

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

BY

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DECLARATION

This research project is my original work and has not been submitted for an award of a degree in any other university.

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

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DEDICATION

To my wife, Elizabeth, my daughter Michelle and my Son Allen for your patience and encouragement throughout my MBA study. Wish you God blessings.

TABLE OF CONTENTS

LIST OF TABLES	viii
ABSTRACT.....	ix
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background to the Study	1
1.1.1 Risk Management	2
1.1.2 The Financial Performance	3
1.1.3 Link between Financial Performance and Risk Management	5
1.1.4 Kenyan Insurance firms	6
1.2 Research problem.....	7
1.3 Objective of the study	9
1.4 The Value of the current study	9
CHAPTER TWO	11
LITERATURE REVIEW	11
2.1 Introduction	11
2.2 Theoretical Review	11
2.2.1 The Modern Portfolio Theory.....	11
2.2.2 Moral Hazard Theory.....	14
2.2.3 Merton’s Default Risk Model	15
2.3 Determinants of Financial Performance.....	17

2.3.1	Economic Condition	17
2.3.2	Corporate Governance	18
2.3.3	Structure of Ownership.....	18
2.3.4	Policies and Characteristics of the Firm	19
2.3.5	Risk Management	19
2.4	Empirical Literature Review	20
2.5	Summary of Literature Review	23
2.6	Conceptual Frame work	25
CHAPTER THREE		26
RESEARCH METHODOLOGY		26
3.1	Introduction	26
3.2	Research Design.....	26
3.3	Population.....	26
3.4	Data Collection.....	27
3.5	Data analysis	27
3.5.1	Analytical Model	28
3.5.2	Test of Significance	29
CHAPTER FOUR.....		30
DATA ANALYSIS AND FINDINGS.....		30
4.1	Introduction	30
4.2	Demographic Analysis	30
4.3	Risk Management Practices	31
4.4	Effect of The management of risk on Performance	38

CHAPTER FIVE	42
SUMMARY, CONCLUSION, AND RECOMMENDATIONS	42
5.1 Introduction	42
5.2 Summary of Findings	42
5.3 Conclusions	43
5.4 Limitation of the Research	43
5.5 Recommendations	44
5.6 Suggestions for Further Research	45
REFERENCES.....	47
APPENDICES.....	51
Appendix 1: Insurance firms in Kenya.....	51
Appendix 2: Questionnaire.....	54
Appendix 3: Data.....	61

LIST OF TABLES

Table 1:	Gender	30
Table 2:	Experience	31
Table 3:	Risk management practices	32
Table 4:	Risk management environment, procedures and policies	33
Table 5:	Risk mitigation	34
Table 6:	Risk monitoring	35
Table 7:	Internal control	36
Table 8:	Risk measurement.....	37
Table 9:	Risk investment strategy and guidelines	38
Table 10:	Correlation matrix.....	39
Table 11:	Model summary	40
Table 12:	ANOVA	40
Table 13:	Coefficients	41

LIST OF ABBREVIATIONS

AKI	Association of Kenya insurers
ANOVA	Analysis of Variance
CAPM	Capital Asset Pricing Model
IRA	Insurance Regulatory Authority
Ltd	Limited Company
MPT	Modern Portfolio Theory
NSE	Nairobi Securities Exchange
RM	Risk Management
ROA	Return on Assets
ROE	Return on owner's equity

ABSTRACT

Risk if not well overseen by organizations could lead to prompt collapse for most of organizations especially those whose core business deals with risks. Risk management should, therefore, be at the center of organization's operations by integrating risk management practices into procedures, frameworks and culture of the whole association. This involves processes such as identifying and analyzing those risks, as well as coming up with risk handling techniques, procedures and monitoring those identified risks in order to reduce the impact of risk on the financial performance of the organization. The objective of the study was to establish the effect of risk management practices adopted by Kenyan insurance companies on the financial performance. An explanatory research outline was used for the study, with the target population being the 51 registered insurance companies in Kenya. The study used both primary and secondary data for the analysis. The Primary data was collected by use of questionnaires whereby 30 insurance companies gave a response. The Secondary data was collected by use of published reports as audited financial statements from the insurance companies. The research also obtained some secondary data from IRA. The data covered a period of 3 years (2013-2015). The researcher employed research analysis tool SPSS. Regression analysis was also used in the study. The results for the study were presented using tables, pie charts and graphs. The study established that risk management has been adopted as part of the practices in most of the insurance firms in Kenya. This is seen in the number of facets of various risk management adopted by the institutions. Thus, firms have better internal controls and risk environment to sustain better performance in the organizations. The study further concludes that while risk management may have an influence on the performance of insurance firms, the relationship has been questioned by the study since some of the practices have negative relationship while others have weak positive beta coefficients. This calls into question whether risk management is well engineered within the institutions surveyed to transmit benefits to the bottom-line of these organizations. 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 (ii) and increase in capital requirements for insurance companies.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

In the insurance industry, experience points that sufficient risk administration converges with wealth protection. The more the growth in wealth, the higher the risk of the business engaged in managing those risks. Additionally, risk is not only part of the risky control business, but also demonstrates the ideal chance to those insurance firms with proper and timely measures to handle risks conclusively.

Internationally, previous research indicates that insurance firms with predictable risk administration systems bring higher return on equity. Furthermore, there are higher financial returns in the way business indicators in examination for their rivals who infrequently provide for incredible significance to risk administration in their business. Those investigations may be setting off to utilize standardized questionnaires with the discovery of the amount of the provision about risk management in the insurance organizations in Kenya and its effect on their financial outcome in the insurance firms.

In broader sense, insurance means taking over risks from customers and other investors. Insurers determine all available quantifiable factors in consideration while creating categories of low risk or high-risk profiles in the insurance. The category of risk defines the amount of insurance premiums charged. In general, pricing of the insurance depends on the frequency of claims where the policy with high frequency bears higher rates of premium (Gollier, 2012). In the event that the insurance organizations have access to large amount of the insured information at hand, the insurers could predict the premiums

with precision. In addition to this, insurers collect large amount of information about the insured and policyholders. Advanced statistical tools and methods based on data mining techniques of the insurance firms can be used to analyze, predict and determine insurance policy risk levels of the policyholder (Dennis, 2005).

1.1.1 Risk Management

Omondi (2015) defines risk as a probable harm and a misfortune or any hazardous to the firm that might not be favorable to the normal functioning of firms and might be reduced by a preemptive action. Horcher (2005) states that both hazard and exposure are firmly connected and that in most cases they are used interchangeably. A risk is the likelihood of loss, while exposure is the possibility occasioned by the misfortune. Risk emerges because of exposure to the hazard.

Risk management can be defined as the procedure of loss exposures identification confronted by an organization with an informed view of proper selection of the practically suitable methodologies for the treatment of these specific exposures successfully (Rejda, 2003). Insurance indicates to a type of risk exchange where one party (the insurance company) accepts to repay the other (insured) in the case of a insured risk occurring in respect to a premium charged in advance (Rejda, 2003). Payment or compensation occurs only after the insured risk materializes under the agreed circumstances. Risk management is vital for the insurance industry.

In recent years, insurance firms have amplified their scope on risk management. Okotha (2003) suggests that risks requires a careful judgment by administration of insurance

organizations, with a keen focus on the insurable risks to evade excessive losses claimed by policyholders. Therefore, risk management is a vital factor in improving financial performance (Okoth, 2003). Risk-taking establishments may, and do fail whenever risks profiles are not adequately managed.

