THE RELATIONSHIP BETWEEN RISK MANAGEMENT PRACTICES AND FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN KENYA

BY

NJERU, ROSENANCY MUTHONI

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DECLARATION

This is my original work and has not been presented for a degree award in any other university.

Signature _____ Date _____

NJERU, ROSENANCY MUTHONI

D61/72276/2011

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

Signature _____ Date _____

MR. MIRIE MWANGI

LECTURER, DEPARTMENT OF FINANCE & ACCOUNTING
SCHOOL OF BUSINESS
UNIVERSITY OF NAIROBI

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DEDICATION

To my dear daughters Stacy, Sharon and Stephanie. May this be an inspiration to strive for greater achievements.

ABSTRACT

Risk is not inherently bad for organizations. Acceptable levels of risk should be retained and actively managed at firm level as this could provide opportunities for a firm to acquire competitive advantage, hence ensuring financial sustainability. 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 analyzing risks, developing and implementing risk handling plans and monitoring the progress of these plans 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 investigate the relationship between the risk management practices adopted by Kenyan insurance companies and the financial performance of these companies. An exploratory research design was used for the study, with the target population being the 46 registered insurance companies in Kenya. The study used both primary and secondary data. Primary data was collected through questionnaires with 40 insurance companies giving a response. Secondary data was collected by use of desk search techniques from published reports and other documents for a period of five years from 2008 to 2012. Content analysis was used to analyze qualitative data while the quantitative data was analyzed using descriptive statistics 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 influence 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 positive relationship between adoption of risk management practices and financial performance of insurance companies in Kenya. The study recommends that insurance companies in Kenya 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 best practice by adopting Enterprise Risk Management (ERM) which involves managing risk across the entire organization. This will ensure that these companies remain globally competitive.

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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

IRA   -   Insurance Regulatory Authority

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

Insurers are in the risk business and assume various types of risks. Kadi (2003), asserts that most insurance companies accept to cover all the insurable risks before carrying out proper analysis of the expected claims from clients and without putting in place a mechanism of identifying various methods of reducing risks. As a result, they have accumulated claims from clients and this has led to increased losses (Magezi, 2003). Accordingly, these companies' loss ratios have consistently increased, hence hindering financial performance.

In recent years, however, risk management has received increasing focus as a central activity of insurance companies. According to Meredith (2004), management of insurance companies should carefully judge the insurable risks so as not to incur excessive losses in settling claims. Managing risks is an important factor which insurance companies must attend to if they are to improve financial performance (Okotha, 2003).

The justification for studying insurance activities by focusing on risk management can be traced to Merton (1995), who argued that financial systems should be analyzed in terms of a "functional perspective" rather than an "institutional perspective" since over long periods of time, functions have been much more stable than institutions. Research on financial services has followed this functional approach by relating insurance activities to the functions that they perform. Merton (1995), suggested that, *inter alia,* the central function of an insurance institution is its ability to distribute risk across different participants. According to Saunders and Cornett (2008), modern

insurance companies are in the risk management business as they undertake the functions of bearing and managing risks on behalf of their customers through the pooling of risks and the sale of their services as risk specialists.

1.1.1 Risk Management Practices

Banks (2004), defines risk as uncertainty associated with a future outcome or event. Applied more specifically to corporate activities, it is the expected variance in profits, losses, or cash flows arising from an uncertain event. Risk management is defined by Rejda (2008), as the process through which an organization identifies loss exposures facing it and selects the most appropriate techniques for treating such exposures. Kiochos (1997) and Stulz (2003), argue that 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. In practice, however, the process can be difficult and balancing between risks with a high probability of occurrence but lower loss against those with high loss but lower probability of occurrence can be mishandled. Banks (2004), asserts 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.

Kiochos (1997), states that the risk management process involves four steps; that is, identifying potential losses, evaluating potential losses, selecting appropriate risk management techniques for treating loss exposures and implementing and administering the risk management program. The practices that are employed by companies in their risk management efforts borrow heavily from these simple steps and are discussed below.

1.1.1.1 Risk Identification

Risk identification sets out to identify an organization's exposure to uncertainty. This requires an intimate knowledge of the organization, the market in which it operates, the legal, social, political and cultural environment in which it exists, as well as the development of a sound understanding of its strategic and operational objectives, including factors critical to its success and the threats and opportunities related to the achievement of these objectives (Venette, 2003). Risk identification should be approached in a methodical way to ensure that all significant activities within the organization have been identified and all the risks flowing from these activities defined. All associated volatility related to these activities should be identified and categorized. Departments and the employees must be assigned with responsibilities to identify specific risks (Power, 2004).

