THE EFFECT OF RISK MANAGEMENT ON FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN KENYA

BY

OMASETE, CATHERINE ASEMEIT

D63/75933/2012

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, THE UNIVERSITY OF NAIROBI.

OCTOBER 2014.

DECLARATION

I declare that this project is my original work and has not been submitted for an award of a degree in any other university for examination /academic purposes.

SIGNATURE…..…….. DATE…….

OMASETE C. ASEMEIT

D63/75933/2012

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

SIGNATURE…..…….. DATE…….

DR.J.O ADUDA

DEDICATION

To my future family, always remember that the sky is the limit. May you be blessed with patience to endure all situations.

ACKNOWLEDGEMENT

I thank the Lord Almighty for giving me the strength and endurance to come this far. My late parents Mr and Mrs J.B Omasete for their continuous encouragement, good education background, exposure and continuous encouragement to know that the sky is the limit. My siblings, Salome, Miriam, Leah, Cindy and Innocent for their emotional support and continuous encouragement. My fiancé Njoroge Nduati for his unwavering support, encouragement, love and financial support that made this project a success. My supervisor Dr Josiah Aduda for his invaluable support, guidance and patience during the study period which was instrumental to the successful completion of this study. I am truly grateful.

I wish to thank the management of the insurance companies and their employees for participating in this study as the main respondents. Lastly, I thank my colleagues and friends for their continued moral support and encouragement.

ABSTRACT

Risk if not well managed could lead to collapse for most organisations especially those whose core business deals with day to day handling of risk. Risk management should, therefore, be at the core of an organization's operations by integrating risk management practices into processes, systems and culture of the entire organization. This involves identifying and analysing risks, developing and implementing risk handling techniques and monitoring the progress of these in order to avoid and/or reduce the impact of risk on the financial performance of the firm. The objective of the study was to establish the effect of risk management practices adopted by Kenyan insurance companies on the financial performance of these companies. An exploratory research design was used for the study, with the target population being the 49 registered insurance companies in Kenya. The study used both primary and secondary data. Primary data was collected through questionnaires with 44 insurance companies giving a response. Secondary data was collected by use of desk search techniques from published reports as well as data from financial statements maintained by IRA for a period of five years from 2008 to 2012. Content analysis was used to analyse qualitative data while the quantitative data was analysed using SPSS. Regression analysis was also used in the study. The results were presented using tables and charts. The study established that a majority of insurance companies in Kenya had adopted risk management practices in their operations and that this had a strong effect on their financial performance. Risk identification was found to be the most significant in influencing financial performance, followed by risk mitigation, risk management program implementation & monitoring and risk assessment & measurement respectively. This study concludes that there is a positive relationship between the adoption of risk management practices and the financial performance of insurance companies in Kenya. The study recommends that insurance companies in Kenya should adopt a multifaceted approach to risk management in order to derive greater benefits from their risk management efforts. Further, Kenyan insurance companies should follow current international leading practice by adopting Enterprise Risk Management (ERM) which incorporates other insurance risk quantification models. This will ensure that the companies remain afloat during such times of strict regulatory regimes such as solvency 11 and Basel.

TABLE OF CONTENTS

DECLARATION ..... **ii**

TABLE OF CONTENTS ..... **vi**

LIST OF TABLES ..... **ix**

LIST OF FIGURES ..... **x**

LIST OF ABBREVIATIONS ..... **xi**

CHAPTER ONE **1**

INTRODUCTION **1**

1.1 Background to the Study 1

1.1.1 Risk Management 2

1.1.2 Financial Performance 3

1.1.3 Risk Management and Financial Performance 4

1.1.4 Insurance Companies in Kenya 6

1.2 Research Problem 7

1.3 Research Objective 9

1.4 Value of the Study 9

CHAPTER TWO **11**

LITERATURE REVIEW **11**

2.1 Introduction 11

2.2 Theoretical Review 11

2.2.1 Agency Theory 11

2.2.2 Stakeholder Theory 13

2.2.3 Theory of Optimal Capital Structure 14

2.3 Determinants of Financial Performance 15
2.4 Empirical Evidence 25
2.5 Summary of Literature Review 31
CHAPTER THREE 33
RESEARCH METHODOLOGY 33
3.1 Introduction 33
3.2 Research Design 33
3.3 Population of the Study 33
3.4 Data Collection 34
3.4 Data Analysis 34
3.5 The Analytical Model 35
3.6 Diagnostic Tests 36
CHAPTER FOUR 37
DATA ANALYSIS, RESULTS & DISCUSSION 37
4.1 Introduction 37
4.2 Questionnaires return rate 37
4.3 Demographic data 37
4.3.1 Number of branches of the insurance companies 37
4.2.2. Number of years that the company had been in operation 38
4.4 Business Information 39
4.5 Financial Performance 40
4.5.1 Ratio Analysis of Financial Performance 40
4.6 Inferential Statistics 40

4.6.1 Regression Analysis 41
4.6.2 ANOVA Results 41
4.6.3 Interpretation of the Results 42
4.7 Discussion of Findings 43
CHAPTER FIVE 46
SUMMARY, CONCLUSION AND RECOMMENDATIONS 46
5.1 Summary of Findings 46
5.2 Conclusion 47
REFERENCES 51
APPENDICES 55
APPENDIX 1: LIST OF ALL REGISTERED INSURANCE COMPANIES IN KENYA 55
APPENDIX 2: QUESTIONAIRE 57
APPENDIX 3: AVERAGE MEAN SCORES ON RISK MANAGEMENT PRACTICES FOR EACH INSURANCE COMPANY 60
APPENDIX 3: ROA PER YEAR FOR EACH INSURANCE COMPANY 64

LIST OF TABLES

Table 4.1	Number of branches of the insurance companies	……..29
Table 4.2	No of years of operation	……..30
Table 4.3	Descriptive statistics for return on assets	……..32
Table 4.4	Model summary	……..33
Table 4.5	ANOVA of the regression	……..33
Table 4.6	Coefficient of determination	……..29

LIST OF FIGURES

Figure 4.1 No of branches of the insurance companies ……..30

Figure 4.2 No of years of operation ……..31

LIST OF ABBREVIATIONS

AKI	-	Association of Kenya Insurers
ANOVA	-	Analysis of Variance
CAMEL	-	Capital Adequacy, Asset Quality, Management, Earnings and liquidity
CBK	-	Central Bank of Kenya
CEO	-	Chief Executive Officer
CRO	-	Chief Risk Officer
EBITDA	-	Earnings before Interest, Taxes, Depreciation and Amortization
ERM	-	Enterprise Risk Management
EV	-	Enterprise Value
IIK	-	Insurance Institute of Kenya
KTN	-	Kenya Television Network
IRA	-	Insurance Regulatory Authority
RAROC	-	Risk-Adjusted Return on Capital
RMI	-	Risk Management Index
ROA	-	Return on Assets
ROE	-	Return on Equity
SACCOS	-	Savings and Credit Cooperative Societies
SPSS	-	Statistical Package for Social Sciences
US	-	United States of America
VAR	-	Value at Risk

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Risk management is an important discipline in business especially the insurance business. Recently, businesses put great emphasis on risk management as this determines their survival and business performance. Insurance companies are in the risk business and as such cover various types of risks for individuals, businesses and companies. It is therefore, necessary that insurance companies manage their risk exposure and conduct proper analysis to avoid losses due to the compensation claims made by the insured. However, Kadi (2003) observes that most insurance companies cover insurable risks without carrying out proper analysis of the expected claims from clients and without putting in place a mechanism of identifying appropriate risk reduction methods.

Poor management of risk, by insurance companies, leads to accumulation of claims from the clients hence leading to increased losses and hence poor financial performance (Magezi, 2003). Risk management activities are affected by the risk behaviour of managers. A robust risk management framework can help organizations to reduce their exposure to risks, and enhance their financial performance (Iqbal and Mirakhor, 2007) .Further; it is argued that the selection of particular risk tools tends to be associated with the firm's calculative culture – the measurable attitudes that senior decision makers display towards the use of risk management models. While some risk functions focus on extensive risk measurement and risk based performance management, others focus instead on qualitative discourse and the mobilization of expert opinions about emerging risk issues (Mikes and Kaplan, 2014).

In recent years, insurance companies have increased their focus on risk management. Meredith (2014) suggests that there should be careful judgement, by management of insurance companies, of insurable risks in order to avoid excessive losses in settling claims. It follows that risk management is an important factor in improving financial performance (Okotha, 2003). According to Standard and Poor's (2013), insurers, as risk-bearing institutions can, and do, fail if risks are not managed adequately.

The central function of an insurance company is its ability to distribute risk across different participants (Merton, 1995). Saunders and Cornett (2008), also state that modern insurance companies are in the risk management business. They discuss that insurance companies undertake risk bearing and management functions on behalf of their customers through the pooling of risks and the sale of their services as risk specialists. This indicates that management of risks should take the centre stage in the operations of insurance companies.

1.1.1 Risk Management

Risk is defined as the uncertainty associated with a future outcome or event (Banks, 2004). Further, risk is a concept that denotes a potential negative impact to an asset or some characteristic of value that may arise from some present process or future event (Douglas and Wildavsky, 1982). Rejda (2008) defines risk management as the process through which an organization identifies loss exposures facing it and selects the most appropriate techniques for treating such exposures.

In risk management, a prioritization process must be followed whereby the risk with the greatest loss and greatest probability of occurrence is handled first and risks with lower loss are handled later (Kiochos, 1997, and Stulz, 2003). There is however, no specific model to determine the

balance between risks with greatest probability and loss and those with lower loss, making risk management difficult. Banks (2004) notes that the key focus of risk management is controlling, as opposed to eliminating, risk exposures so that all stakeholders are fully aware of how the firm might be impacted.

Insurance companies borrow heavily from the risk management process suggested by Kiochos (1997). According to Kiochos (1997), the risk management process involves four steps: identifying potential losses, evaluating potential losses, selecting appropriate risk management techniques for treating loss exposures and implementing and administering the risk management program. Kimball (2000) concurs that risk management is the human activity which integrates recognition of risk, risk assessment, developing strategies to manage it and mitigation of risk using managerial resources. Generally, a proper risk management process enables a firm to reduce its risk exposure and prepare for survival after any unexpected crisis.

1.1.2 Financial Performance

Financial performance can be measured through evaluating a firm's profitability, solvency and liquidity. A firm's profitability indicates the extent to which a firm generates profit from its factors of production. Financial performance can be measured by monitoring the firm's profitability levels. Zenios et al. (1999) states that profitability analysis focuses on the relationship between revenues and expenses and on the level of profits relative to the size of investment in the business through the use of profitability ratios. The return on equity (ROE) and the return on assets (ROA) are the common measures of profitability. By monitoring a firm's profitability levels, one can measure its financial performance.