One of the major fundamental functions of an insurance firm is to ensure wide spread of risk across many participants (Merton, 1995). Saunders & Cornett (2008), state that risk management process should allow the insurance firms to have an explicit control of compensations on behalf of the policyholders through pooling the risks of the policy holders together. Management of policyholders' risks ought to take the center stage in the operations of any insurance firm.

In risk management, prioritization process must be followed whereby the risk of the higher loss and greatest chances of occurrence is controlled first while risks with lower chances of occurrence are handled last (Kiochos, 1997, and Stulz, 2003). However, no model exists that can predict with utmost accuracy the frequency of occurrence of lower loss or higher loss and even the probability level. The unpredictability of risk occurrence poses the most difficult challenge while balancing the claim settlement and premium pricing. Management of the risks requires prioritization over the elimination of risks in the attempt to achieve high returns for the investors of the insurance firms.

1.1.2 The Financial Performance

Financial Performance broadly refers to the level of achievement reached by an organization, which is an essential part of financial risk management. It is the way

towards evaluating performance of the operations in financial standings and can form the basis for comparison of firms in the same industry over time. A Financial performance report outlines the financial outlook of an organization that reports the budgetary wellbeing of an organization which facilitates different stakeholders and speculators to take their venture decision. There are various approaches to gauge financial strength, but all measures should have same consideration.

The Profitability ratios indicate the overall effectiveness of the company. The ratios used give an overview regarding the net earnings in comparison to debt, assets, shareholders equity and sales over a fixed period. Profitability ratios create a combination of evaluation of a company's control, growth and success in converting investments into profit. Lenders are intrigued by profitability ratios since they demonstrate the organization's ability in repayment of both interest and loaned funds. Shareholders have special interests towards profitability as investors. Profitability level indicates the speed and amount of return they expect to get from their investments in the firm. In this research paper the researcher focused on ROA as a measure of financial performance of insurance companies.

Return on the owner's equity (ROE) ratio is the Net profit after the taxes divided by Total shareholders' equity $(PAT)/ E$. The ration is an expectation by shareholders for the money invested in the firm. Return on the Assets ratio is computed as the Net profit after taxes divided by the Total assets $(PAT)/ (TA)$. The ratio (ROA) indicates the level of the operating efficiency for the firm based on all assets employed.

1.1.3 Risk Management and Financial Performance

Strengthening of insurance firms financially has suffered due to lack of compliance to the regulations as risk management continues to expand. However, proper risk management should ensure strong financial standing as compliance enables the firm to reduce losses. In managing risks, officers in the insurance firms enhance profitability that culminated to the value addition for the shareholders. Financial growth is a manifestation of efficiency in balancing the risk profiles and proper compliance to regulation as set out by various regulators such as IRA.

Babbel & Santomero (1996) concluded that insurers ought to assess those sorts of hazards they would face and therefore come up with approaches to oversee them adequately. They added that insurers have the responsibility of managing risks properly through accepting and controlling only risks that have a clear prediction. This lowers the level of risk exposure. According to Stulz (1984), risk administration may be a feasible financial objective through which firm managers, should pay closer attention to the normal productivity and the dissemination from claiming firm returns from investments of better risk handling, subsequently providing for a system for adjusting firm objective to work alongside the expected risk.

Proper risk management forms a critical part of the day-to-day running of any insurance business focused on avoidance of the losses. A research by Jolly (1997) indicated that precautionary strategies not only reduce risks but also drive profitability of the firm.

The effectiveness of risk management by insurance firms has a critical outlay of their financial standing. Gold (1999) creates an assertion that point towards the survival of insurers through a delicate balance between claims and operational expenses in connection with amount of premiums collected. Ali & Luft (2002) suggested that the firm seeks to engage in risk administration and mitigation procedures which results to increase in shareholders worth.

It is essential for every organization to hold and effectively deal with some level of hazard in the event that it is to expand its productivity or market esteem for money related pain is to be mitigated. Risk portfolio administration is a vital capacity of insurance firms in making esteem for shareholders and arrangement holders. Organizations operations are presented to risks and if these risks are not moderated, the organization's financial flow will be in problem. Organizations with viable risks administration frameworks outdo the peers in the industry as they have proper mechanisms to tackle any occurrence of any insured risks.

1.1.4 Kenyan Insurance Firms

Although insurance firms in Kenya were originally under the ownership of British nationals during colonial period, the industry has grown steadily and now boasts of 60 years of existence. The insurance regulatory authority uses the Insurance Act (CAP 847) to govern, promote and regulate insurance industry in Kenya.

In Kenya, 51 insurance firms, 5 reinsurance companies and 144 insurance brokers are in operation. There are 6,428 insurance agents in Kenya. The Insurance Regulatory

Authority (IRA) is the regulator of all insurance firms in Kenya with a mandate to supervise, regulate and develops the insurance industry in Kenya. Kenya's insurance penetration stands at 3.1% compared to its peer countries in the Sub-Saharan Africa region (Insurance Regulatory Authority, 2015). In this study, we are going to focus on all the insurance firms in the country.

1.2 Research Problem

Risk management is very important for insurance company's performance. Over the past decades, more regulations for insurance companies have been created. The Actuarial function Guideline issued By IRA took effect in 2013. In addition to Solvency II, a directive has been worked on for the past several years and is expected to come into effect in December 2016. There is still no proof that the implementation of Risk Management (RM) leads to better performance. Therefore, there is a need for further research to examine the connection between RM implementation and the financial performance.

There few legislative amendment created in the recent which have affected the Kenyan insurance field. These incorporate increment in the solvency for long-term backup plans, Increase in the base capital necessities for insurers, presentation of cash basis policies which requires that insurance providers only assume the risks once the premiums has been received, review of the investment limits for short term insurance, change in taxation rules and policies on life business, charge of tax on dividends earned by financial institutions and payment of penalties upon late of claims. All the above changes, which have been acknowledged for directing the insurance agencies, have accompanied a

tremendous costs. The expenses incorporate additional measures in alleviating risks in insurance agencies.

Certain categories of risks presented for mitigation provides a greater opportunity for high returns to the insurance firm. Once the insurance firm capitalizes on those risks, a new competitive advantage comes about through improved financial standing of the company. Proper utilization of the mitigation efforts gives the management of insurance firms a chance to employ the best practices in maximizing their efficiency in handling risks.

Studies that have been reviewed in the empirical review shows an existence of knowledge gap. Wani and Dar (2014) evaluated relationship that exists between the financial risks and the profitability performance of the Indian insurance firm using multiple linear regressions model. Imane (2013) studied on the Risk Management Practices among Jordan companies and their effect on the financial performance. The study selected credit risk (debt and risk), operational risk (efficiency, income, and price) liquidity risk (capital, liquidity) and market risks (interest rates, inflation, and financial crisis) as the independent variables. ROA and ROE were utilized as the dependent variables for the period of fifteen years from 1998 to 2012.

Locally, Obudho (2014) studied on the relationship between financial risk and financial performance in Kenyan insurance companies. The research employed a causal study design. The population for this study was 49 insurance firms in Kenya. Omasete (2014) studied on the effect of the management of risk and the financial performance of Kenyan insurance firms. A

descriptive research design was assumed for this research. The study adopted a census survey of all the 49 registered insurance firms operating in Kenya.