1.1.1.2 Risk Assessment and Measurement

Risk assessment and measurement aims at evaluating and determining the impact of each risk on the firm's operations. It is the determination of quantitative or qualitative value of risk related to a concrete situation and a recognized threat (also called hazard); and consists of an objective evaluation of risk in which assumptions and uncertainties are clearly considered and presented. Part of the difficulty of risk management is that measurement of both of the quantities in which risk assessment is concerned - potential loss and probability of occurrence - can be very difficult and the chance of error in the measurement of these two concepts is large. 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 (Power, 2004).

Rejda (2008), suggests that risk measurement involves estimating the frequency and severity of loss for each type of loss exposure. Once loss exposures are analyzed, they can then be ranked in order of their relative importance. He further asserts that loss severity is more important than loss frequency.

Anderson (2005) and other critics have expressed concerns that risk assessment tends to be overly quantitative and reductive, arguing that risk assessments ignore qualitative differences among risks. Risk assessment is beneficial to the firm since the results serve as the basis for cost savings through avoidance and the judicious use of available resources for risk mitigation.

1.1.1.3 Risk Mitigation

Risk is inherent in all businesses and can never be completely eliminated. As such, Rejda (2008), notes that risk can only be managed through careful selection of one or a combination of the various techniques available for mitigating loss exposures and suggests two main techniques for managing risk, that is, risk control and risk financing.

According to Rejda (2008), risk control refers to techniques that reduce the frequency and severity of losses. Vaughan and Vaughan (2008), describe risk control as the process of minimizing the loss to which the firm is exposed, using the least possible cost and suggest two methods of risk control; (i) Risk avoidance: this occurs when a decision is made to refuse to accept a risk because the claims resulting from potential loss would not be worth the potential gain. Avoidance is best used when the exposure has catastrophic potential and the risk cannot be reduced or transferred. (ii) Risk reduction: this refers to measures that minimize the likelihood of a loss or the potential severity of those losses that do occur.

Rejda (2008), describes risk financing as the techniques that provide for the financing of losses. Vaughan and Vaughan (2008), assert that risk financing involves arranging the availability of funds to meet losses arising from the risks that remain after the application of risk control techniques and suggest two methods of risk financing; (i) Risk transfer: this involves measures such as re-insurance and hedging through instruments such as Futures and Forward contracts; (ii) Risk retention: this involves retaining the losses that can't be avoided or transferred. It could also be unintentional, that is, when the risk is not recognized, and is therefore retained by the firm.

According to Banks (2004), there are times when it might actually make sense for a firm to intentionally retain, and even increase, its loss exposure as this helps to increase the value of the firm for the shareholders. According to Rejda (2008), retention calls for adequate technical provisions in the firm's balance sheet to pay for claims in the event of a loss occurring.

1.1.1.4 Risk Management Program Implementation and Monitoring

Implementation of a risk management program begins with proper documentation in the form of a risk management policy statement that; (i) Outlines the firm's risk management objectives; (ii) Outlines the firm's policy on loss control; (iii) Educates top managers in regard to the firm's risk management process; (iv) Gives the risk manager greater authority and (v) Provides standards for judging the risk manager's performance (Rejda, 2008). As part of implementation, employees should also be trained on risk management policies of the firm and on their roles and responsibilities in the risk management efforts of the firm. The policies should also be communicated to all stakeholders to ensure maximum cooperation. After implementation, Rejda

(2008) suggests that the risk management program should be periodically reviewed and evaluated to determine whether intended objectives are being attained.

1.1.2 Financial Performance

From an accounting viewpoint, the financial performance of a firm can be measured from three perspectives: Solvency, profitability and liquidity.

Quach (2005), indicated that solvency measures the amount of borrowed capital used by the business relative to the amount of owners' equity capital invested in the business. In other words, solvency measures provide an indication of the business' ability to repay all indebtedness if all of the assets were sold. It also provides an indication of the business' ability to withstand risks by providing information about its ability to continue operating after a major financial adversity.

Profitability measures the extent to which a business generates a profit from the factors of production: labor, management and capital. 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 (Zenios et al. 1999). One of the most popular measures of profitability is the ROE which measures accounting earnings for a period per dollar of shareholders' equity invested. Another common measure of profitability is the ROA. It is a measure of the return on each dollar invested in assets, but does not distinguish between capital raised from shareholders and that raised from creditors (Zender, 2004). For companies to be able to measure and monitor their financial performance, they must monitor their profitability levels.

Liquidity measures the ability of the business to meet financial obligations as and when they fall due without disrupting the normal, ongoing operations of the business.

Liquidity can be analyzed both structurally and operationally. Structural liquidity refers to the balance sheet (assets and liabilities) and operational liquidity refers to cash flow measures (Quach, 2005).

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 Practices and Financial Performance

According to Babbel and Santomero (1996), insurers should assess the various types of risks and devise ways of effectively managing them. They further contend that insurers should only accept and manage at firm level those risks that are uniquely a part of the insurers' services.