Solvency measures give an indication of a firm's ability to repay all its indebtedness by selling all of its assets. It also provides information about a firm's ability to continue operating after undergoing a major financial crisis. Quach (2005) states that solvency measures the amount of borrowed capital used by the business relative to the amount of owners' equity capital invested in the business as an indication of the safety of the creditors interests in the company.

Liquidity indicates a firm's ability to meet its financial obligations as and when they mature without disrupting the normal operations of the business. According to Quach (2005), liquidity can be analysed structurally and operationally. Further, operational liquidity refers to the cash flow measures while structural liquidity refers to the composition of the balance sheet.

The incidence and relative magnitude of internal or external disruptions to business activities from risk events also vary considerably across firms depending on the nature of activities and the sophistication of internal risk measurement standards and control mechanisms. While companies should generate enough expected revenues to support a net margin that absorbs expected risk losses from predictable internal failures, they also need to hold sufficient capital reserves to cover the unexpected losses or resort to insurance (Zsidison, 2003). This ensures that losses do not impact negatively on the firm's financial performance.

1.1.3 Risk Management and Financial Performance

The main focus of risk management has mainly been on controlling and for regulatory compliance, as opposed to enhancing financial performance (Banks, 2004). However, this risk management often leads to enhanced financial performance as regulatory compliance and control of risks enables the organization to save on costs. Banks (2004) further suggests that by

managing risks, the managers are able to increase the value of the firm through ensuring continued profitability of the firm.

Standard and Poor's (2013) identifies poor liquidity management, under-pricing and under-reserving, a high tolerance for investment risk, management and governance issues, difficulties related to rapid growth and/or expansion into non-core activities as main causes of financial distress and failure in insurance companies. It is important that these factors be managed efficiently by insurance companies, to avoid financial failure and bankruptcy to the firm.

In the 21st century has seen great efforts to risk management. Babbel and Santomero (1996) note that insurers should assess the various types of risks they are exposed to and devise ways of effectively managing them. They further suggest that insurers should accept and manage at firm level, only those risks that are uniquely a part of their services. This will reduce the risk exposure. Stulz (1984) suggested that risk management is a viable economic reason why firm managers, might concern themselves with both the expected profit and the distribution of firm returns around their expected value, hence providing a rationale for aligning firm objective functions in order to avoid risk.

Proper risk management is important in the daily operations of any insurance company to avoid financial losses and bankruptcy. This is in line with Jolly (1997) contribution that preventing losses through precautionary measures is a key element in reducing risks and consequently, a key driver of profitability. The efficiency of risk management by insurance companies will generally influence their financial performance. Gold (1999), asserts that insurance companies could not survive with increased loss and expense ratios.

Meanwhile, risk management has been linked with shareholder value maximization proposition. Ali and Luft (2002), suggested that a firm will only engage in risk management if it enhances shareholder value; Banks (2004), contributed that it is important for each firm to retain and actively manage some level of risk if it is to increase its market value or if the probability of financial distress is to be lowered; Pagano (2001), confirms that risk management is an important function of insurance institutions in creating value for shareholders and customers.

Generally, company operations are prone to risks and if the risks are not managed the firm's financial performance will be at stake. Firms with efficient risk management structures outperform their peers as they are well prepared for periods after the occurrence of the related risks. This study hopes to come up with an expected positive relationship between risk management and performance of insurance companies.

1.1.4 Insurance Companies in Kenya

According to Insurance Regulatory Authority, there are 49 insurance companies in Kenya. Among the 49 insurance companies, 23 are life insurance companies and 26 are purely non-life insurance companies while the total number of general insurance companies is 37 (IRA, 2014). Out of the 23 life insurance companies, 16 companies also engage in general insurance business. This implies that there are 7 pure life insurance companies. The IRA is the industry regulatory body which is mandated to supervise and regulate the insurance industry players. The industry has also established self-regulation through the Association of Kenya Insurers (AKI).

There are many challenges facing the insurance industry including structural weaknesses, fraud by both clients and employees, high claims, delays in claim settlement, delayed premium

collection, lack of liquidity leading to collapse of some firms, low economic growth, poor governance, low penetration of insurance services and industry saturation.

Over the past decade, at least 9 insurance companies have suffered and collapsed due to the above risks. The many risks and challenges facing the insurance industry in Kenya have prompted the insurance regulatory body, IRA, to establish a comprehensive risk management guideline for the insurance sector, effective June 2013.

1.2 Research Problem

Insurance companies are in the core business of managing risk. The companies manage the risks of both their clients and their own risks. This requires an integration of risk management into the companies' systems, processes and culture. Various stakeholders pressure their organizations to effectively manage their risks and to transparently report their performance across such risk management initiatives. Banks (2004) argues that some risks can and should be retained as part of the core business operations and actively managed to create value for stakeholders, while others should be transferred elsewhere, as long as it is cost effective to do so.

According to Stulz (1996), some risks present opportunities through which the firm can acquire comparative advantage, and hence enable it to improve on financial performance. Generally, review of the literature on risk management seems to suggest that better risk management practices result in improved financial performance of the firm. By linking risk management and performance, insurance firms can more effectively and efficiently understand the value of implementing a risk management framework.

A study by Aon Risk Solutions and Wharton School in 2011 revealed an existence of a positive relationship between the maturity of a firm's risk management framework and its financal performance. The findings of the study reflect that higher risk maturity is associated with improved ROA and stock performance for most firms. Ernst & Young (2012) also reinforces this point of view by suggesting that companies with more mature risk management practices outperform their peers financially, and tend to generate the highest growth in revenue.

A number of studies have been conducted on risk management by companies in Kenya but little has been studied on Insurance companies. A study on the effect of risk management practices on the financial performance of commercial banks in Kenya by Mwangi (2010) showed evidence that risk management and the related practices are considered significantly important to the operations and financial performance of these commercial banking institutions. The study also found that some risk management practices have a greater significance on financial performance than others, that is, the existence of a risk management policy and the integration of risk management in setting of organizational objectives were considered to be the key risk management practices that had a direct effect on financial performance.

Kinyua (2010) assessed risk as a component of corporate strategy in selected life insurance companies in Kenya and found out that insurance companies faced competitor, regulation and de-regulation risk and industry economics and recommended that insurance companies should deploy strategic planning tools to give the firms an all-inclusive perspective of strategic planning. Njoroge (2013) also conducted a research on the strategic risk management practices by AAR Insurance Kenya Limited showed that reputational risk is significant in insurance companies. The study emphasized the importance of risk management in insurance business.

This study on the relationship between the various risk management practices adopted by the companies in Kenya and their financial performance was aimed at addressing the challenge of ever emerging risks within the sector. It was an attempt to critically examine the various practices through which insurance companies manage the various types of risks that they face, and determine if there was any relationship between the practices and the financial performance of these companies. The study, therefore, sought to fill the gap in knowledge about the possible existence of a relationship between risk management practices and financial performance by insurance companies in Kenya and the nature of the relationship.

1.3 Research Objective

The research objective for this study is to determine the relationship between risk management and financial performance of insurance companies in Kenya.

1.4 Value of the Study

This study will be significant to insurance companies, general public, students and the insurance regulators as it will offer valuable contributions from both a theoretical and practical perspective. Theoretically, it will contribute to the general understanding of risk management practices and their effect on financial performance.

The study will enable Insurance companies in Kenya to improve their risk management process and to adopt efficient strategies to improve firm financial performance through the risk management processes. This will enable the insurance companies to perform better and to grow their businesses and maintain a competitive advantage.

Apart from benefiting the insurance companies, the general public will benefit from the study through improved insurance services and better management of risks. This will result to affordable rates of insurance premiums and reduction in levels of non-payment and fraud.

The study will be helpful to the government in setting regulations on insurance practices in Kenya through the IRA and safeguarding the resources of the country. Lastly, the study will add to the existing body of knowledge on risk management to benefit academicians and aid further research on risk management in the insurance sector and the financial sector.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter critically reviews the available literature on risk management and financial performance. It begins by reviewing financial theories related to risk management, then an overview of the empirical studies and literature on the risk management and financial performance.

2.2 Theoretical Review

The concept of risk management theory involves studying the various ways by which businesses and individuals raise money, as well as how money is allocated to projects while considering the risk factors associated with them (Sarkis, 1998). The theories reviewed in this section are the agency theory, the stakeholders' theory and the optimal capital structure theory.

2.2.1 Agency Theory

Agency theory extends the analysis of the firm to include separation of ownership and control, and managerial motivation. In the field of corporate risk management agency issues have been shown to influence managerial attitudes toward risk taking and hedging (Smith and Stulz, 1985). Theory also explains a possible mismatch of interest between shareholders, management and debt holders due to asymmetries in earning distribution, which can result in the firm taking too much risk or not engaging in positive net value projects (Mayers and Smith, 1987).

Consequently, agency theory implies that defined hedging policies can have important influence on firm value (Fite and Pfleiderer, 1995).

Stulz (1984) first suggested a reason for the interest in risk management by managers of a firm. He asserts that managers are presumed to be working on behalf of firm owners and therefore, concern themselves with both expected profit and the distribution of firm returns around their expected value. They have an inclination to avoid risk in order to minimize the variability of firm returns and hence achieve the. For firm owners, risk management saves on agency costs since, by reducing the variability of returns of their firms, managers are working in line with the shareholder wealth maximization goal.

Managerial motivation factors in implementation of corporate risk management have been empirically investigated in a few studies with a negative effect (Faff and Nguyen, 2002; MacCrimmon and Wehrung, 1990; Geczy et al., 1997). Notably, positive evidence was found however by Tufano (1996) in his analysis of the gold mining industry in the US. Financial policy hypotheses were tested in studies of the financial theory, since both theories give similar predictions in this respect. However, the bulk of empirical evidence seems to be against agency theory hypotheses.

Agency theory provides strong support for risk management as a response to mismatch between managerial incentives and shareholder interests. Shareholders and managers have different interests to the firm and risk management objectives vary for the different stakeholders. While shareholders may require high risk – high return investments, management prefer low risk and

return investments. The agency theory emphasizes the need for risk management to align the interests of mangers and shareholders and to contribute to the financial performance of the firm.

2.2.2 Stakeholder Theory

Stakeholder theory, developed originally by Freeman (1984) as a managerial instrument, has since evolved into a theory of the firm with high explanatory potential. Stakeholder theory focuses explicitly on equilibrium of stakeholder interests as the main determinant of corporate policy. The most promising contribution to risk management is the extension of implicit contracts theory from employment to other contracts, including sales and financing (Cornell and Shapiro, 1987). In certain industries, particularly high-tech and services, consumer trust in the company being able to continue offering its services in the future can substantially contribute to company value. However, the value of these implicit claims is highly sensitive to expected costs of financial distress and bankruptcy.