Empirical studies done in Kenya have focused on the critical aspect of management of risks and financial performance in the insurance industry. The number of risk management practices in all the studies were limited to five practices hence the margin of error has been consistent in all the studies. To reduce the margin of error, this study has focused on additional risk management practices hence the error term has been minimal and the results of the study are more precise and accurate in answering the question is there a relationship between risk management and financial performance in insurance companies in Kenya?

1.3 Objective of the Study

The goal of the study is to set up the relationship between risk administration and financial performance of insurance companies in Kenya.

1.4 Value of the Study

This research is of great importance to insurance firms, the public, scholars the insurance regulators and the active members in the NSE as it offers missing contributions necessary for the stability of insurance industry. This study creates a significant contribution towards a clear understanding of best practices while managing risks to achieve better performance of Insurance firms in Kenya

The study will empower the Insurance organizations in Kenya to enhance their risk administration system and embrace better methodologies to enhance the firms' financial accomplishment through the risk administration strategies. This will empower the insurance firms and agencies to perform better in monetary terms

The general population who are the real customers of the services provided by insurance firms will benefit through moderates premium rates offered by insurance firms as result of adequate risk management procedures.

The study will be useful to the administration such as regulatory bodies and the government in setting directions on insurance firms in Kenya. This can be done by IRA through issuance of new guidelines on RM.

Lastly, the research is an addition to the existing body of knowledge of management of risk to benefit academicians while aiding further research on risk management in the insurance sector and the financial sector

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter touches on the theoretical review of the research paper whereby the main theories on the management of risk is briefly discussed, determinants of financial performance in insurance firms, further Empirical review, and conclusions on the chapter. Conclusion on this chapter focuses on how this research intends to cover the knowledge gap and the ways in which this research seeks to bridge an existing knowledge gap. The review specifies the theory the research shall be based on.

2.2 Theoretical Review

This research was mainly guided by the following theories, the Modern Portfolio Theory, the Moral Hazard Theory, and Merton's the default Risk Theory. These theories try to explain the link between the risk management and monetary performance of finances of Kenyan Insurance firms.

2.2.1 The Modern Portfolio Theory

From technical perspective, Modern Portfolio Theory ("MPT") includes Portfolio Selection Theory by Markowitz', presented in 1952, and commitments to the hypothesis of budgetary resource value development which was developed in 1964 by William Sharpe's, which came to be known as the "CAPM" (Capital Asset Pricing Model) (Veneeya, 2006). The MPT is a venture structure that determines and develops the speculation portfolios depending on the growth of expected returns of the portfolio and

the minimization of the investment risks (Fabozzi, Gupta, & Markowitz, 2002). Also called "portfolio theory" or "portfolio administration hypothesis," MPT advises that it is likely to develop a productive collection of ideal portfolios, which offer greatest expected returns for a set level of risk. It recommends that it is not enough to look at the normal risks and returns of one specific stock in objectivity. A financial specialist can then receive the rewards of enhancement from the stocks by putting resources into diversification, especially by a lessening in the uncertainty of the given portfolio. MPT measures the advantages got from diversification, otherwise termed as not tying the entire investments up on a single venture.

A view by most speculators consider the risk part as the proceeds from a venture being lower than the normal returns or just put the deviation from the normal returns lower than the anticipated returns. Every stock has its particular standard deviation from its mean. The standard deviation is known as the risk.

The risk in a portfolio individual stocks will be not be exactly as the risk inherent in holding any of the individual stocks (on condition that the risks of the different stocks are not specifically related). Markowitz indicated that venture is not about picking stocks, but picking the right and particular blend of stocks in a given basket .Specifying arithmetic of expansion, he suggested that financial specialists concentrate on selecting portfolios since those portfolios' general risk compensate attributes rather than simply incorporating portfolios from securities that each independently has alluring risk remunerate qualities.

This envisages that financial specialists ought to concentrate on selecting portfolios not remain solitary securities. Treating single-period returns for different securities as

arbitrary factors, we could allocate those expected qualities, standard deviations, and relationships. Given these, then we can compute the normal returns and unpredictability of any portfolio developed with those securities. Out of the whole wicker container of conceivable portfolios, certain ones will ideally adjust hazard and rewards. These contain Markowitz effective scope of portfolios. A proposed speculator ought to choose any of the portfolios that lie on the productive scope.

Tobin (1958) extended the work of Markowitz's work by adding a risk-free resource for the examination. It, therefore, made it conceivable to influence or deleverage portfolios on the efficient frontier. This prompted the ideas of a super-effective portfolio and the capital market line. Through influence, securities on the capital market line can outperform portfolio on the effective scope (Sharpe, 1964) formalized the capital resource evaluating model (CAPM).

As per the CAPM, all speculators ought to maintain the market portfolio, utilized or deleveraged with circumstances of the risk-free resource. Portfolio theory gives a setting to the comprehension of the connections of the reward and the systemic risk involved. It has molded how institutional portfolios are run and persuaded the utilization of passive investment methods. The arithmetic of portfolio analysis is utilized as a part of money related risks administration and was a possible antecedent for current value-at-risk procedures.

2.2.2 Moral Hazard Theory

In economics, moral hazard is defined as when one individual goes out taking extra risks because another person bears the cost of those risks. An ethical risk may happen where the activities of one party may change to the impediment of another party taking a powerful part in any financial exchanges.

Moral hazard happens under information asymmetry through which the higher risk-taker in the transaction has more information about its goals than the other party paying dearly of the risks. Paul Krugman (2009) portrayed this as “any circumstance in which one individual settle on the choice about how much risk to take, while the risk is borne by the other party.

The insufficient control of moral hazards frequently prompts unnecessary risk and individual taking additional was a recurring theme in the modern financial crisis Wolf (2008) suitably cautions that no other industry yet apart from finance has an equal ability for privatizing additions and mingling misfortunes. Rather than creating value, as per the guaranteed outlook, the acts of financial related designing (organized finance and elective risk exchange), immense influence, forceful bookkeeping and doubtful credit assessment have empowered their professionals to concentrate esteem on a gigantic scale. At whatever point the client cannot viably screen the exercises of his agent, accordingly, the last has a motivating force to build his fiscal earnings to the detriment of the former.

The insurance contract forms a basis for the moral hazard regarding the agency model. Here the insurance firm is the less educated client, and the safeguarded individual is the

agent. Automotive insurance, for instance, makes a moral hazard for drivers; it makes an extra motivator for hazardous driving because other individuals comprising of different customers of the insurance firm will pay a part of the expenses of the agent's accidents. Essentially, within sight of unemployment insurance contract, the unemployed client has an extra motivator to remain unemployed because other individuals will pay part of their living expenses. Then again, within sight of medical coverage, guaranteed individuals will have an extra motivator to take part in unsafe exercises or ways of life since others will pay costs of the treatment if there should be an occurrence of ailment..

2.2.3 Merton's Default Risk Model

Merton, a financial researcher in 1970s, created the model and it is utilized as a part of the assessment of credit risks among home loan firms and corporations. The model used to decide the capacity of debt holders to clear their obligations. The loan officers and securities experts focused on deciding an organization's repayment failure by use of Merton's model. The model permits the experts to better position the organization and decides its capacity to stay solvent through the examination of reported obligation totals and payment dates.