Risk management has become a key focus of financial markets in the 21st century. According to Banks (2004), the main focus has mainly been on controlling and for regulatory compliance, as opposed to enhancing financial performance. The key theory on risk management by firms can be traced to Stulz (1984). According to Allen and Santomero (1996), Stulz first suggested a viable economic reason why a firm's managers, who are presumed to be agents working on behalf of the owners of the firm, 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. Banks (2004), suggests that by managing risks, the managers are able to increase the value of the firm through ensuring continued profitability of the firm.

Sound risk management practices need to be embedded in the daily operations of any insurance company so as to prevent losses which would deplete company assets. According to Jolly (1997), preventing losses through precautionary measures is a key element in reducing risks and consequently, a key driver of profitability. Insurance companies, therefore, have a direct financial interest in reducing losses through preventing accidents and ensuring that if one occurs, its effects on human life and the environment are minimized. Gold (1999), asserts that insurance companies could not survive with increased loss and expense ratios. Ellul and Yerramilli (2010), contend that in order for risks to be successfully managed, they must first be identified and measured. The firm must know what risks it faces and the potential impact of these risks on firm value, in order to make decisions on what measures to put in place to mitigate against these risks.

Given the importance of risk management in insurance sector functioning, the efficiency of its risk management is expected to significantly influence its financial performance. Corporate finance literature has linked the importance of risk management with the shareholder value maximization proposition. Such propositions have been put forward by Ali and Luft (2002), who suggested that a firm will only engage in risk management if it enhances shareholder value; Banks (2004), contends 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), asserts that risk management is an important function of insurance institutions in creating value for shareholders and customers.

Generally, every company faces various types of risks in its daily operations and the key to survival and superior performance, therefore, lies in how each firm manages risk. A study by Ernst & Young (2012), reveals that companies with more mature risk management practices outperform their peers financially, translating to competitive advantage for such companies. The study further reveals that companies with more mature risk management practices generated the highest growth in revenue, EBITDA and EBITDA/EV.

1.1.4 The Insurance Industry in Kenya

The main players in the Kenyan insurance industry are insurance companies and other insurance service providers. According to IRA, the numbers of licensed insurance industry players in Kenya are as follows: 174 insurance brokers, 129 insurance investigators, 96 motor assessors, 46 insurance companies, 26 medical insurance providers, 26 insurance surveyors, 20 loss adjusters, 8 risk managers, 3 re-insurance companies and 1 claims settlement agent. The industry regulatory body is the IRA which is mandated to supervise and regulate the insurance industry players. The industry has also established self-regulation through the AKI. The professional body of the industry is IIK, which deals mainly with training and professional education.

The 2011 AKI insurance industry report indicates gross premium written by the industry at Kshs 91.60 billion representing a growth of 15.90%. The gross premium from general insurance was Kshs 60.67 billion while life business premiums and pension contributions amounted to Kshs 30.93 billion. The gross profit before tax rose to Kshs. 9.78 billion in 2011 representing a growth of 2.62%. Over the same period,

the total assets held by the industry increased by 10.2% to Kshs. 230.76 billion while the total liabilities incurred increased by 13.7% to Kshs. 183.70 billion. The net assets decreased by 1.7% to Kshs. 47.06 billion. The claims and total expenses (including net commissions) increased by 0.2% and 11.7% to Kshs. 39.58 billion and Kshs. 28.05 billion respectively. Insurance penetration in the country stood at 3.02% as at 2011.

The industry is faced with many challenges, some of which include: low penetration of insurance services especially among the low end market mainly due to lack of proper understanding of the value of insurance among this group and intense competition and price wars especially in general insurance business because of many small players of almost equal size. The industry is also riddled with corporate governance issues because many of the companies are owned principally by individuals who exert control and interfere with the independence of managers. This has led to the collapse of some of the insurance companies. To address this challenge, the Finance Bill, 2012 contains rules regarding significant shareholding and sets individual ownership at a threshold of 25%. This is aimed at reducing the influence and power of key shareholders in the companies and hence minimizes fraud and other malpractices. Other challenges facing the industry include: 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 and industry saturation.

The above challenges all represent a risk to the sustainability of the Kenyan insurance industry. The last decade saw the industry characterized by collapse of several insurance companies and although industry reports continue to show improved

performance, the insurance industry in Kenya still lags behind most other industries in the financial sector. Although there are various determinants of financial performance such as the condition of the general economic environment, management, government policy, regulation and other macroeconomic factors, it is evident from the foregoing challenges that a lack of an effective risk management framework within the industry could threaten the survival of insurance companies. It was in light of this that the regulatory body, IRA, established a comprehensive risk management guideline for the insurance sector, effective June 2013.