Since corporate risk management practices lead to a decrease in these expected costs, company value rises (Klimczak, 2005). Therefore stakeholder theory provides a new insight into possible rationale for risk management. However, it has not yet been tested directly. Investigations of financial distress hypothesis (Smith and Stulz, 1995) provide only indirect evidence (Judge, 2006). This theory is useful to risk management research. It helps to address the importance of customer trust and financial distress costs to insurance companies. Finally the theory suggests that smaller firms are more prone to financial problems, which should increase their interest in risk management practices.

The stakeholder theory emphasizes the need for risk management in insurance companies and its importance in improving the value of the company. It however does not indicate the influence of risk management on the financial performance and the resulting relationship between the two variables apart from suggesting that risk management leads to growth in company value.

2.2.3 Theory of Optimal Capital Structure

According to the optimal capital structure theory, there is an optimal, finite debt equity ratio, resulting from a trade-off between the expected value of bankruptcy costs and the tax savings associated with the deductibility of interest payments (Kim, 1976). Bankruptcy occurs when the fixed obligations to creditors cannot be met. There are direct and indirect costs related to bankruptcy. Direct costs include legal, accounting and trustee fees as well as the possible denial of income tax carryovers and carrybacks. Indirect costs relate to opportunity costs resulting from disruptions firm-supplier relationships that are associated with the transfer of ownership or control (Barker, 1976). Warner (1977) and Weiss (1990) give evidence of financial distress and state underline the significance of bankruptcy costs to a business.

Allen and Santomero (1996) suggest that the cost of bankruptcy is more important in regulated industries where large losses may lead to license or charter withdrawal and the loss of a monopoly position. This theory offers a significant rationale as to why firms would be engaged in risk management. Stulz (1996) provides further evidence by suggesting that the expected present value of bankruptcy costs will be reflected in a firm's current market value if shareholders view bankruptcy as a real possibility. He further states that a risk management

program that costlessly eliminates the risk of bankruptcy effectively reduces such costs to zero, thereby increasing the value of the firm.

Bankruptcy costs are significant to insurance business in Kenya. Once a company is not able to pay customer claims, the regulator declares it bankrupt and puts it under receivership. Recently, Blue Shield Insurance and Concord Insurance were put under receivership due to failure to meet the customer claims (KTN, 2014). This indicates that bankruptcy costs should be considered in the risk management of insurance companies. However, Standard and Poor's (2013) observe that unlike corporate and bank failures caused by the incomplete or untimely payment on all or some financial obligations, including debt restructurings, an insurance company failure most often becomes apparent when the regulator takes action because the insurer's financial position has become untenable. They further contend that nonpayment of a debt obligation do not generally prompt a default. Anyway, insurers tend to have low debt burdens, but high policy obligations.

2.3 Determinants of Financial Performance

2.3.1 Interest Rate

An interest rate is the cost of borrowing money (Hoyt, 1994). Since insurance companies make their promises or commitments to the insured at the time of the sale of policies to the latter, they are not free to adjust the rates fixed or agreed in the sale subsequently depending on circumstance. This feature of insurance exposes them directly to the risks associated with changes in interest rates. Insurance companies invest much of the collected premiums, so the income generated through investing activities is highly dependent on interest rates. Declining interest rates usually equate to slower investment income growth impacting on the insurance

company‘s financial performance (Staking &Babbel, 1995). Another downside to interest rate fluctuations (not exclusive to insurance companies) is the cost of borrowing.

However, Schich (2008) contends that insurance companies may also benefit from rising interest rates, because much of their profit is earned on the float, the period between when premiums are collected and claims paid out. During this time, insurers invest the premium. Rising interest rates imply a higher return on bonds, one kind of investment, although higher rates lower the value of bonds currently in their portfolio. Large home insurers benefit more than do smaller auto insurers.

It is argued that a continuing decline in market interest rates tends to make it more difficult for insurance companies to provide high interest rates for their customers or the insured and-as a result-to maintain hence high levels of profitability. This proposition was tested in Taiwan over a period of declining market interest rates for insurance companies. Flannery's (1981) model (quoted in Yang, 2007) was used to examine the relations between changes in market interest rate and the profitability of 12 domestic insurance companies. The results suggest that the effects of changes in interest rates on insurance company profitability depend on how profits are measured, that it differs depending on the profit indicator that is employed.

This result is not apparent, with there being no obvious influence of interest rates on profitability, if the entire insurance sector is considered as a whole. Yang (2007) argues that the extent of the fluctuations in interest rates does not have an obvious impact on the income, cost, operating profit, or the assets return rate, net return rate, operating profit margin, operating profit rate and

net profit rate of the 12 sample insurance companies, except in the case of the profitability indices for Cathay Life, Central Insurance and First Insurance. This may have something to do with the length of observation. When market interest rate fluctuations are taken into account, three of the effects examined, those for insurance companies' profits on new assets, and two of the effects, those for insurance companies' cost of liabilities, become significant, suggesting that in these cases at least market interest rates may have an influence on the profits on new assets of the insurance companies. Moreover, in the case of nine insurance companies in the sample profits on new assets were higher than the cost of new liabilities suggesting that in these companies at least profits on new assets increase relatively rapidly, bringing about a gradual increase on operating net profits to the insurance companies concerned.

In a study of the relation between insurance market conditions and insolvencies, A. M. Best(1992) found that the number of insolvencies is correlated with the accident and health underwriting cycle (lagged one to three years). The increased number of insolvencies also is correlated with increases in interest rates and the life-health insurance industry‘s focus on investment-related products. The Best study did not examine the various economic factors in a multivariate framework, thus precluding the ability to identify the relative significance of the individual factors.

Changes in interest rates have a direct impact on the value of insurers. As interest rates decline, the value of bonds in an insurer‘s portfolio rises, and vice versa. Staking and Babbel (1995) note that one way insurers incur risk with their financial portfolio is by holding assets with a longer duration than their liabilities. This mismatch creates an interest rate risk since the magnitude of

the change in the value of assets will be greater than that of liabilities when interest rates move. When interest rates decrease, insurers with this duration mismatch experience an increase in surplus. On the other hand, an increase in interest rates leads to a larger decline in the value of assets than liabilities, and thus a decrease in surplus. Young (1996) document a positive asset/liability maturity mismatch for the majority of life insurers in their sample. The asset/liability mismatch results in increased leverage and a greater risk of poor performance for the insurer (Carson and Hoyt, 1995). Changes in interest rates are expected to be negatively related to insurer performance.

2.3.2 Profitability

As with any company, profitability is a key determinant for deciding whether to invest. For an insurance company, there are two components of profits that we must consider: premium/underwriting income and investment income (Santomero&Babbel, 1997).Underwriting income is just that: any revenue derived from issuing insurance policies. By averaging the premium's growth rates of several past years, you can determine the growth trends. Growing premium income is a "catch 22" for insurance companies. Ideally, you want the growth rate to exceed the industry average, but you want to be sure that this higher growth does not come at the expense of accepting higher risk clients. Conversely, a company whose premium income is growing at a slower rate might be too picky, looking for only the highest quality insurance opportunities. The one thing to remember is that higher premium collections do not equate to higher profits.

Lower numbers of claims (via low risk clients) contribute more to the bottom line.

Santomero and Babbel (1997) contend that the second area of profitability that should be included in the analysis is investment income. As mentioned earlier, a greater proportion of an insurer's income comes from investments. To evaluate this area, take a look at the company's asset allocation strategy (usually mentioned in the notes of the financial statements). A majority of the assets should be invested in low-risk bonds, equities or money market securities. Some insurers invest a substantial portion of their assets in real estate. If this is so, take a look at what type of property it is and where it is located. A building in Nairobi may be more liquid than one in Marsabit.

Return on Assets (ROA): $\frac{\text{Net Income + Interest Expense}}{\text{Total Assets}}$

ROA indicates the return a company is generating on the firm's investments/assets. In general, a life insurer should have an ROA that falls in the 0.5-1% range.

Return on Equity (ROE): $\frac{\text{Net Income}}{\text{Shareholder's Equity}}$

ROE indicates the return a company is generating on the owners' investments. In the policyholder owned case, you would use policy holders' surpluses as the denominator. As a general rule for insurance companies, ROE should lie between 10-15%.

Lapse Ratio: $\frac{\text{Lapsed Life Insurance Specified Period}}{\text{Contracts in Force (in effect) at Start of Specified Period}}$

This ratio compares the number of policies that have lapsed (expired) within a specified period of time to those in force at the start of that same period. It is a ratio used to measure the effectiveness of an insurer's marketing strategy. A lower lapse ratio is better, particularly because insurance companies pay high commissions to brokers and agents that refer new clients. ROA, ROE, and the lapse ratios (discussed above) are also useful for evaluating the profitability of the insurer. In order to determine whether management has been increasing return for shareholders, the ROA and ROE numbers over the past several years should be calculated. The lapse ratio will help to tell whether the company has managed to keep marketing expenses under control. The more policies remain in force (are not cancelled), the better.

These views are supported by Hagel, Brown and Davison (2010) who proposed that most economic analysts and investors tend to focus on return on equity as their primary measure of company performance. ROE focuses on return to the shareholders of the company. If you are a shareholder, this gives you a quick and easy to understand metric. However, they argued that ROE can obscure a lot of potential problems. If investors are not careful, it can divert attention from business fundamentals and lead to spiteful surprises. Companies can resort to financial strategies to artificially maintain a healthy ROE — for a while — and hide deteriorating performance in business fundamentals. Growing debt leverage and stock buybacks funded through accumulated cash can help to maintain a company's ROE even though operational profitability is eroding.

Mounting competitive pressure combined with artificially low interest rates, characteristic of the last couple of decades, creates a potent incentive to engage in these strategies to keep investors happy. Excessive debt leverage becomes a significant albatross for a company when market demand for its products heads south, as many companies discovered during the current economic downturn. It actually creates more risk for a company in hard times. These efforts can become addictive. If underlying profitability continues to deteriorate, more stock buybacks or debt leverage will be necessary to maintain return on equity, further increasing company exposure to unanticipated downturns in consumer demand or financial market crises. But letting ROE decline is often too painful to contemplate since the impact on stock performance hence financial performance can be immediate. The risks on the other side are less immediate and less quantifiable, so there is an understandable temptation to avoid immediate pain (Hagel, Brown & Davison, 2010).

2.3.3Competition

One of the most significant trends in the insurance industry is the prevalence of mergers and acquisitions among insurance carriers and agencies (Schich & Kikuchi, 2004). Due to strong investment returns, record profits have allowed many carriers to amass substantial "war chests" earmarked for acquisition. As a result, the large insurance companies are getting larger and smaller agencies are being forced to band together in "clusters. “In addition, networks have become more competitive in an effort to improve their bargaining position with carriers whose demands for profitable premium growth have steadily increased. All of these have a major impact on consumers.