Merton's (1974) paper on the valuation of corporate securities is one of his various fundamental commitments to finance. In his paper, Merton came up with two interrelated inquiries in finance. To begin with, by what means would it be advisable for one to approach understanding and clarifying credit spreads? Second, in what capacity would it be advisable for one to consider the plan of the association's capital structure? Merton was worried about seeking after the ideal capital structure of a firm.

A noteworthy benchmark in these studies is the KMV (Kealhofer, McQuown and Vasicek), a San Francisco-based risk administration firm. KMV was established in 1989 to offer the business extension of Merton's model utilizing market-based information. In 2002, it was expanded by Moody's and got to be Moody's-KMV. Hillegeist, Keating, Cram, and Rundstedt (2004) looked at the comparison that existed between the Merton model to Ohlson (1980) and Altman (1968) models (Z-score and O-score) and arrived at the deduction that the Merton display beats these models. Duffie et al. (2007) demonstrated that macroeconomic factors that include, financing cost, stock return, and stated market return have predictable expectation capacity even in the wake of controlling for Merton model.

Campbell et al. (2007), utilizing a risk model, joined Merton display likelihood of default with different factors significant to default expectation. They likewise observed that Merton display probabilities had a moderately little commitment to the prescient power. Bharath and Shumway (2008) introduced a "gullible" use of Merton model that beat the intricate utilization of Merton model (in light of apparently Moody's-KMV determinations)

In light of the assumptions, this research is founded on hypothesis number three, Merton's default Risk Model. Merton model depends on some improving suspicions about the structure of the normal company's funds. The occasion of default is dictated by the market estimation of the company's advantages in conjunction with the obligation structure of the firm. At the point when the estimation of the benefits falls beneath a specific limit (the default point), the firm is thought to be in default. One reason for

default as expressed by Merton is credit hazard, which frames part of the risks confronted by insurance firms in Kenya.

2.3 Determinants of Financial Performance

Financial growth of firms is critical for speculators, stakeholders and economy on its entirety. For financial investment, the arrival on their predictions is exceedingly substantial, and well achieving firms can draw high and long-term yields for their risk-takers. Researches by Maher and Andersson (2000) and Javed and Iqbal (2007), have indicated different non-budgetary components that can help or adversely affect the accomplishment of the organization. Still no single compelling model has been built up that catches extreme variety of the performance. In this research, factors such as economic condition, ownership structure, policies, corporate governance, Firm characteristics, and the management of risk forms discussion of this research.

2.3.1 Economic Condition

Economic standing of any nation can influence a company's performance on different cost of borrowings, for instance, higher loan prices can contrarily influence the company's capacity to create capital and put resources into ventures (Ntim, 2009). Prices of essential services, high expenses connected with plant and hardware because of either decay of coin. Import prices, high swelling rate and low-salary level of individuals can diminish the interest for modern products and consequently obstinately affect the firm's performance (Forbes, 2002). Insurance firms in Kenya have been highly affected by inflation rates and the financial and the stiff competition.

2.3.2 Corporate Governance

Corporate governance concerns the arrangements and policies that direct how a firm sets its strategies, creates systems and missions, screens and reports its implementation, and deal with internal risks (Javed & Iqbal, 2007). Researchers are additionally of the view that great corporate supervision sharpens the achievement of better performance of the firm.

There are two models of corporate structure shareholder model and partner's model. Shareholder approach concentrates on the value increase for proprietors while partner approach covers more extensive angle and concerns the welfare of all stakeholders and general firm accomplishment (Maher & Andersson, 2000).

A research led by Javed and Iqbal (2007) investigated effect of corporate administration on firm execution by making files for board qualities, sincerity and proper disclosures. Significances of their research supported a critical connection amongst performance and records aside from straightforwardness and proper disclosures.

2.3.3 Structure of Ownership

Splitting up of ownership into categories lays on the view that there is distinct separation of control and possession. Berle and Means came up with a division of possession and distinguished two sorts in particular, Owner-controlled firms and government controlled firms.

As indicated by agency theory, if supervisors of a firm happen to have possession stake they are well on the way to increase shareholder value (Dutta, Sefton, & Weale, 1999). Administrative risk avoidance and requirements on the earnings confine their responsibility. Besides, ownership can turn out to be expensive for larger firms (Jensen & Murphy, 1990). Number of tradable shares is contrarily identified with inside ownership, as the greater part of the shares claimed by insiders is limited from the trading.

2.3.4 Policies and Characteristics of the Firm

Some firm attributes are connected with the growth of firm financially. These incorporate development rate, size, profits, liquidity (Gurbuz et al., 2010) and deals. The policies that have better development rate can manage the price of improved systems, and gradually the benefits and size of the firm increases. Substantial firms engage skilled administrators and officers who eventually add to the accomplishment of the firm performance. In this way, the firm and its workers add value to each other's objectives (Succuro, 2010)

2.3.5 Risk Management

The management of risk portfolio of an insurance firm affects its performance. Unsafe firms have a tendency to pull in just hazard taking financial specialists. The relationship of returns and risk must be watched over so that the financial specialists do get the expected value with the risk they are bearing. Risk administration has been a key determinant in the performance of Kenya Insurance firms, because of the hazardous way of insurance field.

2.4 Empirical Literature Review

Several studies have been done internationally and locally. We start by reviewing studies done internationally then by studies done locally in line with the topic of research.

Ai & Brockett, (2008) established that there are multiple types of non-financial risks. They include the hazard risk, and strategic risk operational risk. Ai & Brockett, (2008) found that hazard risk refers to physical risks like theft, fire, liability claims, and business interruptions, among others. Operational risk is risk of failure coming about because of the insufficient or weak internal procedures and structures or from external incidents. This can incorporate inside and outside misrepresentation, items and business rehearses, harm to physical resources, business disturbance and framework disappointments, and execution, conveyance and process administration. They also stated that Strategic risk is closely related to the firm's overall strategies. Reputation risk, competition risk and regulatory risk are included in the strategic risk.

Eling & Schmeiser (2010) established that insurance firms were less affected than banks when it comes to financial failure. This is because of the difference in business models. Insurance firms are financed ahead of time and the installments are connected to future claims with a prediction model. Likewise, as indicated by Eling and Schmeiser (2010), numerous back up plans do not have huge presentation to mortgage-backed securities (MBS) and different types of securitization. Therefore, having not been specifically influenced by the credit crunch that was at the foundation of the current money related emergency straightforwardly influenced by the credit crunch that was at the base of the 2007 - 2008 crisis in finance industry.

Imane (2013) studied on the management of risk and performance in terms of finances in insurance firms from Jordan. The research selected credit risk (debt and risk), operational risk (efficiency, income and price) liquidity risk (liquidity, capital) and market risks (inflation, interest rates and financial crisis) as explanatory variables while return on the assets and return on the equity, were utilized as dependent variables for the period of fifteen years from 1998 to 2012. The research exposed that liquidity, credit and operational hazard administration rehearses have a negative and noteworthy measurable effect on Islamic banks' performance, and these protection firms fizzled in the meantime in dealing with these risks. Second, showcase risk administration improvement have a positive and huge factual effect on performance which means these institutions don't suffer neither from the operational risk during the research period nor from managing this type of risk.