1.2 Research Problem

Risk management is at the core of an insurance company's operations. This involves integrating risk management practices into processes, systems and culture of the company. Organizations face increasing pressure from various stakeholder groups to manage their risks effectively and to report their performance transparently 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 that there exists a positive relationship between the maturity of an organization's risk management framework and its financial performance. The findings of the study reflect that higher risk maturity is associated with improved ROA and stock performance for most firms. This point of view was reinforced by the findings of another study by Ernst & Young (2012). From their findings, Ernst & Young (2012), suggest that companies with more mature risk management practices outperform their peers financially, and tend to generate the highest growth in revenue.

Mwangi (2010), conducted a study on the effect of risk management practices on the financial performance of commercial banks in Kenya. The study findings 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 do have significant effect on financial performance more 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. This implied that although there were other determinants of performance not included in the study, the banks can improve their performance by focusing on developing strong risk management policies and integrating risk management in the process of setting achievable organizational objectives.

This study on the relationship between the various risk management practices adopted by the insurance 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 the risk management practices used by insurance companies in Kenya and their financial performance.

1.3 Research Objectives

The objective of this study was to assess the relationship between the risk management practices adopted by Kenyan insurance companies and the financial performance of these companies.

1.4 Value of the Study

The study offers valuable contributions from both a theoretical and practical perspective. Theoretically, it contributes to the general understanding of risk management practices and their effect on financial performance.

Given the recent concern with risk management at a global level, the study will ensure that Kenyan insurance companies follow international best practice of the insurance sector. In particular, the study will assist insurance companies operating in Kenya to identify the gaps in their risk management practices and thus be able to improve the process of managing risks and subsequently, enhance their financial performance. As a result, the study will benefit the general public to the extent that insurance companies will be better placed to manage risk and hence issues of non-payment of claims due to insolvency and fraud will be minimized. It will also be useful for government in formulating policies regarding taxation and other regulatory requirements of the

insurance sector. Lastly, the study will add to the existing body of knowledge on risk management to benefit academicians and aid further research on risk management not only in the insurance sector, but also in the larger financial sector.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter summarizes the information from other researchers who have carried out their research in the same field of study. The specific areas covered here are various theories about risks and the impact of risk and risk management on organizations' 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). During the last few decades, various theories have emerged to explain why firms have taken a keen interest in risk management. These are discussed below:

2.2.1 Agency Theory

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 goal of shareholder wealth maximization.

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.

2.2.2 Managerial Self Interest

This theory was first put forward by Stulz (1984), who argued that managers of a firm who hold a significant portion of their personal wealth in the form of stock and capitalization of their earnings from the firm have limited ability to diversify such wealth. Such managers would prefer less risk in order to reduce volatility of firm earnings and hence protect their personal interest in the firm.

Breeden and Viswanathan (1990), and later Demarzo and Duffie (1992), suggest that observed outcomes may influence owner perception of managerial talent. For this reason, managers prefer less risk so as to achieve reduced volatility of firm returns and to protect the market value of the firm. This would in turn influence the perception of the owners regarding the managers.

2.2.3 Capital Market Imperfections

Froot, Scharfstein and Stein (1993), argue that external financing is more costly than internally generated funds (retained earnings) due to capital market imperfections such as transaction costs of obtaining external funds, information asymmetry regarding the riskiness of the investment opportunities present in the firm and high cost of potential future bankruptcy. Failure to manage risks would lead to volatility of profitability and this in turn would cause firms to seek external financing to take advantage of profitable investment opportunities when profits are low.

This, therefore, gives firms an incentive to actively manage risks in order to avoid variability of returns and hence ensure that adequate retained earnings, which are a cheaper source of financing, exist to take advantage of profitable investment opportunities. Risk management becomes an optimal activity of the firm in that it

allows the firm to obtain the highest expected shareholder value (Allen and Santomero, 1996).

2.2.4 Bankruptcy Costs

The theory of bankruptcy costs was first postulated by Warner (1977) and more recently by Weiss (1990) who gave more evidence on financial distress. 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.

2.3 Empirical Evidence

In a study on the risk management practices on construction project companies in Klang Valley, Malaysia, Yusuwan et al., (2008) focused on identifying the level of awareness of risk management, examining the policy undertaken when dealing with risks in a construction project and identifying the problems and challenges for the implementation of risk management. Their respondents were 27 companies from public and private sectors that operated in Klang Valley. The study employed questionnaire survey and interviews. The study findings were that in terms of level of awareness and perception of risk management, 44.4% had heard occasionally, 29.6%

had heard and attended training, 14.8% had practised risk management and 11.1% had never heard about risk management at all. 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. From these findings, it is clear that risk management has a bearing on productivity and performance of companies.

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 announce the hiring of a CRO (an event frequently accompanied by adoption of ERM) 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. They 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. Similarly, risks found faced by Islamic banks were found to be significantly higher than those faced by conventional banks.