Over time economists have approached the measurement of competition in industries in a variety of ways. The earliest studies attempted to infer the competitive conduct and performance of firms from the market structure of the industry. This approach is mainly associated with Bain (1956) quoted in Hoch hauser (2004). The number of firms and any concentration of market share are believed to determine the competitive conduct. Fewer firms with more concentrated market shares are more likely to engage in anticompetitive behaviour than when the industry is populated by numerous small firms. Alternatively, a small number of large companies may form a cartel and dictate prices and conditions. Furthermore, one or two dominant firms may act as price setters while the many smaller peripheral firms accept the formers 'price leadership. This structure conduct- performance approach provides regulators with a convenient yardstick, when they rule on the competitive impact of mergers.

Blundell-Wignall, Atkinson and Lee (2008) proposed an alternative approach to competitive behaviour and examined the revenue and cost structures of companies, using the framework of perfect competition as the reference position. Firms in an industry operating under conditions of perfect competition are unable to absorb any of the cost increase. They are forced to pass on the entire rise of input costs in output prices and revenue, leaving output unaffected. Of course, not all firms survive. By contrast, under monopolistic conditions in equilibrium, a rise in input prices, such as wages or administrative costs, results in a reduction in output and a rise in prices by a smaller amount than the increase in costs, leading to a shrinking of total revenue. Marginally profitable firms may have to leave the industry.

A group of firms offers a range of insurance products. By differentiating their products they are able to create downward sloping demand curve segments for their insurance products through advertising and other selling costs. The many competitors allow each firm to believe that its actions will not prompt retaliatory actions. Entry into the industry is relatively easy and collusion such as price fixing or market sharing virtually impossible (Brigham & Philip, 2004). Under monopolistic competition in long-run equilibrium output is determined where the average cost curve is tangential to the average revenue curve. Companies do not make economic profits since long-run average cost equals price.

Since firms produce at less than minimum cost, the theory of monopolistic competition suggests that the industry is operating under excess capacity. As a result more firms exist than if production occurred at the average cost minimum. The market becomes overcrowded. If production occurred at the long-run cost minimum, the return on assets would, of course, be higher. According to Donlon and Gutfreund (1998) firms in this industry generate revenue through underwriting of insurance risks and from investing their assets. Market pressure appears to force companies to employ similar investment strategies enabling them to match competitors' investment yields. As they record consistently underwriting losses, that is, premium income falls short of claims payments and expenses, there is considerable pressure on companies to generate satisfactory investment returns. Finance theory suggests that a higher return from a given amount of available funds may only be had by investing in riskier assets. This implies that firms in the GI industry have to take greater risk than would seem to be compatible with prudence, considering their underwriting losses. Applied to the problem at hand this means that firms can only recoup rising costs in investment markets by reshuffling their portfolios towards more risky

assets and thus reap higher returns. The asset risk materializes in the form of market and credit risks. (O'Connor, 2000).

2.3.4 Liquidity

Black, Wright and Bachman (1998) define liquidity ratios as the amount of money that companies and other private entities have on hand at any time available to pay their debt. When looking at any company's financial statements and attempting to understand where it stands as regards to its viability, liquidity ratios are quite important. The higher a company's liquidity ratio, the healthier it is. Entities with high debt and low liquidity are more likely to fail and riskier investments. Liquidity risk could include two different types of risk: the risk that an insurance company will become unable to assure itself of adequate funding due to a decline in new premium income caused by a deterioration, etc. of its financial position, an increase in surrender value caused by large-lot cancellations, or an outflow of funds caused by a big disaster, or it will incur losses because it is forced to sell assets at markedly lower prices than normal and therefore unable to maintain cash flow (capital liquidity risk), and the risk that upheavals, etc. in the market will render it impossible to trade and therefore force the company to engage in transactions at prices that are markedly more disadvantageous than normal (market liquidity risk) (Black, Wright & Bachman, 1998).

According to Barney (1997) the first test of an insurer's ability to meet financial obligations is the acid test. It tests whether a firm has enough short-term assets (without selling inventory) to cover its immediate liabilities. Poor liquidity causes investment losses and hence poor financial performance when the insurer must sell assets prematurely to cover claims. An insurer should

almost always have a positive cash flow. Cash flow is crucial to an entity's survival. Having ample cash on hand will ensure that creditors, employees and others can be paid on time. If a business or person does not have enough cash to support its operations, it is said to be insolvent, and a likely candidate for bankruptcy should the insolvency continue. Other things to keep an eye on are the investment grades of the company's bond portfolio. Too many high and medium risk bonds could lead to instability hence poor financial health.

2.4 Empirical Evidence

A number of studies have been conducted on risk management. This section will review the empirical studies in view of the study. Yusuwan et al., (2008) focused on identifying the level of awareness of risk management in their study on the risk management practices on construction project companies in Klang Valley, Malaysia. They undertook to examine the policies undertaken when dealing with risks in a construction project and identifying the problems and challenges in risk management. For this study, they employed questionnaire survey and interviews to study 27 public and private companies operating in Klang Valley. The study found out that 44.4%, 29.6%, 14.8% and 11.1% had occasionally heard, heard and attended training, practiced risk management and never heard about risk management respectively. In addition, 51.9% of the respondents believed that risk management was capable of adding value to daily work, 33.4% believed that risk management was useful in times of crisis. Their studies concluded that risk management positively contributes to the productivity and financial performance.

Some empirical work understands risk management as an organizational and social practice, and has compiled sufficient evidence to suggest that risk management practices vary considerably across firms, even within an industry (Tufano, 1996; Mikes, 2009; Mikes, 2011). In some firms, risk management takes the form of complex financial transactions (Tufano, 1996; Chacko, Tufano, and Verter, 2001); in others, it follows a more holistic assessment of financial and nonfinancial risks (Mikes, 2009; Mikes, 2011; Woods, 2009; Arena, Arnaboldi, and Azzone 2010), bridging functional silos. Risk management in some firms consists only of policing the business for compliance with risk limits and risk policies while, in others, the function helps the organization learn about uncertainties in its strategy and in its external and competitive environment (Mikes, 2009; Mikes, Hall, and Millo, 2013; Power, Ashby, and Palermo, 2013).

There is evidence of varying risk management processes. Some firms concentrate only on a narrow set of financial, insurable, or measurable events that threaten strategic objectives (Tufano, 1996; Mikes, 2009). Others address threats that encompass nonfinancial and qualitative issues (Mikes, 2009; Woods, 2009; Jordan, Jorgensen, and Mitterhofer, 2013). The various risk management programs require participation of employees and management. Some firms are driven by a quantification-oriented calculative culture with a managerial predilection towards measurement and management by numbers (Mikes, 2009), while others, more sceptical about the relevance and value of risk measures, emphasize the learning benefits from questioning and learning from the numbers (Mikes, 2011). The kinds of risks facing organizations enable some organizations to emphasize on risk management than others.

Pagach and Warr (2010) studied the effect of adoption of ERM principles on firms' long-term performance by examining how financial, asset and market characteristics change around the time of ERM adoption. Using a sample of 106 firms that announced the hiring of a CRO, they found that firms adopting ERM experience a reduction in stock price volatility. Similarly, firms hiring CROs when compared to similar, non-CRO appointing firms in their industry group, exhibit increased asset opacity, a decreased market-to-book ratio and decreased earnings volatility. In addition, these researchers found a negative relationship between the change in firms' market-to-book ratio and earnings volatility. However, Pagach and Warr (2010) overall results fail to find support for the proposition that ERM is value creating.

Hameeda and Al Ajmi (2012) carried out a study on conventional and Islamic banks in Bahrain. The objective of the study was to find out the risk management practices of these banks. Their study found out that banks in Bahrain had a clear understanding of risk and risk management and also had efficient risk identification, risk assessment analysis, risk monitoring and credit risk analysis. In addition, they established that credit, liquidity and operational risk were the most important risks facing both conventional and Islamic banks in Bahrain. The risk management practices were determined by the extent to which managers understood risk and risk management, efficient risk identification, risk assessment analysis, risk monitoring and credit risk analysis. From the study, Islamic banks were found to be significantly different from their conventional counterparts in understanding risk and risk management. Islamic banks were found to have significantly higher risks than conventional banks.

Muli (2003) conducted an investigative study on the management of property risks in Kenya using a case study of the insurance sector. Questionnaires were distributed to a sample of 18

insurance companies out of a total of 36. An interview was conducted with the Commissioner of Insurance and the Honorary Secretary to the Institute of Loss Adjusters and Risk Surveyors. Due to the exploratory nature of the study, a qualitative analysis of the available data was adopted. Data from questionnaires and interviews was coded and frequency tables in simple percentages used to analyze responses to each question. A descriptive approach was then adopted in communicating the results. In summary, the study found that although risk management is consciously present in Kenyan insurance business, there still lacks a clear understanding of the discipline in the industry. Where they were available, the involvement of risk surveyors/managers by insurers was found not comprehensive enough. They were not involved in risk control and evaluation even after they had recommended appropriate risk control measures. It was found that although insurers have adequate information for any risk management activity, there lacks an efficient means of storage and retrieval of the same. The study recommended computerization and general improvement of their information systems.

Kithinji (2010) studied credit risk management and profitability of commercial banks in Kenya to assess the degree to which the credit risk management in practice had significantly contribute to high profits in commercial banks of Kenya. Data on the amount of credit, level of non-performing loans and profits were collected for the period 2004 to 2008. The results of the study showed that, there was no relationship between profits, amount of credit and the level of nonperforming loans. A regression model was used to elaborate the results which showed that there was no significance relationship between the banks profit and credit risk management proxied by level of Nonperforming Loans and Loans and Advances/Total assets.

Kinyua (2010) conducted a study on the assessment of risks as a component of corporate strategy in selected life insurance firms in Kenya. The research employed a descriptive survey design. The population of the study consisted of only 23 insurance firms involved in life insurance. The findings of the study indicated that the top three risks faced by insurance firms were competitor risk, regulation and de-regulation risk and industry economics risk respectively. Competitor risk was characterized by companies competing for the restricted market which was not made any better by the worsening economic situation. Given the reality of risks to company strategy, this study recommended that insurance firms further enhance the deployment of strategic planning tools that give the firms an outside-in perspective of the strategic planning process.