Wani and Dar (2014) contemplated on the Relationship between the financial risk and financial performance of Indian Insurance Industry. The research utilized different straight regression model to decide the relationship between money related hazard and budgetary execution. Data analysis was done using SPSS software. For determining the relationship, the research used Return on Assets as an indicator for the firm's financial performance as a dependent variable. The independent variables comprising of Capital Management Risk, Solvency Risk, Liquidity Risk, and Underwriting Risk, size of a company and volume of capital. , the research found a statistically significant and relationship that was also positive between volume of capital and return on assets. Hence,

it can be said that that volume of capital is a major pull factor for the financial performance of life insurers in India.

Locally several studies have been done. Obudho (2014) studied on the link between financial risk and performance of Kenyan insurance firms financially. The research applied a causal research design. The sample utilized for this research was 49 insurance firms in Kenya. The research period was 5 years that covered from year 2009 to year 2013. Additional secondary data for insurance firms' annual report was collected on the research variable, this included Financial Performance of the company that was measured using return on Asset (ROA), Exchange Rate Risk, Financial risk, Solvency Risk and Liquidity risk. Data analysis was done using SPSS Version 20. From the finding, the research revealed that an increase in financial risk lead to the decrease in performance of Kenyan insurance firms financially, thus the research concludes that increased financial risk negatively influences insurance firms in Kenya performance financially.

Omasete (2014) studied on the effect of management of risk on the performance of Kenyan insurance firms financially. A descriptive research design was adopted for the research. The research adopted a census survey of all the 49 registered Kenyan insurance firms (IRA, 2013). A census approach enables one to collect more accurate and 34 reliable data. Both the primary data and the secondary data were used in the research. This research employed descriptive statistics to analyze the data. The research found risk identification to be the most significant in influencing the financial performance of Kenyan insurance firms, followed by risk mitigation, the management of risk program implementation & monitoring and risk assessment & measurement respectively.

Wanjohi (2013) researched on the existing correlation between financial management of risk and the performance of Kenyan commercial banks financially. The research used the regression analysis condition to decide the relationship between the factors. The model gave a factual system to evaluating the relationship between the financial risk administration and the budgetary execution of the banks. The five segments of hazard administration utilized as free factor were Risk Measurement, The management of risk Environment, Risk Mitigation, Adequate Internal Control and Risk Monitoring. All the mentioned segments were then connected with the mean of the ROA for the five years (2008-2012). The research built up that financial hazard administration strongly affected the budgetary execution of business banks in Kenya. The research also established that the risk measurement practice had the biggest impact on financial performance followed by risk mitigation practice. Thus, as each shilling invested in risk measurement techniques, risk mitigation techniques increases earnings, and the increases financial growth of the banks. The research by Wanjohi distinguishes an information gap since the research was just centered on the relationship between financial risk administration and budgetary execution of the Kenyan commercial banks.

2.5 Summary of Literature Review

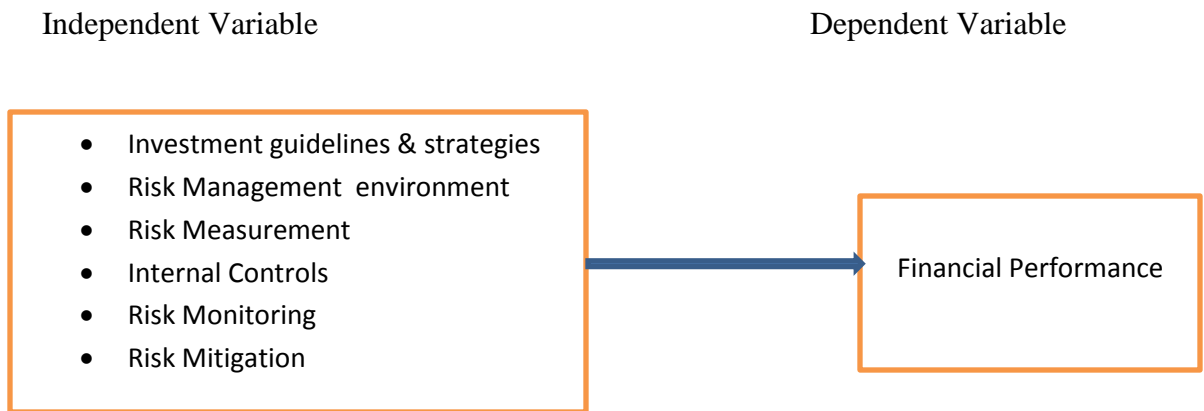
From the above and entire chapter, it is evident that the management of risk in the insurance industry has implication on the performance of the firms especially in the financial performance. The management of risk is considered as a key concern for all companies. The crisis that was experienced in the past could have been avoided if good the management of risk practices had been put in place in all financial sectors. All the

previous studies established that financial institutions should have proper risk management and control function and better the management of risk techniques so as to lead to improved financial performance.

Research gaps exist since all the studies reviewed on the management of risk and financial performances in insurance firms have focused only on five independent variables. Increasing the independent variable results in the reduction in error and the results are likely to be more accurate and precise. The financial performance will be measured by use of ROA. ROA is one of the pointers that give an overview on the direction taken by a business from its utilization of the total assets at its disposal.

2.6 Conceptual Frame work

Diagram 2.6.1 shows the conceptual framework of this research



Source: Self, 2016

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter enumerates the presentation and examination of the proper and reasonable research strategy used to accomplish the motivation behind this exploration. The primary subsection covers inquire about outline of the research. Subsection two covers the unit of examination taken after by the information gathering techniques and lastly how information will be analyzed.

3.2 Research Design

Research design gives the system for the accumulation and investigation of information gathered (Bryman and Bell, 2007). Alternatively, it is the arrangement and structure of the survey so considered as to acquire answers to the survey prompts (Cooper and Emory, 1995). This therefore, gives the strategy vital for getting the data expected to take care of the examination issues been researched. The researcher used the qualitative approach to interview Insurance managers in the risk department because of the skills possessed in this field of profession and a deep and greater understanding on the topic of research.

3.3 Population

The target population is defined as the group of individuals from which the study seeks to generalize it's and make conclusions on its findings. The target sample comprised of census population of all the 51 registered insurance firms in Kenya.

3.4 Data Collection

The research employed both the primary data and the secondary data from published results and administered questionnaire. The intention of using the data from the primary source was to get perception of factual information on issues of the management of risk by the Insurance. The primary data for this research was collected using personally administered questionnaires as per appendix 2. The questionnaire was adapted from Khan and Ahmed (2001) and Ariffin et al. (2009). The questionnaire comprises of seven parts. The first part is designed to gather the respondent and institutional information. The second section was designed to gather information about the risk management environment. The other sections gathered the insurance firms in Kenya adopt information about risk measurement followed by risk monitoring, risk mitigation, internal control techniques and Investment guidelines and strategy. The questionnaire is comprises the 5 Likert scale, starting with 5 as a strongly agree, 4 as agree, 3 as neutral, 2 as disagree and the finally 1 as strongly disagree. The secondary data was collected from the various insurance published reports, IRA reports and NSE. The period under research covered the 3 years from 2013-2015

3.5 Data Analysis

Descriptive statistics describes the data and examines the links among all variables under investigation. Descriptive statistics used included the measures of central tendency, the frequency distributions, mean and line graphs that describe the data. The quantitative data on the management of risk was measured in real values by normalizing. In addition, regression analysis was conducted to determine the connection between the management

of risk practices (independent Variable) and the financial performance (dependent variable) of Kenyan insurance firms. Probabilistic model was used to represent the randomness using simple linear regression model to evaluate the interval variables, the independent variables and dependent variables.