Ellul and Yerramilli (2010), carried out a study to investigate whether a strong and independent risk management system is significantly related to bank risk taking and performance during credit crisis in a sample of 79 large US banks. They constructed an RMI based on five variables related to the strength of a bank's risk management. These were: (i) Whether the bank has a designated CRO who is a member of the executive board; (ii) Whether the CRO is among the top five highly paid executives, the ratios of the CRO's total compensation to the CEO's total compensation; (iii) Whether at least some of the non-executive directors on the bank's risk committee met frequently in the respective year as compared to the average value across other sample banks. Their findings indicate that banks with a high RMI value in 2006 had lower exposure to private label mortgage backed securities, were less active in trading off balance sheet derivatives and a smaller fraction of non-performing loans, a lower downside risk and a higher Sharpe ratio during the crisis years of 2007-2008.

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 and to investigate the impact of each risk management element on these banks'

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.

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 credit risk management.

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.

2.4 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. The literature also shows that a comprehensive and well-coordinated risk management process will ensure that the process yields the desired results. Firstly, firms should engage in risk identification in order to find out which risks face the firm. All the identified risks should then be assessed and measured. From this, the firm is able to identify the potential impact of each risk on its financial performance and on general firm survival. Once the impact has been known, the managers must then decide which risks to accept and actively manage at firm level and which ones are to be avoided. The firm then needs to put in place appropriate budgetary measures that can adequately cater for potential losses that may arise from retained risks or transfer the risks to third parties using appropriate techniques such as re-insurance and hedging. This will ensure that potential losses do not negatively impact the financial performance of the firm. The literature further indicates that risk in not inherently a bad thing for the firm, and that in fact, some risks do present opportunities for firms if they are well managed. This gives such firms a comparative advantage over other firms in the market place, hence increasing firm value.

From a contextual perspective, most of the studies on risk management by firms have been done in other countries. The few that have been done in Kenya have mainly focused on risk management in relation to financial performance of commercial banks and an even fewer number have studied risk management in the microfinance sector and SACCOS. Local studies that have attempted to study risk management in the insurance sector have only focused on the risk management strategies employed by insurance companies, without establishing the impact of these strategies on the financial performance of insurance companies in the Kenyan context. This study therefore sought to fill the gap in knowledge by establishing the relationship between

risk management practices and financial performance of insurance companies in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methods that were used in the study. It is divided into research design, target population, data collection, data analysis methods and expected output.

3.2 Research Design

The main focus of this study was quantitative. The research adopted an exploratory research design. This research design was adopted since it is a non-experimental investigation in which researchers seek to identify cause and effect relationship by forming groups of individuals/objects in whom the independent variable is present or present at several levels and then determining whether the groups differ in the dependent variable (Mugenda and Mugenda, 1999). It is the easiest research free form material bias and enables one to intensively study a particular area. This may not be possible with other methods of study.

3.3 Target Population

This study was a survey of all insurance companies currently registered and operating in Kenya. According to the IRA, there were 46 insurance companies registered and operating in Kenya at the start of this study (see Appendix II). The census approach was intended to increase accuracy and reliability of the data collected. Mugenda and Mugenda (1999), explain that the target population should have some observable characteristics, to which the researcher intends to generalize the results of the study.

3.4 Data Collection

The study used both primary and secondary data. Primary data was obtained through questionnaires which were administered through drop and pick method to respondents. A 5-point Likert scale was used to assess the effects of risk management practices on financial performance of the insurance companies. Secondary data was collected by use of desk search techniques from published reports and other documents for a period of five years from 2008 to 2012. Secondary data sources included government publications, journals, insurance survey reports, annual insurance industry reports and periodicals.

3.5 Data Analysis

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data was then coded to enable the responses to be grouped into various categories. A descriptive analysis was employed. Descriptive statistics such as means, standard deviation and frequency distribution were used to analyze the data. The quantitative data on risk management was measured in real values by normalizing. In addition, the researcher conducted a multiple regression analysis so as to determine the relationship between the insurance company financial performance and the risk management practices. A probabilistic model was used to represent the randomness that is part of real-life process using simple linear regression model to analyze the interval variables, the independent and dependent variables.

3.5.1 Analytical Model

Simple regression was used in the study. It provides the value of R^2, which was used to indicate how well the model performed. In this study, the independent variable was

evaluated in terms of its predictive power. The main goal of the study was to explore the relationship between risk management practices and financial performance of insurance companies in Kenya.

The regression equation was; $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Whereby;

Y   =Financial Performance (measured using ROA)

X1   =Risk Identification (measured using Inspection, Financial statement analysis, establishing standards and Risk rating and collateral)

X2   =Risk Assessment (measured using Approximations and projections)

X3   =Risk Mitigation (Risk Control and Risk Financing measures)

X4   =Risk Management Implementation and Monitoring (Controls, Responses, Reporting and review)

The values of X1, X2, X3 and X4 were computed from the mean score of the responses on each Likert-scaled data for each insurance company. The mean score was thus obtained for the respective variables for each insurance company, and the values were then utilized for regression analysis. The value of Y (financial performance) was an average for the five year period, that is, 2008 – 2012.