Ogilo (2012) carried out a study that sought to establish the impact of credit risk management on financial performance of commercial banks in Kenya and to find out if there exists a relationship between the credit risk management determinants by use of CAMEL indicators and financial performance of these banks. The study used secondary data from the CBK publications. Multiple regression analysis was used for data analysis. The study found a strong impact between the CAMEL components on the financial performance of commercial banks. The study also established that capital adequacy, asset quality, management efficiency and liquidity had a weak relationship with financial performance whereas earnings had a strong relationship with financial performance. The study concluded that CAMEL model can be used as a proxy for

Siba (2012) carried out a study on the relationship between financial risk management practices and financial performance of commercial banks in Kenya. The objective of the study was to find out if there was any relationship between financial risk management practices and financial performance of commercial banks in Kenya performance. The subject of the study were 40

commercial banks operating in Kenya and the study employed questionnaire method for the primary data collection, while secondary data was obtained from the CBK annual supervision reports. The findings showed that all banks had a formal risk management system in place and that all the banks had similar risk management environment, policies and procedures. Similarly, the banks used very efficient levels of risk monitoring and management information systems and internal controls. They, however, had various mixes of risk monitoring schedules and there was a disparity between the various banks in the responsibility for identifying, managing and controlling risks as well as back up of system and data files. The overall finding was that banks have highly effective risk management practices and there was a strong relationship between bank performance and efficiency of the bank's risk management practices.

Wanjohi (2012) analyzed the effect of financial risk management on the financial performance of commercial banks in Kenya. The study found out that majority of the Kenyan banks were practicing good financial risk management and as a result the financial risk management practices had a positive correlation to the financial performance of commercial banks in Kenya. The study recommended that banks should devise modern risk measurement techniques such as value at risk, simulation techniques and Risk-Adjusted Return on Capital. The study also recommended use of derivatives to mitigate financial risk as well as develop training courses tailored to the needs of banking personnel in risk management.

Njoroge (2013) studied the strategic risk management practices by AAR Insurance Identified reputation risk as the most significant risk facing the company. This study employed case study research design. The target population comprised of 40 senior management and middle level staff at AAR Insurance Kenya Limited drawn from the department of finance, underwriting and

operation. The study recommended that the Board should continue taking ownership and driving the risk agenda across the business. It was also recommended that the organization should focus on new emerging risk types such as reputation, operational risks and IT security while not losing focus on the traditional risks such as credit and market risks. AAR should also define Risk Management framework and program which enables effective reporting and consolidation of data.

Ongore and Kusa (2013) conducted a study on the determinants of financial performance of commercial banks in Kenya. The authors used linear multiple regression model and Generalized Least Square on panel data to estimate the parameters. They found out that the financial performance of commercial banks in Kenya was driven mainly by board and management decisions, while macroeconomic factors have insignificant contribution. They found out a weak relationship between financial performance risk management. The empirical review is not clear on the relationship of risk management and financial performance. This study sought to determine the relationship existing between risk management and financial performance among insurance companies in Kenya.

2.5 Summary of Literature Review

Although financial performance is influenced by a combination of factors facing the firm, a review of the literature provides evidence as to why firms should concern themselves with risk management. Vaughan and Vaughan (2008), provide a compelling reason for risk management by firms. They assert that the primary goal of risk management by firms is for survival. Risk management guarantees the continuity of the firm as an operating entity, hence ensuring that the

firm is not prevented from attaining all its other goals through losses that might arise from pure risks.

It is evident that the decisions made by managers affect the risks and financial performance of an insurance company. This then emphasizes the need for a proper risk management strategy to direct the goals and interests of management to the interests of the organization. A firm's stakeholders also require an assurance that their interests are safeguarded by firm's management and strategies. From the literature, it is discovered that the desire to improve financial performance should be balanced with the risks associated with the operations of the firm. This then leads to the development of a risk management program to meet the strategies of an organization.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methods and procedures used in conducting the study. It outlines the research design, population of the study and sampling design, data collection and data analysis.

3.2 Research Design

Mugenda & Mugenda (2003) describe a research design as the plan or structure of investigation conceived to obtain answers to research questions that includes an outline of the research work to enable the representation of results in a form understandable by all. A descriptive research design was adopted for this study. Descriptive research enables the researcher to describe the existing relationship by using observation and interpretation methods. It provides the researcher with the appropriate methodology to illustrate characteristics of the variables under study. Causal research determines causal linkages between study variables by studying existing phenomena and then reviewing available data so as to try to identify workable causal relationships.

3.3 Population of the Study

A population is the aggregate of all elements that conform to some general set of specifications (Paton, 2002). The study adopted a census survey of all the 49 registered insurance companies operating in Kenya (IRA, 2013). A census approach enables one to collect more accurate and

reliable data. The observable characteristics of the target population should be strongly related to the characteristics intended to be generalized by the study (Mugenda & Mugenda, 2003).

3.4 Data Collection

Both primary and secondary data was used in this study. Primary data was collected through the use of questionnaires. Questionnaires were picked and dropped to the risk managers in the insurance companies. Questionnaires were structured to collect both qualitative and quantitative data. Questionnaires are also a common tool for data collection in social sciences. Secondary data was collected from secondary data sources like insurance survey reports from AKI and the audited financial statements of all insurance companies as presented to IRA. Secondary data for the period 2008 to 2012 was used in this study.

3.4 Data Analysis

This research employed descriptive statistics to analyse the data. It is argued (Mugenda & Mugenda, 2003) that descriptive statistics enable the researcher to get meaningful description of scores and measurements for the study through the uses of few indices or statistics. The data obtained from the questionnaires was edited and then coded for the purposes of data analysis. It was further summarized using descriptive statistics which usually include measure of central tendency, measures of variability, and measures of reliability and frequency among others. Measures of central tendency such as the mean, median and the mode state the best estimate of the expected score or measure from a group of scores in a group of scores in a study. The Statistical Package for Social Sciences (SPSS) was used to analyse the independent and

dependent variables. The findings are presented in the form of charts, tables and pie charts in chapter 4.

3.5 The Analytical Model

The goal of the study was to describe the relationship between risk management and financial performance among insurance companies in Kenya. The study used a regression model to determine the existing relationship. The following regression model was used for the study:

$$\mathbf{Y=\beta_0 + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \beta_4 X4 + \varepsilon}$$

Where:

Y = Financial Performance (Measured using ROA)

X1 = Risk identification (Measured using inspection, Financial statements analysis, establishing standards and risk rating and collateral.

X2 = Risk assessment (Measured using approximations & projections)

X3 = Risk mitigation (Risk control and risk financing measures)

X4 = Risk management implementation and monitoring (Controls, responses, reporting & review)

ε = the error term

The values of X1, X2, X3&X4 were computed from the mean score of the responses on each Likert scaled data for each insurance company (either life, general or composite). The mean

score was obtained for the respective variables for each insurance company, and values used for the regression analysis. The Y value is an average for the 5 year period, 2008-2012.

3.6 Diagnostic Tests

F-test was tested for joint significance of all coefficients and t-test for significance of individual coefficients. Measures of central tendency (mean) and a measure of dispersion/variation (standard deviation) was used to analyse the data.

CHAPTER FOUR

DATA ANALYSIS, RESULTS & DISCUSSION

4.1 Introduction

This chapter presents data analysis, results and a discussion of the study findings on the effect of risk management practices on the financial performance of insurance companies in Kenya.

4.2 Questionnaires return rate

The study targeted 49 registered insurance companies in Kenya out of which 44 responded contributing to a response rate of 90%. This response rate was sufficient and representative and conforms to Mugenda and Mugenda (1999), stipulation that a response rate of 50% is adequate for analysis and reporting, a response rate of 60% is good while a response rate of 70% and above is excellent. The study findings were presented in form of tables and charts as appropriate.

4.3 Demographic data

The study sought some demographic information from the insurance companies in scope. The results are analysed in the following sections.

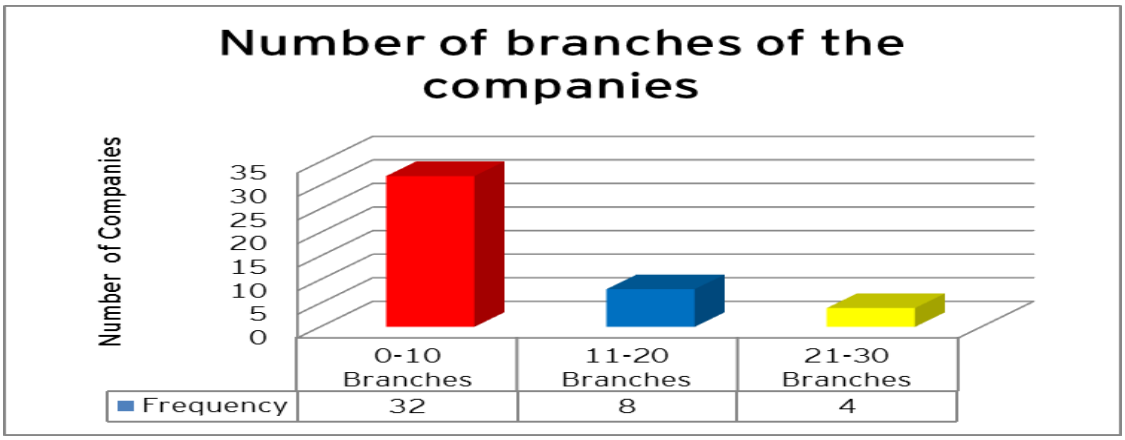
4.3.1 Number of branches of the insurance companies

The results are summarised in table 4.1 and figure 4.1below:

Table 4.1 Number of branches of insurance companies

Range	Frequency	Percentage
0-10	32	73%
11-20	8	18%
21-30	4	9%
TOTAL	44	100%

Figure 4.1 Number of branches of insurance companies



The graph above depicts that most of the insurance companies in Kenya had less than ten branches. This was 73% of the respondent companies.18% of the companies had 11-20 branches while 9% of the companies had 21-30 branches.

4.2.2. Number of years that the company had been in operation

The results are shown in table 4.2 and figure 4.2 below:

Table 4.2 Number of years of operation

Age/Years	Frequency	Percentage
1-10	14	32%
11-20	3	7%
21-30	27	61%
TOTAL	44	100%

Figure 4.2 Number of years of operation

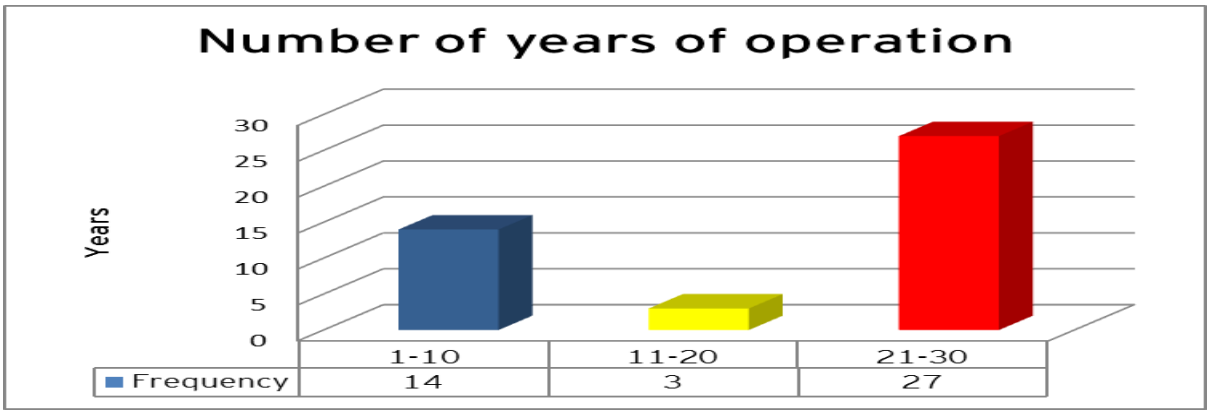


Table 4.2 and figure 4.2 above show that 61%, (27 companies) of the 43 insurance companies had been operational for 21-30 years, 32% (14 companies) for 1-10 years and 7 %(3 companies) for 11-20 years. These findings indicate that a majority of the insurance companies in scope had been operational for a long time and thus had a lot of information on the impact of risk management practices in their companies.