3.5.1 Analytical Model

The study utilized the regression analysis with the equation of the form

$$Y = \alpha + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + \epsilon.$$

Whereby:

α = constant/the interception point of the y-axis and the regression line

b_1, b_2, \dots, b_6 = the coefficients of the independent variables that was determined.

Y = Financial performance measured by the simple average ROA

X1= Risk Management Environment.

X2=Risk Measurement.

X3=Risk Mitigation.

X4=Risk Monitoring.

X5= Adequate Internal Control.

X6=Investment guidelines and strategy.

ε = error term

The independent variables X1, X2 ... X6 shall be measured using the

Questions posted in the questionnaire. (Appendix 2)

3.5.2 Test of Significance

An F - test was used in assessing to what degree of set of independent variables, determines the variation in the dependent variable/ effectiveness of the model as a whole in explaining the dependent variable. T-test was used to assess the level of significance for the individual regression constraints / assessing whether the individual coefficients are statistically significant. The significance of the regression model was set at 95% confidence interval and 5% level of significance.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter is a presentation about the data analysis results from collected data from thirty (30) Kenyan insurance firms. These were general and life insurers in Kenya. The chapter begins by discussing the results on the profiles of the respondents. This is followed by results on the management of risk practices adopted by the insurance firms surveyed. The last section presents the results on the connection between the management of risk practices and the financial performance of Kenyan insurance firms.

4.2 Demographic Analysis

In terms of gender, the results show that 23% of the participants were female and 77% only were male. This may suggest that majority of the employees at the top levels of management in insurance firms in Kenya are male.

Table 1: Gender

Gender	Frequency	Percent
Male	23	76.7
Female	7	23.3
Total	30	100.0

On experience, the research found that 34% of the respondents had an experience of three years or less in the organizations while 66% had more than three years in their organizations. This shows that most of the respondents had stayed longer in the insurance sector as well as in their organizations and, therefore, had longer institutional memory that was important for this research.

Table 2: Experience

Experience	Frequency	Percent
3 years or less	10	34
More than 3 years	20	66
Total	30	100.0

4.3 Risk Management Practices

Table 3 shows the results for the management of risk practices adopted by insurance firms in Kenya. As shown, the most prevalent practice of the management of risk in the insurance sector is internal control where 92% of the respondents (mean = 4.60) agree that it is the fact of the management of risk mostly applicable to their company. This was followed by risk environment, policies and procedures where 91% of the respondents agreed (mean = 4.54) and then risk investment guidelines and strategy as 90% of the respondents agreed (mean = 4.50).

Table 3: Risk Management Practices

Risk	Percent	Mean	SD
Internal control	92	4.60	0.35
Risk environment, policies and procedures	91	4.54	0.41
Risk investment guidelines and strategy	90	4.50	0.41
Risk mitigation	88	4.40	0.38
Risk monitoring	88	4.38	0.52
Risk measurement	81	4.06	0.72

Table 3 shows the results of the management of risk environment, policies and procedures. The results show that board competence is highly rated by 97% of the respondents. A further 97% also rate adoption of appropriate guidelines highly. Risk management environment, policies and procedures are, therefore, important as part of the management of risk in insurance firms in Kenya.

Table 4: Risk Management Environment, Procedures and Policies

	Percent	Mean	SD
The Board is dynamic and has a proper level of administration, specialized, and other skill, combined with the outlook important to play out its oversight obligations.	97	4.8333	.37905
The insurance company adopts and utilizes guidelines internally generated and by regulatory authorities such as IRA	97	4.8333	.37905
The existence of risks and management's recognition of this is appropriately communicated to all employees.	93	4.6667	.47946
Management fully considers risk assessment in determining the best course of action.	90	4.5000	.50855
Internal guidelines are in place to govern the institution	90	4.5000	.77682
Business objectives are appropriately communicated as it relates to objectives targeted by the following organization layers: Company, Divisional and Departmental	87	4.3333	.75810
Individuals are aware of their activities interrelation and add to accomplishment of the organization goals	87	4.3333	.47946
The Insurance company has adopted and utilized Revised IRA Financial Risk Management Guidelines	84	4.2000	.76376

Table 4 shows the results on risk mitigation by Kenyan insurance firms. The results show that the highest rated risk mitigation measure by 97% of the respondents was ethical values followed by simulation analysis as rated highly by 90% of the respondents. Most

of these risk mitigation measures had higher scores (more than 80% agreement) and shows, therefore, that insurance firms had risk mitigation measures in place.

Table 5: Risk Mitigation

	Percent	Mean	SD
Moral values are imparted as well as joined by express direction in regards to what is good and bad	97	4.8333	.37905
The insurance company regularly conducts simulation analysis and measure benchmark (premium rates) rate risk sensitivity.	90	4.5000	.50855
There exists the parameters for separate counterparty	87	4.3333	.47946
The firm has a regular reappraise of risks levels of the covered properties (assets)	87	4.3333	.47946
There is analysis and report writing committee on the risk rating of the prospective properties under cover	87	4.3333	.75810
The company analyses each insured loss ratio before business renewal	87	4.3333	.75810
There is risk rating of prospective insured by checking if there are no factual errors or misinterpretations of data provided by prospective insured.	87	4.3333	.47946
There is risk rating of prospective insured property by pre-visiting desk analysis of data and information collected from the client.	83	4.1667	.69893

The results on risk monitoring are shown in Table 5. The research found that 93% of the respondents noted that the lines of authority were ineffective in handling risks. However,

as 90% of the respondents showed, regular reporting systems were in place in insurance firms. The results also show that 87% of the firms monitor credit limits of brokers and other third parties. A further 80% of the firms also regularly compile maturity ladder charts.

Table 6: Risk Monitoring

	Percent	Mean	SD
Incapable lines of power or potentially inability to set up clear approaches or points of confinement of power that causes directors or workers to do things they ought not do or neglect to do things they ought to be accounted for by the administration.	93	4.6667	.47946
The insurance firm has set up a consistent reporting framework with respect to hazard administration for senior officers and administration	90	4.5000	.50855
The credit limits for insurance brokers and other third parties is strongly monitored by doing background check.	87	4.3333	.75810
The insurance firm has a consistent (e.g. week after week) arranges a development stepping stool outline as indicated by settlement date and screen money position hole	80	4.0000	1.01710

Table 6 shows that internal control issues are adequately handled in most of the insurance firms surveyed. For instance, 97% of insurance firms had principles and procedures relating to decision making process. The results further show that duties were segregated in 93% of the firms, the task to review and verify the management of risk systems was a

responsibility of internal auditor in 93% of the firms, and there existed the backups of data files and software in 93% of the firms.