3.5.2 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 analyze the data.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

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

The study targeted 46 registered insurance companies in Kenya out of which 40 responded contributing to a response rate of 86.95%. 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.

4.2 Demographic Data

The study first sought some general information about the insurance companies.

4.2.1 Number of branches of each insurance company

The results were as shown in Table 4.1 below.

Table 4.1 Number of branches of the company

	Frequency	Percentage
0 - 10 branches	4	10
11 - 20 branches	10	25
21 - 30 branches	12	30
31 - 40 branches	14	35
Total	**40**	**100**

Table 4.1 depicts that a majority of the insurance companies had a wide branch network in Kenya with 35% of the companies having 31-40 branches.

4.2.2 Number of years that the company had been in operation

The results were as shown in figure 4.1 below.
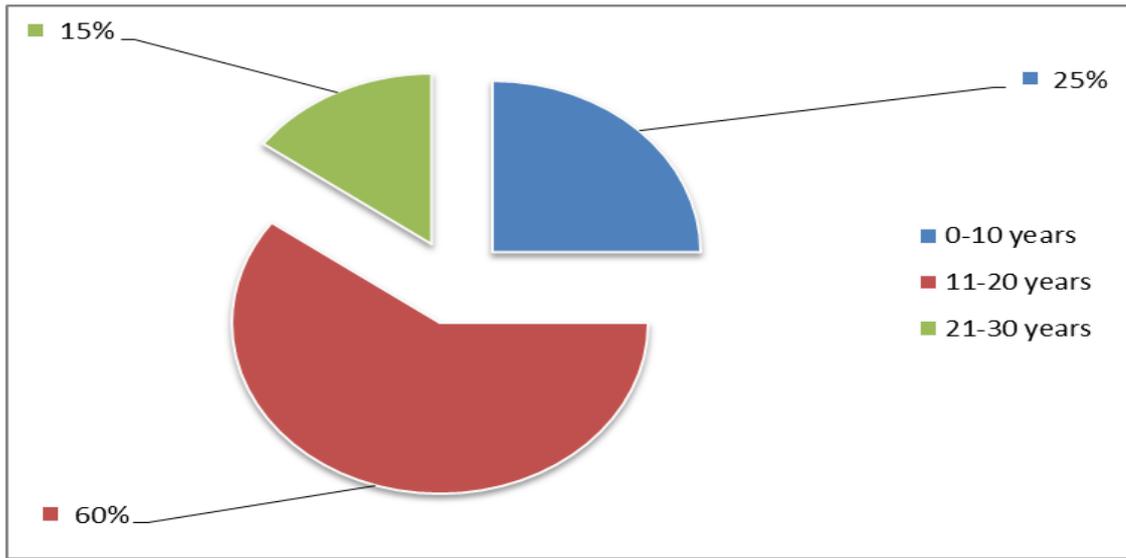
Figure 4.1 Number of years of operation

Figure 4.1 shows that a majority of the insurance companies (60%) had been operational for 11-20 years, 25% for 0-10 years while 15% had been operational for 21-30 years. These findings imply that majority of the insurance companies had been operational for a long duration and hence they had rich information on the impact that risk management practices could have on the financial performance of insurance companies in Kenya.

4.3 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 I.

4.4 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).

4.4.1 Ratio Analysis of Financial Performance

The study utilized ROA to measure the financial performance of the insurance companies. ROA is computed as follows;

ROA = <u>Net Income</u>

        Average Total assets

Table 4.2 Descriptive Statistics for Return on Assets

	N	Minimum	Maximum	Mean	Std. Deviation
2008	40	.61	6.18	2.2645	1.45059
2009	40	-11.65	6.83	1.6528	3.44163
2010	40	-11.75	8.79	2.4093	3.95387
2011	40	.78	10.73	3.1725	2.56988
2012	40	-2.46	11.64	3.6135	3.04607

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 high standard deviation is a sign of greater 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.

4.5 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.

4.5.1 Regression Analysis

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

Table 4.3 Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.919	0.845	0.789	0.6273

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 4.3 reveals an R^2 of 0.845 which implies that the four independent variables studied explain only 84.5% of the variations in financial performance of insurance companies in Kenya. Consequently, this means that other factors not studied in this research explain 15.5% of the variations in financial performance of Kenyan insurance companies.

4.5.2 ANOVA Results

Table 4.4 ANOVA of the regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.534	10	1.267	9.475	.0031

	Residual	9.307	30	2.327		
	Total	**11.841**	**40**			

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.