4.4 Business Information

The study further sought information regarding the various risk management practices that had been adopted by insurance companies in Kenya.

To determine the extent to which risk management practices were adopted by the insurance companies, the respondents were requested to indicate their level of agreement with statements that point to the extent to which the various risk management techniques were used in their respective companies.

The responses were rated on a 5-point Likert scale where: 5-Strongly Agree, 4-Agree, 3-Not Sure, 2-Disagree, and 1-Strongly Agree. The findings were as shown in **Appendix 2 & 3.**

4.5 Financial Performance

In addition to primary data, the study utilized secondary sources of data in order to determine the financial performance of the insurance companies. The data for financial performance was obtained from the financial statements of the insurance companies for 5 years (2008-2012).

4.5.1 Ratio Analysis of Financial Performance

Return on Assets (ROA) was used to measure the financial performance of the insurance companies. ROA is computed as follows:

ROA=Net Income/Average Total Assets

Table 4.3 Descriptive statistics for return on assets

YEAR	N	MIN ROA	MAX ROA	MEAN	STD DEV
2008	44	0.61	6.18	2.175	1.47478812
2009	44	-11.65	6.83	1.94682	1.39528427
2010	44	-11.75	8.79	2.64614	1.62669492
2011	44	0.78	10.73	3.08841	1.75738701
2012	44	-2.46	11.64	3.56727	1.88872251

The findings as depicted in Table 4.2 shows the lowest value for ROA as -11.75 in year 2010 and the highest as 11.64 in 2012. In addition a low standard deviation is a sign of lower variation in financial performance of the insurance companies. On the other hand, a steady rise in ROA values from 2010 indicates that the Kenyan insurance companies have been performing well financially over the last three years.

4.6 Inferential Statistics

The study further applied multiple regressions to determine the predictive power of the risk management practices on financial performance of insurance companies in Kenya.

4.6.1 Regression Analysis

A multiple regression analysis was conducted to test the relationship between the independent variables (risk management practices) and the financial performance of insurance companies in Kenya. The SPSS tool was applied to code, enter and compute the measurements of the multiple regressions for the study.

Table 4.4 Model Summary

Model	R	R Square	Adjusted Square	Std Error of the Estimate
1	0.846	0.7157	0.679	0.5382

Coefficient of determination (R Square) explains the extent to which changes in the dependent variable can be explained by changes in the independent variables or the percentage of variation in the dependent variable (financial performance of insurance companies in Kenya) that is explained by all the four independent variables (risk management practices).

Table 4.4 above reveals an R^2 of 0.7157 which implies that the four independent variables studied explain only 71.6% of the variations in financial performance of insurance companies in Kenya. Consequently, this means that other factors not studied in this research explain 28.4% of the variations in financial performance of Kenyan insurance companies.

4.6.2 ANOVA Results

Table 4.5 ANOVA of the regression

MODEL		SUM OF SQUARES	df	MEAN SQUARE	F	Sig
1	Regression	2.534	12	1.267	9.475	0.0031
	Residual	9.307	32	2.327		
	Total	**11.841**	**44**			

The significance value is 0.0031 which is less than 0.05 thus the model is statistically significant in predicting how risk management practices affect the financial performance of insurance companies in Kenya. The F critical at 5% level of significance was 2.1646. Since F calculated is greater than the F critical (value = 9.475), this means that the overall model was significant, and hence, it is good for prediction.

4.6.3 Interpretation of the Results

Table 4.6 Coefficient of determination

MODEL		UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS	t
		Beta	**Std Error**	**Beta**	
1	Constant	1.147	0.2235		5.132
	Risk Identification	0.668	0.1102	0.1032	7.287
	Risk assessment & measurement	0.348	0.1828	0.0937	4.685
	Risk mitigation	0.454	0.2156	0.1178	4.626
	Risk monitoring	0.398	0.3164	0.1425	3.418

Multiple regression analysis was conducted to determine the relationship between financial performance of insurance companies in Kenya and the four independent variables, that is, risk management practices. As per the SPSS generated table above, regression equation;

($Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \varepsilon$) becomes:

($Y = 1.147 + 0.668X1 + 0.348X2 + 0.454X3 + 0.398X4 + \varepsilon$)

According to the regression equation established, taking all factors into account (risk identification, risk assessment, risk mitigation and risk monitoring) constant at zero, financial performance of insurance companies in Kenya will be 1.147. The data findings analysed also show that taking all other independent variables at zero, a unit increase in risk identification will

lead to a 0.668 increase in financial performance, a unit increase in risk assessment and measurement will lead to a 0.348 increase in financial performance, a unit increase in risk mitigation will lead to a 0.454 increase in financial performance while a unit increase in risk management program implementation and monitoring will lead to a 0.398 increase in financial performance of insurance companies in Kenya.

This implies that risk identification contributes the most to the financial performance of insurance companies in Kenya followed by risk mitigation, risk management program implementation & monitoring and risk assessment & measurement in that order. At 5% level of significance and 95% level of confidence, risk identification, risk mitigation, risk management program implementation & monitoring and risk assessment & measurement all significantly influenced the financial performance of insurance companies in Kenya.

4.7 Discussion of Findings

From the study, it was established that most insurance companies in Kenya had been in operation for a long period of time, and a majority of these companies had a wide branch network throughout the country. The implication is that these are large companies and hence face greater levels of risk in their operations due to operating in larger scales.

According to the study, majority of the insurance companies had adopted various risk management practices in their risk management efforts. Being large companies with greater risk levels, it made economic sense for these companies to have a comprehensive risk management program. This could, therefore, explain why most of the companies had continued to be financially viable for longer periods.

With regard to the various risk management practices adopted by the insurance companies, the study found that risk identification contributes the most to the financial performance of insurance companies in Kenya followed by risk mitigation, risk management program implementation & monitoring and risk assessment & measurement in that order. At 5% level of significance and 95% level of confidence, risk identification, risk mitigation, risk management program implementation & monitoring and risk assessment & measurement all significantly influenced the financial performance of insurance companies in Kenya.

The study found risk identification to be the most significant in influencing the financial performance of Kenyan insurance companies, followed by risk mitigation, risk management program implementation & monitoring and risk assessment & measurement respectively. This finding is consistent with practice as all risk management efforts should ideally start with identifying the risks facing the firm, before exploring ways to manage these risks. The fact that risk assessment and measurement ranked last in significance in influencing financial performance could be interpreted to imply that organizations may fail to assess and measure risks but still put in place measures to mitigate these risks. If these measures are well implemented, then the firm could still realize benefits in terms of improved financial performance. This is a good thing for the firm as not all firms have the technical capacity to assess and measure the impact of risks facing the firm. Companies can anticipate potential losses and still be successful in their risk management efforts. However, if a company is able to assess and measure the impact of potential losses in advance, the measures put in place for mitigation will be more appropriate and the firm will derive more significant benefits from its risk management efforts. This

essentially implies that organizations should adopt a comprehensive risk management framework in order to realize greater benefits from risk management.

The study further established that adoption of risk management practices had a significant influence on the financial performance of Kenyan insurance companies. This could be interpreted to mean that the firms that had a more comprehensive risk management program were more likely to remain financially stable for long and could be the firms that had been in operation for a long period of time. This finding is consistent with findings of a previous study by Ernst & Young (2012), whose results revealed that companies with more mature risk management practices tend to generate a higher growth in revenue. Similarly, the findings are consistent with the findings of a study by Aon Risk Solutions and Wharton School (2011), whose results revealed that there exists a positive relationship between the maturity of an organization's risk management framework and its financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This chapter presents a summary of findings, conclusion and recommendations of the study in line with the objectives of the study. The study sought to establish the relationship between risk management practices of Kenyan insurance companies and their financial performance. The study found that most of the insurance companies registered in Kenya had been in operation for a long period of time with 75% of the companies having been in existence for over 10 years. 35% of the companies had a countrywide branch network of over 30 branches.

Many of the companies had adopted the four risk management practices that were the focus of this study. Of the four risk management practices, risk identification was found to be the most significant in influencing financial performance with a unit increase in risk identification leading to a 0.668 increase in financial performance. This was followed closely by risk mitigation whose unit increase led to an increase of 0.454 in financial performance. A unit increase in risk management implementation and monitoring led to an increase of 0.398 in financial performance with risk assessment and measurement having the least influence on the companies' financial performance, at 0.348 increases in financial performance for a unit increase in risk assessment and measurement. Generally, from the results of this study, adoption of risk management practices was found to have a significant influence on the financial performance of insurance companies, as explained by an R2 of 71.6%. This implies that better risk management by companies leads to improved financial performance.

5.2 Conclusion

Most of the insurance companies in Kenya are large companies with a wide branch network throughout the country in order to take services closer to their customers and hence enhance market share in the face of growing competition. Owing to their large sizes, it can be concluded that these companies are faced with greater risks and hence the need to manage risk appropriately.

A large number of these companies had put in place measures to spearhead risk management and this could explain why most of these companies had continued to be in operation for a long duration of time, with 61% of them having been in existence for over 20 years. It can be inferred that the companies that had existed for a long time had more mature risk management programs which had contributed to their financial sustainability over the years.

The study also concludes that risk identification and mitigation play the most significant role in influencing financial performance of insurance companies. Hence, risk identification can essentially be said to be the key starting point of any risk management program as companies cannot manage what is unknown. On the other hand, once identified, risks must be mitigated so that the impact on the firm is reduced.

The study results, however, also show that all the four risk management practices were of some significance in influencing financial performance and hence the conclusion of this study is that insurance companies need to adopt a multifaceted approach in their risk management efforts that

includes all the practices that were the focus of this study in order to realize the full benefits of their risk management programs.

Risk management significantly contributes to financial performance of insurance companies, with adoption of risk management practices explaining 71.6% of the variation in financial performance of these companies. The study, therefore, concludes that there is a strong relationship between adoption of risk management practices and financial performance of Kenyan insurance companies. The study further concludes that there are other factors that influence financial performance of insurance companies and that these explain the remaining 28.4% of the variation in financial performance of these companies.