Table 7: Internal Control

	Percent	Mean	SD
Principles and procedures relating to decision making processes	97	4.8333	.37905
Segregation of duties in different approvals levels in the all documents processed by the Insurance company e.g. premium approvals, payment approvals	93	4.6667	.47946
The internal auditor is mindful to audit and checks the risk administration frameworks, risk reports and adherence to rules	93	4.6667	.47946
The Insurance company has backups of data files and software in a different location from the insurance head office.	93	4.6667	.47946
The insurance has backups of data files and software	93	4.6667	.47946
Existence of personnel policy on guiding on frauds transactions	93	4.6667	.47946
There is a Risk Committee in the Board Level responsible for approval of audit plans.	90	4.5000	.77682
System controls to detect any fraud transactions	90	4.5000	.50855
There is relevant or reliable information supporting pricing decisions to prevent the risk of unprofitable contractual agreement.	90	4.5000	.50855
The insurance has countermeasures (contingency plan) against disasters	87	4.3333	.47946

Table 6 shows that risk measurement fared badly as opposed to other risk practices. While 92% of the firms issued maturity matching analysis for life insurance and 90% kept adequate records and had adequate internal audit process, only 57% of the firms used duration analysis.

Table 8: Risk Measurement

	Percent	Mean	SD
The insurance uses Maturity Matching Analysis for life insurance	92	4.6000	.50000
Adequate record keeping processes	90	4.5000	.77682
Adequate internal audit processes	90	4.5000	.77682
The insurance uses stress testing for the risk evaluation	87	4.3333	.75810
Adequate quality management processes	87	4.3333	.75810
The firm frequently directs reenactment examination and measure benchmark (premium rates) rate hazard affectability.	80	4.0000	.83045
The insurance firm has a quantitative supportive network for surveying clients' credit standing (brokers and agents)	77	3.8333	1.08543
There is a computerized support network for evaluating the inconstancy of income and hazard administration	73	3.6667	1.12444
The insurance uses Duration Analysis	57	2.8333	1.23409

In terms of risk investment guidelines and strategy, Table 8 reveals that 97% of the organizations had sufficient and convenient inside correspondence of data on speculation,

93% had evidently determined strategies for changes to the usage of speculation technique and 90% had a foot on their portfolio compositions.

Table 9: Risk Investment Strategy and Guidelines

	Percent	Mean	SD
Satisfactory and auspicious internal correspondence of data on investing undertakings	97	4.8333	.37905
Products are unmistakably determined for any progressions to the execution of the speculation technique	93	4.6667	.47946
The arrangement of a benefit portfolio is made of the result of an all-around reported organized venture prepare with proper strides for usage.	90	4.5000	.50855
For any different portfolios held, for the insurance agency there is a framework for recognizable proof, estimation and evaluation of speculation risks to that portfolio and where fitting for the gathering as entirety.	90	4.5000	.50855
Satisfactory strategies for the estimation and evaluation of speculation execution;	90	4.5000	.77682
There are thorough and compelling review strategies and observing exercises to distinguish and report shortcomings in venture controls and consistence	87	4.3333	.47946
Strategies to recognize and control the reliance on and vulnerability of the firm to important work force and the systems	83	4.1667	.69893

4.4 Effect of the Management of Risk on Financial Performance

The correlation matrix in Table 8 shows that some of the independent variables were highly and significantly related. On a closer look, risk monitoring was eliminated in the

final OLS regression model as it failed tolerance tests. The rest of the variables were included in the analysis.

Table 10: Correlation matrix

	ROA	Env.	Mit.	Mon.	Cont.	Measure
Return on Assets	1					
Risk environment, policies and procedures	.181	1				
Risk mitigation	.195	.848**	1			
Risk monitoring	.230	.588**	.905**	1		
Internal control	.259	.847**	.927**	.806**	1	
Risk measurement	.198	.539**	.893**	.984**	.816**	1
Risk investments guidelines	.241	.777**	.820**	.747**	.646**	.645**

Autocorrelation

Some of the independent variables are highly correlated. This means that there is a problem of multicollinearity. In order to address this problem, a number of solutions are provided by scholars. One of the ways is to delete the offending variable from the model. Here, the variable that was deleted to remove autocorrelation from the model was monitoring. Hence, the final model without monitoring variable did not have a problem of autocorrelation.

The regression model was run with performance (ROA) as the dependent variable and the rest of the variables as the independent variables with the exception of risk monitoring. Table 10 shows a relatively moderate relationship between the performance in terms of

finances and the management of risk ($r = 0.471$). The model accounted for only 22.1% of the variance in performance ($r^2 = 0.221$).

Table 11: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.471 ^a	.221	.059	.39187

Table 12 shows the ANOVA results. The F statistic of 1.366 was not significant at 5% level of significance ($p = 0.272$) which suggests that the model used was unfit in explaining the influence that management of risk had on the Kenyan insurance firms performance financially.

Table 12: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.049	5	.210	1.366	.272 ^b
Residual	3.685	24	.154		
Total	4.734	29			

In Table 12, the coefficients show that risk environment and risk mitigation both had negative effects on performance although none was significant. The rest of the variables (internal control, risk measurement, and risk investment guidelines) had positive effects on performance. However, these effects were also non-significant at 5% level of

significance. However, at 10% level, both internal control and risk investment guidelines had significant effects. The equation becomes:

$$\text{ROA} = -2.435 - 0.488 \text{ RiskEnv} - 1.597 \text{ RiskMit} + 1.701 \text{ IntCont} + 0.022 \text{ RiskMeas} + 0.876 \text{ RiskInv} + 2.552$$

Table 13: Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-2.435	2.552		-.954	.349
Risk environment	-.488	1.168	-.507	-.418	.680
Risk mitigation	-1.597	1.819	-1.544	-.878	.389
Internal control	1.701	.937	1.504	1.814	.082
Risk measurement	.022	.712	.039	.030	.976
Risk investments guidelines	.876	.437	.904	2.002	.057

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of research findings, conclusions of the research, and recommendations for policy, practice and research.

5.2 Summary of Findings

The research sought to determine the relationship between the management of risk practices and the financial performance of Kenyan insurance firms. To do this, data was collected from 30 insurance firms in Kenya. Both primary and secondary data were collected.

The research found that the most prevalent practice of the management of risk in the insurance sector is internal control where 92% of the respondents agreed that it is the fact of the management of risk mostly applicable to their company. This was followed by risk environment, policies and procedures where 91% of the respondents agreed and then risk investment guidelines and strategy as 90% of the respondents agreed.

The regression showed a moderate relationship between performance and the management of risk ($r = 0.471$). The model accounted for only 22.1% of the variance in performance ($r^2 = 0.221$). The F statistic of 1.366 was not significant at 5% level of significance ($p = 0.272$) meaning that the model used was not fit to explain the connection between the management of risk practices and the financial performance of Kenyan insurance firms.

The coefficients showed that risk environment and risk mitigation both had negative effects on performance although none was significant. The rest of the variables (internal control, risk measurement, and risk investment guidelines) had positive effects on performance. However, these effects were also non-significant at 5% level but significant at 10% level of significance.

5.3 Conclusions

The research concludes that the management of risk has been adopted as part of the practices in most of the insurance firms in Kenya. This is seen in the number of facets of various risk management approaches adopted by the firms. Thus, firms have better internal controls and risk environment to sustain better performance in the organizations.

The research further concludes that while the management of risk may have an influence on performance of insurance firms, the relationship is weak at best. This calls into question whether the management of risk is well engineered within the institutions surveyed to transmit benefits to the bottom-line of these organizations.

5.4 Limitation of the Research

The key impediments in this research was that, out of the 51 Kenyan insurance firms recorded as the target, just 30 firms managed to return completed surveys. A few respondents did not respond to the inquiries to the researcher even after a formal request to do so. There were respondents who considered the requested inform as confidentiality breach and requested the researcher to use the released information through insurance regulator. This decreased the likelihood of achieving a more decisive research.