4.5.3 Interpretation of the Results

Table 4.5 Coefficient of determination

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.147	0.2235		5.132	0.000
	Risk identification	0.752	0.1032	0.1032	7.287	.000
	Risk assessment & measurement	0.439	0.1937	0.0937	4.685	.000
	Risk mitigation	0.545	0.2178	0.1178	4.626	.000
	Risk management program implementation and monitoring	0.487	0.3425	0.1425	3.418	.000

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;

$(Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon)$ becomes:

$(Y = 1.147 + 0.752X_1 + 0.439X_2 + 0.545X_3 + 0.487X_4 + \varepsilon)$

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 analyzed also show that taking all other independent variables at zero, a unit increase in risk identification will lead to a 0.752 increase in financial performance, a unit increase in risk assessment and measurement will lead to a 0.439 increase in financial performance, a unit increase in risk mitigation will lead to a 0.545 increase in financial performance while a unit increase in risk management program implementation and monitoring will lead to a 0.487 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.

4.6 Discussion of Findings

The study established that most insurance companies in Kenya had been in operation for a long period of time, some for as long as over 20 years. 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.

The study also found that 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 long periods.

With regard to the various risk management practices adopted by the insurance companies, 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 RECOMENDATIONS

5.1 Introduction

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.

5.2 Summary of Findings

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 0.752 increase in financial performance. This was followed closely by risk mitigation whose unit increase led to an increase of 0.545 in financial performance. A unit increase in risk management implementation and monitoring led to an increase of 0.487 in financial performance with risk assessment and measurement having the least influence on the companies' financial

performance, at 0.439 increase 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 R^2 of 84.5%. This implies that better risk management by companies leads to improved financial performance.

5.3 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 75% of them having been in existence for over 10 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 84.5% 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 15.5% of the variation in financial performance of these companies.

5.4 Recommendations

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. This will help to identify

any weaknesses in the risk management practices employed by the companies and hence take timely remedial action.

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.

5.5 Limitations of the Study

The study made use of only one measure of financial performance, that is, ROA. There are, however, other measures of financial performance that can be used such as ROE.

The study partly used secondary data which had already been compiled by Kenyan insurance industry sources. 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 did not use a control variable and it is therefore possible that a lack of inclusion of some of the companies may cause differences in findings.

The respondents were initially reluctant to give information easily due to suspicion that information given could get into the hands of competitors. This resulted in more time being spent to convince respondents. It is also possible that this may have resulted in a lower response rate.

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.

5.6 Suggestions for Further Research

This study explored the relationship between risk management practices and financial performance of insurance companies in Kenya. Similar studies should be carried out in other sectors of the Kenyan economy for comparison purposes so as to allow for generalization of findings on the relationship between risk management practices and financial performance of firms in Kenya.

Lastly, further studies should be carried out to establish the other factors that cause 15.5% 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.

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APPENDICES

Appendix I: Questionnaire

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 firm have?

    0-10   ☐

    11-20   ☐

    21-30   ☐

    31 -40   ☐

3) How long has your Company been in operation (In Years):

    0-10 year   ☐

    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 your 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.					

THANK YOU FOR YOUR FEEDBACK.

Appendix II

List of Registered Insurance Companies - 2013

Name

1. AAR Insurance Kenya Limited

2. APA Insurance Limited

3. Africa Merchant Assurance Company Limited

4. Apollo Life Assurance Limited

5. AIG Kenya Insurance Company Limited

6. British-American Insurance Company (Kenya) Limited

7. Cannon Assurance Limited

8. Capex Life Assurance Company Limited

9. CFC Life Assurance Limited

10. CIC General Insurance Limited

11. CIC Life Assurance Limited

12. Corporate Insurance Company Limited

13. Directline Assurance Company Limited

14. Fidelity Shield Insurance Limited

15. First Assurance Company Limited

16. G A Insurance Limited

17. Gateway Insurance Company Limited

18. Geminia Insurance Company Limited

19. ICEA LION General Insurance Company Limited

20. ICEA LION Life Assurance Company Limited

21. Intra Africa Assurance Company Limited

22. Invesco Assurance Company Limited

23. Kenindia Assurance Company Limited

24. Kenya Orient Insurance Limited

25. Madison Insurance Company Kenya Limited

26. Mayfair Insurance Company Limited

27. Mercantile Insurance Company Limited

28. Metropolitan Life Insurance Kenya Limited

29. Occidental Insurance Company Limited

30. Old Mutual Life Assurance Company Limited

31. Pacis Insurance Company Limited

32. Pan Africa Life Assurance Limited

33. Phoenix of East Africa Assurance Company Ltd

34. Pioneer Assurance Company Limited

35. Real Insurance Company Limited

36. Resolution Insurance Company Limited

37. Shield Assurance Company Limited

38. Takaful Insurance of Africa Limited

39. Tausi Assurance Company Limited

40. The Heritage Insurance Company Limited

41. The Jubilee Insurance Company of Kenya Limited

42. The Monarch Insurance Company Limited

43. Trident Insurance Company Limited

44. UAP Insurance Company Limited

45. UAP Life Assurance Limited

46. Xplico Insurance Company Limited

Source: Insurance Regulatory Authority

Appendix III: Average Mean Scores of Risk Management Practices For Each Insurance Company