5.3 Recommendations for policy and practice

From the study, risk identification and mitigation were found to have a huge impact on the financial performance of insurance companies. The study therefore recommends that the management of insurance companies should put in place cost-effective measures for timely risk identification and effective risk mitigation so as to ensure that their financial performance is not impacted negatively.

The study also recommends that the management of insurance companies should continuously assess their risk management practices to see if they are still practical in the face of a continuously changing operating environment, for instance the new regulatory pressures of solvency 2 and Basel regulatory regimes.

The management should leverage information technology in risk management by installing information systems that can carry out risk assessment & measurement more accurately and for monitoring their risk management programs for effectiveness. This should further be complimented by training of employees on risk management policies of the firm, with clearly defined roles and responsibilities for risk management.

There is also need for insurance companies to address corporate governance issues in their risk management programs. Risk management programs that are supported by senior company officials are more likely to succeed, thereby enhancing financial performance.

Lastly, the study recommends that the management of insurance companies should put in place risk management frameworks such as ERM that conform to international best practice. This will ensure that Kenyan insurance companies achieve international standards and, therefore, become globally competitive.

5.4 Limitations of the Study

The study partly used secondary data which had already been compiled by The Insurance Regulatory Authority (IRA). This data was used as obtained and the researcher had no means of independently verifying the validity of the data which was assumed to be accurate for the purpose of the study. The study findings are, therefore, partly subject to the validity of the secondary data used.

The study mainly used the return on assets as the measure of financial performance. However,

there are other measures of financial performance that can be used in other future studies, for instance return on equity (ROE).

The study did not use a control variable and it is therefore possible that a lack of inclusion of the remaining 5companies may cause differences in findings.

Lastly, the time and resources that were available for this study could not allow for the study to be conducted in a more comprehensive manner.

5.5 Suggestions for Further Research

This study explored the effect of risk management practices on the financial performance of insurance companies in Kenya. A deeper study should be carried out on the effect of specific risk management practices and ERM models adopted by the various insurance companies in Kenya and the effect of this on their financial performance.

Lastly, further studies should be carried out to establish the other factors that cause 28.4% variation in the financial performance of Kenyan insurance companies. This will help the management of these companies to increase firm value through better management of these other factors, in addition to risk management.

REFERENCES

Allen, F. & Santomero, A.M. (1996). The Theory of Financial Intermediation, Working Paper#96-32, Wharton Financial Institutions Center, University of

Anderson, K. (2005). Intelligence-Based Threat Assessments for Information Networks and Infrastructures: *A White Paper*, Global Technology.

Aon Global Risk Solutions and The Wharton School of Pennsylvania (2011): Aon Association of Kenya Insurers (AKI), *2011 Insurance Industry Annual Report*,

Babbel, D.F. & Santomero, A.M. (1996). Risk Management by Insurers: An Analysis of the Process, Working Paper#96-16, Wharton Financial Institutions Center,

Banks, E. (2004). Alternative Risk Transfer: Integrated Risk Management Through Insurance, Re-insurance and the Capital Markets, John Wiley & Sons Ltd.

Breeden, D. & Viswanathan, S. (1990). Why Do Firms Hedge? An Asymmetric Information Model, Working paper, Duke University.

Demarzo, P. & Duffie, D. (1992). Corporate Incentives for Hedging and Hedge Accounting, Working Paper, Northwestern University.

Douglas M. & A.Wildavsky. (1982). Explaining risk perception. An evaluation of cultural theory.

Ellul, A. & Yerramilli, V. (2010). Stronger Risk, Lower Controls: Evidence from U.S. Bank Holding Companies, National Bureau of Economic Research, Working Paper 16178.

Ernst & Young (2012). Turning Risk into Results: How Leading Companies Use Risk Management to Fuel Better Performance.

Froot, K., Scharfstein, D. & Stein, J. (1993). A Framework for Risk Management, *Journal of Applied Corporate Finance*, 7, 22-32.

Gold, G. (1999). The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets. *Review of Economics and Statistics,* 47 (1), 13-37.

Hameeda, A.H. & Al Ajmi J. (2012). Risk Management Practices of Conventional and Islamic Banks in Bahrain. *Journal of Risk Finance.*

Insurance Regulatory Authority (IRA) Website, *http://www.ira.go.ke*

Iqbal Z. & Mirakhor A. (2007). An Introduction to Islamic Finance: Theory and Practice, 2nd Edition.

Jolly, K. (1997). Counterparty Credit Risk Modelling: Risk Books. Incisive Media, London.

Kadi, A.M. (2003). Basic Conditions and Procedures in Insurance. The Accountant, 13 (3), 16-19.

Kiochos, P. (1997). Principles of Risk Management and Insurance. 8 th Edition, Pearson Education, New York.

Magezi, J.K. (2003). A New Framework for Measuring the Credit Risk of a Portfolio. *Institute for Monetary and Economic Studies (IMES),* 1-45.

Meredith, L. (2004). The Ultimate Risk Manager. Boston: CUSP Communications Group Inc.

Merton, R.C. (1995). A Functional Perspective of Financial Intermediation, *Financial Management* Journal, 24 (2), 23-41.

Mikes A. & R.S Kaplan. (2014).Towards a contingency. Theory of Enterprise Risk Management. Working Paper 13-063.

Muli, M.S. (2003). An Investigative Study on the Management of Property Risks in Kenya: A Case Study of the Insurance Sector, Unpublished MBA Project, University of Nairobi.

Mwangi, A.K. (2010). The Effect of Risk Management Practices on the Financial Performance of Commercial Banks in Kenya, Unpublished MBA Project, University of Nairobi.

Ogilo, F. (2012). The Impact of Credit Risk Management on Financial Performance of Commercial Banks in Kenya, *DBA Africa Management Review,* 3(1), 22-37.

Okotha, H. (2003). Corporate Risk Management:Costs and Benefits. *Global Finance Journal,* 13 (1), 29-38.

Pagach, D. P. & Warr, R.S. (2010). The Effects of Enterprise Risk Management on Firm Performance. Available at SSRN: http://ssrn.com/abstract=1155218

Pagano, M.S. (2001). How Theories of Financial Intermediation and Corporate Risk-Management Influence Bank Risk-taking Behavior, *Financial Markets, Institutions and Instruments*, 10 (5), 277-323.

Power, M. (2004). The Risk Management of Everything: Rethinking the Politics of Uncertainty, Demos, London.

Quach, M. (2005). Problems in Managing Internal Development Projects in Multi-Project Environments, *International Journal of Project Management*, 21 (395-402)

Rejda, G. E. (2008). Principles of Risk Management and Insurance, Prentice Hall, 10 th Ed.

Sarkis, J. (1998). Evaluating Environmentally Conscious Business Practices, *European Journal of Operational Research,* 107, 59-174.

Saunders, A. & Cornett, M.M. (2008). Financial Institutions Management*:* A Risk Management Approach, McGraw-Hill, Irwin.

Siba, A.M. (2012). Relationship Between Financial Risk Management and Financial Performance of Commercial Banks in Kenya. Unpublished MBA project. University of Nairobi.

Stulz, R.M. (1984). Optimal hedging policies. *Journal of Financial and Quantitative Analysis,* 19, 127-140.

Stulz, R.M. (1996). Rethinking Risk Management. *Journal of Applied Corporate Finance,* 9 (3), 8-24.

Stulz, R.M. (2003). Risk Management and Derivatives. South-Western: Mason, Ohio.

Vaughan, E.J. & Vaughan, T.M. (2008). Fundamentals of Risk and Insurance, John Wiley & Sons, Inc. 10 th Edition.

Venette, S. J. (2003). Risk Communication in a High Reliability Organization: APHIS PPQ's Inclusion of Risk in Decision Making. Ann Arbor, MI: UMI Proquest Information and Learning.

Warner, J. (1977). Bankruptcy Costs: Some Evidence. *Journal of Finance.* 32, 337-347.

Weiss, L. (1990). Bankruptcy Resolution: Direct Costs and Violation of Priority Claims. *Journal of Finance and Economics,* 27, 285-314.

APPENDICES

APPENDIX 1: LIST OF ALL REGISTERED INSURANCE COMPANIES IN KENYA

#	NAME
1	AAR Insurance Kenya Ltd
2	Africa Merchant Assurance Company Ltd
3	AIG Kenya Insurance Company Ltd
4	APA Insurance Ltd
5	APA Life Assurance Limited
6	British American Insurance Company
7	Cannon Assurance Company Ltd
8	CFC Life Assurance Company Ltd
9	CIC General Insurance Company Ltd
10	CIC Life Assurance Company Ltd
11	Continental Reinsurance Company Ltd
12	East Africa Reinsurance Company Ltd
13	Fidelity Shield Insurance Company
14	First Assurance
15	GA Life Assurance
16	GA Insurance Ltd
17	Gateway Insurance Company Ltd
18	Geminia Insurance Company
19	ICEA LION General Insurance Company Limited
20	ICEA LION Life Insurance Company Limited
21	Intra Africa Insurance Company Limited
22	Invesco Assurance Company Limited
23	Kenindia Assurance Company Limited
24	Kenya Orient Insurance
25	Kenya Reinsurance Corporation Limited
26	Madison Insurance Company Limited
27	Mayfair Insurance Company Limited
28	Mercantile Insurance Company Limited
29	Metropolitan Life Insurance Company Limited
30	Occidental Insurance Company Limited
31	Old Mutual Life Insurance Company Limited
32	Pacis Insurance Company Limited
33	Pan Africa Life Insurance Company Limited
34	Phoenix of East Africa Insurance Company Limited

#	NAME
35	Pioneer Assurance Company Limited
36	Real Insurance Company Limited
37	Resolution Insurance Company Limited
38	Takaful Insurance
39	Tausi Insurance
40	The Heritage Insurance
41	Jubilee Insurance
42	Kenya Alliance Insurance
43	The Monarch Insurance
44	Trident Insurance
45	Direct Line Assurance Company
46	Corporate Insurance Company
47	Xplico Insurance Company
48	UAP Life Insurance
49	UAP Insurance Company

APPENDIX 2: DATA COLLECTION QUESTIONAIRE

The purpose of this study is to collect data that will assist in determining the risk management practices and how they affect the financial performance of the insurance company. The information provided will be confidential and used for the purpose of the study only.

Part 1: Demographic Data

1) Name of the insurance company ----------

2) How many branches does the insurance company have?

0-10 □

11-20 □

21-30 □

3) How long has the Company been in operation (In Years)?

0-10 years □

11-20 years □

21-30 years □

Part II: Business information

SECTION I: RISK IDENTIFICATION

4) Indicate your level of agreement with the following statements as regards risk

Identification techniques used by your company. Use a scale of 1-5, where:

Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1	2	3	4	5

NB: This scale should also be used for question number 5, 6 and 7.

