better financial performance for them.

There should be due regard to the role of reinsurance companies in the life insurance industry in Kenya and therefore retention ratios should be kept at reasonable levels. High retention ratios would lead to a worse off financial performance.

Having high regard to growth and size would not necessarily lead to better financial performance.

The regulator certainly needs to monitor the solvency margins of life insurers for various reasons but they need not to push the threshold too high unnecessarily as solvency margin has no significant impact on financial performance.

## **5.5 Limitations of the Study**

The model in the study focused on firm specific quantitative determinants of financial performance for life insurers in Kenya. Therefore, other determinants such as macroeconomic factors as well as qualitative factors were not part of the study. Thus, industry and macroeconomic factors as well as qualitative factors were not controlled for in the present study.

The use of regression analysis also means that there is an assumption of linearity with the various models which may not always be the case. Besides, the study was conducted for a five year period 2010 - 2014. As such only the companies having operation over this span have been considered.

## **5.6 Suggestions for Further Research**

A similar research can be done with additional qualitative explanatory variables such as management competence and include a longer time frame of say 10 years depending on data availability. An extended geographical territory beyond Kenya can also be considered.

Further research can also be undertaken which analyses the different sectors in the economy to determine any significant differences in the determinants of financial performance in the different sectors incorporating more independent variables and also taking into account the prevailing macroeconomic situations.

The Risk Based Supervision regime introduced by IRA as opposed to the Compliance Based regime would have an impact on the financial performance of the insurance industry in Kenya. A research on the same would be useful as well.

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## **APPENDICES**

### **APPENDIX I: List of Life insurance companies in Kenya as at December 2014**

- 1 APA LIFE ASSURANCE COMPANY
- 2 BRITISH AMERICAN INSURANCE
- 3 CANNON ASSURANCE COMPANY
- 4 CAPEX LIFE ASSURANCE COMPANY
- 5 CIC LIFE ASSURANCE COMPANY
- 6 CORPORATE INSURANCE COMPANY
- 7 FIRST ASSURANCE COMPANY
- 8 GA LIFE ASSURANCE COMPANY
- 9 GEMINIA INSURANCE COMPANY
- 10 ICEA LION LIFE ASSURANCE
- 11 JUBILEE INSURANCE COMPANY
- 12 KENINDIA ASSURANCE COMPANY
- 13 KENYA ORIENT LIFE ASSURANCE
- 14 LIBERTY LIFE ASSURANCE COMPANY (formerly CFC LIFE)
- 15 MADISON INSURANCE COMPANY
- 16 METROPOLITAN INSURANCE
- 17 OLD MUTUAL LIFE ASSURANCE
- 18 PAN AFRICA INSURANCE COMPANY
- 19 PIONEER ASSURANCE COMPANY

- 20 PRUDENTIAL LIFE ASSURANCE (formerly SHIELD ASSURANCE)
- 21 SAHAM ASSURANCE (formerly MERCANTILE)
- 22 THE KENYAN ALLIANCE INSURANCE
- 23 THE MONARCH INSURANCE
- 24 UAP LIFE ASSURANCE COMPANY