S. No	Insurance Company	Risk Identification	Risk Assessment	Risk Mitigation	Risk Monitoring
1	APA Insurance Limited	4	3.67	3.67	3.6
2	Africa Merchant Assurance Company Limited	4.4	4.67	4.5	4.6
3	Apollo Life Assurance Limited	3	4	4.33	4.2
4	AIG Kenya Insurance Company Limited	4.8	5	5	5
5	British-American Insurance Company (Kenya) Ltd	3.8	3.5	3.33	3.4
6	Cannon Assurance Limited	3.6	3.5	3.33	3.4
7	Capex Life Assurance Company Limited	3.4	3.67	4	3.8
8	CFC Life Assurance Limited	4.2	4.33	4.67	4.6
9	CIC General Insurance Limited	3.8	4	4.33	4.2
10	CIC Life Assurance Limited	4	3.67	3.67	3.6
11	Corporate Insurance Company Limited	3.6	4	4.33	4.2
12	Directline Assurance Company Limited	4	4.17	3.83	4
13	Fidelity Shield Insurance Limited	4.2	4.67	4.5	4.6
14	First Assurance Company Limited	3.6	3.5	3.33	3.4
15	G A Insurance Limited	3.8	4	3.67	3.8
16	Gateway Insurance Company Limited	3.8	4.5	4.33	4.4
17	Geminia Insurance Company Limited	3.8	4	4	4
18	ICEA LION General Insurance Company Limited	4	4.67	4.5	4.6
19	ICEA LION Life Assurance Company Limited	3.6	3.67	3.67	3.6
20	Intra Africa Assurance Company Limited	4.6	4.67	4.67	4.6
21	Invesco Assurance Company Limited	4	4.33	4.17	4.2
22	Kenindia Assurance Company Limited	4	4.5	4.33	4.4
23	Kenya Orient Insurance Limited	4	4	3.67	3.8
24	Madison Insurance Company Kenya Limited	3.4	4.17	4.17	4.2
25	Mayfair Insurance Company Limited	3.8	4.17	4.17	4.2
26	Mercantile Insurance Company Limited	4.6	5	5	5
27	Metropolitan Life Insurance Kenya Limited	3.8	4	4.17	4
28	Occidental Insurance Company Limited	4.2	4.17	4.33	4.2
29	Old Mutual Life Assurance Company Limited	3.4	4	4.33	4.2
30	Pacis Insurance Company Limited	3.4	4	4.33	4.2
31	Pan Africa Life Assurance Limited	3.4	4	4.33	4.2
32	Phoenix of East Africa Assurance Company Ltd	3.6	4	4.33	4.2
33	Pioneer Assurance Company Limited	3.8	4	4.33	4.2
34	Real Insurance Company Limited	3.2	4	4.33	4.2
35	Resolution Insurance Company Limited	3.4	4	4.33	4.2
36	Shield Assurance Company Limited	3.4	4.17	4.17	4.2
37	UAP Insurance Company Limited	3.8	4.17	4.17	4.2
38	Tausi Assurance Company Limited	3.8	4.17	4.17	4.2
39	The Heritage Insurance Company Limited	4.6	5	5	5
40	The Jubilee Insurance Company of Kenya Limited	4.4	4.67	4.5	4.6
	MEAN	**3.8500**	**4.1595**	**4.1998**	**4.1800**

Appendix IV: ROA Per Year For Each Insurance Company

S. No	Insurance Company	2008	2009	2010	2011	2012
1	APA Insurance Limited	1.50	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	4.90	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	1.50	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	2.80	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	Corporate Insurance Company Limited	1.78	1.86	2.61	2.51	2.56
12	Directline Assurance Company Limited	4.56	-11.65	-11.75	0.78	-2.46
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	5.20	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	2.10	2.33	2.94	3.71	3.92
18	ICEA LION General Insurance Company Limited	1.30	1.46	1.80	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	5.30	5.87	7.53	9.22	9.98
21	Invesco Assurance Company Limited	1.20	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	1.50	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
26	Mercantile Insurance Company Limited	1.16	1.31	1.60	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	1.50	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	1.50	1.68	4.52	1.25	1.81
34	Real Insurance Company Limited	3.24	3.67	6.03	4.90	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	3.20	1.99	6.24
37	UAP Insurance Company Limited	2.03	1.15	1.53	1.02	-0.12
38	Tausi Assurance Company Limited	2.80	2.66	2.85	3.23	3.73
39	The Heritage Insurance Company Limited	2.08	2.13	3.00	1.89	6.04
40	The Jubilee Insurance Company of Kenya Limited	0.93	0.84	1.14	1.95	2.82
	MEAN	**2.2645**	**1.6528**	**2.4093**	**3.1725**	**3.6135**