STATEMENT	1	2	3	4	5
Risk inspection is done by managers					
Roles and responsibilities for risk identification are clearly defined					
Financial statement analysis enhances risk identification					
Establishing standards enhances risk identification					
Risk rating and collateral enhances risk identification					

SECTION II: RISK ASSESSMENT

5) Indicate your level of agreement with the following statements as regards risk assessment and measurement in the company. Use a scale of 1-5.

STATEMENT	1	2	3	4	5
Risks are evaluated with assumptions and uncertainties being clearly considered and presented.					
Risk is evaluated in terms of both quantitative and qualitative value.					
Measurement of both of the quantities in which risk assessment is concerned - potential loss and probability of occurrence – is carried out by the company					
A risk with a large potential loss and a low probability of occurring is often treated differently from one with a low potential loss and a high likelihood of occurring					
Risks are subdivided into individual levels for further analysis					

SECTION III: RISK MITIGATION

6) To what extent does your company adopt the following risk mitigation practices? Use a scale of 1 – 5.

STATEMENT	1	2	3	4	5
The company insures different types of risks but not all risks.					
The company does not insure catastrophic risks					
The organization has a mechanism for estimating potential losses at the time of entering into insurance contracts					
The company trains insured parties on ways to avoid or minimize the chances of losses occurring					
The company has a mechanism for transferring certain risks to third parties e.g. through reinsurance/hedging.					

The company sets aside sufficient technical reserves to pay for claims.					

SECTION IV: RISK MANAGEMENT IMPLEMENTATION AND MONITORING.

7) To what extent are the following facets of risk management implementation and monitoring applicable to your company? Use a scale of 1 – 5.

STATEMENT	1	2	3	4	5
Risk management program is well documented					
Risk management efforts are supported by senior management.					
Employees are properly trained on risk management policies of the firm.					
The roles and responsibilities of each employee in the risk management efforts of the firm are well communicated to them.					
Controls are in place to evaluate the efficiency of the risk management program.					
Regular reviews of risk management efforts and reporting to senior management.					
Risks are subdivided into individual levels for further analysis					

APPENDIX 3: AVERAGE MEAN SCORES ON RISK MANAGEMENT PRACTICES FOR EACH INSURANCE COMPANY

		Risk Identification	Risk Assesment	Risk Mitigation	Risk Monitoring
#	**Name of Insurance Company**	**Average**	**Average**	**Average**	Average
1	AAR Insurance Kenya Ltd	3.20	3.80	4.83	3.43
2	Africa Merchant Assurance Company Ltd	3.40	4.60	4.50	4.57
3	AIG Kenya Insurance Company Ltd	3.80	5.00	4.83	4.71
4	APA Insurance Ltd	4.40	4.80	4.83	4.43
5	APA Life Assurance Limited	4.00	5.00	4.83	4.57
6	British American Insurance Company	4.00	4.80	4.83	4.57
7	Cannon Assurance Company Ltd	4.80	4.80	3.83	3.43
8	CFC Life Assurance Company Ltd	4.00	4.80	4.50	4.57
9	CIC General Insurance Company Ltd	4.20	4.80	4.00	4.86
10	CIC Life Assurance Company Ltd	3.80	4.20	4.00	4.29
11	Continental Reinsurance Company Ltd	3.60	3.60	4.17	4.29
12	East Africa Reinsurance Company Ltd	3.60	4.20	4.17	4.00

		Risk Identification	Risk Assesment	Risk Mitigation	Risk Monitoring
#	**Name of Insurance Company**	**Average**	**Average**	**Average**	Average
13	Fidelity Shield Insurance Company	3.80	4.00	4.17	4.29
14	First Assurance	4.00	4.80	4.33	4.86
15	GA Life Assurance	4.60	4.00	4.33	4.14
16	GA Insurance Ltd	2.60	2.80	3.50	4.57
17	Gateway Insurance Company Ltd	4.00	3.60	3.67	3.71
18	Geminia Insurance Company	3.80	3.60	3.33	2.71
19	ICEA LION General Insurance Company Limited	3.60	3.80	3.33	3.86
20	ICEA LION Life Insurance Company Limited	3.60	3.80	3.33	3.86
21	Intra Africa Insurance Company Limited	3.80	3.80	3.83	3.71
22	Invesco Assurance Company Limited	3.40	2.20	2.67	2.00
23	Kenindia Assurance Company Limited	3.80	3.40	3.33	3.71
24	Kenya Orient Insurance	3.40	4.00	3.67	3.71
25	Kenya Reinsurance Corporation Limited	3.20	4.00	3.67	2.86
26	Madison Insurance Company Limited	3.60	3.60	4.33	4.43

		Risk Identification	Risk Assesment	Risk Mitigation	Risk Monitoring
#	**Name of Insurance Company**	**Average**	**Average**	**Average**	Average
27	Mayfair Insurance Company Limited	2.80	3.60	4.17	3.71
28	Mercantile Insurance Company Limited	3.60	4.20	4.33	4.57
29	Metropolitan Life Insurance Company Limited	3.60	3.60	4.33	4.29
30	Occidental Insurance Company Limited	3.60	4.40	3.33	4.29
31	Old Mutual Life Insurance Company Limited	3.40	4.60	4.33	3.71
32	Pacis Insurance Company Limited	3.20	4.40	4.33	3.86
33	Pan Africa Life Insurance Company Limited	4.40	4.40	4.33	4.57
34	Phoenix of East Africa Insurance Company Limited	4.00	4.40	4.33	4.71
35	Pioneer Assurance Company Limited	4.60	4.40	4.17	4.14
36	Real Insurance Company Limited	4.40	4.40	4.17	4.00
37	Resolution Insurance Company Limited	3.60	4.60	4.50	4.43
38	Takaful Insurance	3.20	4.20	4.50	4.29
39	Tausi Insurance	3.60	3.60	4.00	4.57
40	The Heritage Insurance	4.40	4.20	4.33	4.71

		Risk Identification	Risk Assesment	Risk Mitigation	Risk Monitoring
#	**Name of Insurance Company**	**Average**	**Average**	**Average**	Average
41	Jubilee Insurance	4.60	4.40	4.17	4.43
42	Kenya Alliance Insurance	4.60	4.60	4.00	3.14
43	The Monarch Insurance	4.60	4.80	4.33	4.71
44	Trident Insurance	4.20	4.20	4.17	4.86
	TOTALS	168.40	182.80	180.67	181.14
	MEAN	3.83	4.15	4.11	4.12

APPENDIX 3: ROA PER YEAR FOR EACH INSURANCE COMPANY

No	Insurance Company	2008	2009	2010	2011	2012
1	AAR Insurance Kenya Limited	1.5	1.68	4.52	1.25	1.81
2	Africa Merchant Assurance Company Limited	0.98	1.12	1.21	1.13	4.58
3	Apollo Life Assurance Limited	3.24	3.67	6.03	4.9	4.61
4	AIG Kenya Insurance Company Limited	0.83	0.94	0.94	1.75	2.52
5	British-American Insurance Company (Kenya) Limited	0.98	1.11	1.12	1.64	2.79
6	Cannon Assurance Limited	1.49	1.5	1.56	1.27	2.08
7	Capex Life Assurance Company Limited	2.03	1.15	1.53	1.02	-0.12
8	CFC Life Assurance Limited	2.8	2.66	2.85	3.23	3.73
9	CIC General Insurance Limited	1.45	1.56	0.58	0.91	0.97
10	CIC Life Assurance Limited	0.61	0.69	0.81	0.99	0.43
11	Kenya Reinsurance Corporation Limited	1.78	1.86	2.61	2.51	2.56
12	Continental Reinsurance Company Ltd	4.56	1.16	2.85	1.7	0.9
13	Fidelity Shield Insurance Limited	3.21	3.56	4.53	5.62	6.02
14	First Assurance Company Limited	4.08	4.52	5.78	7.12	7.67
15	G A Insurance Limited	5.2	5.75	7.38	9.05	9.79
16	Gateway Insurance Company Limited	6.18	6.83	8.79	10.73	11.64
17	Geminia Insurance Company Limited	2.1	2.33	2.94	3.71	3.92
18	ICEA LION General Insurance Company Limited	1.3	1.46	1.8	2.35	2.42
19	ICEA LION Life Assurance Company Limited	1.31	1.47	1.82	2.37	2.44
20	Intra Africa Assurance Company Limited	5.3	5.87	7.53	9.22	9.98
21	Invesco Assurance Company Limited	1.2	1.34	1.65	2.16	2.22
22	Kenindia Assurance Company Limited	1.32	2.79	3.13	4.54	5.13
23	Kenya Orient Insurance Limited	1.5	3.08	6.81	4.56	5.35
24	Madison Insurance Company Kenya Limited	1.41	1.58	1.96	2.54	2.63
25	Mayfair Insurance Company Limited	4.52	5.01	6.42	7.89	8.51

No	Insurance Company	2008	2009	2010	2011	2012
26	Mercantile Insurance Company Limited	1.16	1.31	1.6	2.11	2.16
27	Metropolitan Life Insurance Kenya Limited	0.83	0.94	0.94	1.75	2.52
28	Occidental Insurance Company Limited	0.98	1.11	1.12	1.64	2.79
29	Old Mutual Life Assurance Company Limited	1.49	1.5	1.56	1.27	2.08
30	Pacis Insurance Company Limited	1.78	1.86	2.61	2.51	2.56
31	Pan Africa Life Assurance Limited	4.56	-11.65	-11.75	0.78	-2.46
32	Phoenix of East Africa Assurance Company Ltd	3.21	3.56	4.53	5.62	6.02
33	Pioneer Assurance Company Limited	1.5	1.68	4.52	1.25	1.81
34	Real Insurance Company Limited	3.24	3.67	6.03	4.9	4.61
35	Resolution Insurance Company Limited	0.83	0.94	0.94	1.75	2.52
36	Shield Assurance Company Limited	2.28	2.53	3.2	1.99	6.24
37	UAP Insurance Company Limited	2.03	1.15	1.53	1.02	-0.12
38	Tausi Assurance Company Limited	2.8	2.66	2.85	3.23	3.73
39	The Heritage Insurance Company Limited	2.08	2.13	3	1.89	6.04
40	The Jubilee Insurance Company of Kenya Limited	0.93	0.84	1.14	1.95	2.82
41	Takaful Insurance	0.89	1.2	0.7	1.71	2.45
42	Kenya Alliance Insurance	1.3	1.63	1.72	1.82	2.52
43	The Monarch Insurance	1.41	1.61	1.12	1.72	1.9
44	Trident Insurance	1.52	2.3	1.92	2.82	2.19
	TOTALS	95.7	85.66	116.43	135.89	156.96
	Mean	2.175	1.946818	2.646136	3.088409	3.567273
	Standard Deviation	1.474788	1.395284	1.626695	1.757387	1.888723