The researcher encountered a challenge of persuading the busy officers of the sampled insurance firms. This may have kept the evaluation to take longer than expected, as most of the respondents were reluctant to fill out the survey as provided on paper. There was an instant where a targeted respondent referred the researcher to obtain the questionnaire to a junior officer citing to attend mandatory management seminar.

Some unanticipated imperative occurred, for example, funds prevented the researcher from completing all the expected meetings on the effect of the risk administration on all Kenyan insurance firms. This could have restricted the information accessible to the researcher.

The data collection process could not be verified since all the respondents filed the questionnaire anonymously. This could lead to obtaining of arbitrary data hence skewed results after the analysis.

The time constraint likewise prompted the confinement in the number of insurance officers who took an interest in the research by filling the poll in time and returning them. The time constraint made it impossible to carry out a pilot survey with a view of determining the effectiveness of the questionnaire design as the respondents did not give feedback.

5.5 Recommendations

The research makes a number of recommendations. First, insurance firms should evaluate the way in which the management of risk is implemented in the organizations. All facets

of the management of risk should form the culture of the organizations in order to enhance the performance of these institutions.

Secondly, while the management of risk has a weak effect on performance, insurance firms should enhance their internal control and risk investment strategies as these may have a positive impact on their profitability if well implemented.

Lastly, the insurance regulator in Kenya, as well as the industry association body, should enhance their training on the management risk to insurance institutions to equip the players with the requisite expertise to handle risks.

5.6 Suggestions for Further Research

Further studies are needed in this area. First, research should be done to examine other risk management variables that may have a significant impact on the performance of insurance firms in Kenya. Thus, the definition of risk should be expanded beyond the one used in this paper.

Secondly, future studies should incorporate other measures of performance other than ROA to assess whether management of risk in other ways may influence performance than were tested in the present research.

The research paper also recommends on a research to be carried out in the relationship between risk management and financial performance of other financial institutions such as micro finance institutions and SACCOS.

The research paper also recommends that a study should be done on other determinants of financial performance of insurance companies in Kenya.

The research paper also recommends on a study to be on how financial institutions have adopted risk management procedures and other control measures as actuarial functions guidelines recommendations and its effects on the financial performance of these institutions.

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APPENDICES

Appendix 1: Insurance firms in Kenya

1. AAR INSURANCE OF KENYA
2. AFRICAN MERCHANT ASSURANCE
3. AIG INSURANCE COMPANY
4. ALLIANZ INSURANCE COMPANY
5. APA INSURANCE COMPANY
6. APA LIFE ASSURANCE COMPANY
7. BARCLAYS LIFE ASSURANCE
8. BRITAM GENERAL INSURANCE COMPANY
9. BRITAM LIFE ASSURANCE COMPANY
10. CANNON ASSURANCE COMPANY
11. CAPEX LIFE ASSURANCE COMPANY
12. CIC GENERAL INSURANCE COMPANY
13. CIC LIFE ASSURANCE COMPANY
14. CORPORATE INSURANCE COMPANY
15. DIRECTLINE ASSURANCE COMPANY
16. FIDELITY SHIELD INSURANCE
17. FIRST ASSURANCE COMPANY
18. GA INSURANCE COMPANY
19. GA LIFE ASSURANCE LIMITED
20. GATEWAY INSURANCE COMPANY

21. GEMINIA INSURANCE COMPANY
22. HERITAGE INSURANCE COMPANY
23. ICEA LION GENERAL INSURANCE
24. ICEA LION LIFE ASSURANCE COMPANY
25. INTRA-AFRICA ASSURANCE
26. INVESCO ASSURANCE COMPANY
27. JUBILEE INSURANCE COMPANY
28. KENINDIA ASSURANCE COMPANY
29. KENYA ORIENT INSURANCE
30. KENYA ORIENT LIFE ASSURANCE
31. LIBERTY LIFE ASSURANCE KENYA
32. MADISON INSURANCE COMPANY
33. MAYFAIR INSURANCE COMPANY
34. METROPOLITAN LIFE ASSURANCE
35. OCCIDENTAL INSURANCE COMPANY
36. OLD MUTUAL ASSURANCE COMPANY
37. PACIS INSURANCE COMPANY
38. PAN AFRICA INSURANCE COMPANY
39. PHOENIX OF EAST AFRICA
40. PIONEER ASSURANCE COMPANY
41. PRUDENTIAL LIFE ASSURANCE KENYA
42. RESOLUTION HEALTH INSURANCE
43. SAHAM INSURANCE COMPANY

44. TAKAFUL INSURANCE OF AFRICA
45. TAUSI ASSURANCE COMPANY
46. THE KENYAN ALLIANCE INSURANCE
47. THE MONARCH INSURANCE COMPANY
48. TRIDENT INSURANCE COMPANY
49. UAP INSURANCE COMPANY
50. UAP LIFE ASSURANCE COMPANY
51. XPLICO INSURANCE COMPANY

Appendix 2: Questionnaire

This questionnaire is intended to provide anonymous data for the study on the connection between the management of risk practices and the financial performance of Kenyan insurance firms. Please note that the information provided is useful for academic purpose only and was treated with highest confidentiality possible.

Kindly fill out the following prompts by marking (x) as provided in the section or by giving the necessary details in the spaces provided.

TABLE 1.PROFILE OF THE RESPONDENTS

Gender	
Institution name	
Level of experience(years)	
Department of the respondent	
Occupation ranking of the respondent	
Highest education level of the respondent	
Annual company turnover (Ksh)	

TABLE 2. Risk Management Environment, Procedures and Policies

1. To what extent are the following facets of risk management environment, policies and procedures applicable to your company? Use a scale of 1-5 where

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Note: This scale is applicable for question 1,2,3,4 and 5

ITEM	1	2	3	4	5
1. Management fully considers risk assessment in determining the best course of action.					
2. The existence of risks and management’s recognition of this is appropriately communicated to all employees.					
3. The Board is dynamic and has a proper level of administration, specialized, and other skill, combined with the outlook important to play out its oversight obligations.					
4. The Board is consistent in questioning and scrutinizing management’s actions, with a view to offer alternative opinions, and take action for wrongdoing					
5. The Board guarantees that administration goes for proper management					
6. Internal guidelines are in place to govern the institution					
7. The insurance company adopts and utilizes guidelines internally generated and regulatory authorities such as IRA					
8. The Insurance company has adopted and utilized Revised IRA Financial Risk management Guidelines					
9. Business objectives are appropriately communicated as it relates to objectives.					
10. Individuals are aware of their activities interrelation and add to accomplishment of the organization goals					

TABLE 3. Risk Mitigation

2. To what extent does your company adopt the following risk mitigation procedures? Use a scale of 1-5

ITEM	1	2	3	4	5
1. Counterparty risk limits for each individual are considered.					
2. The firm has a regular reappraise of risks levels of the covered properties (assets)					
3. There is analysis and report writing committee on the risk rating of the prospective properties under cover					
4. The insurance company regularly conducts simulation analysis and measure benchmark (premium rates) rate risk sensitivity.					
5. The company analyses each insured loss ratio before business renewal					
6. There is risk rating of prospective insured property by pre-visiting desk analysis of data and information collected from the client.					
7. There is risk rating of prospective insured by checking if there are no factual errors or misinterpretations of data provided by prospective insured.					
8 Ethical are communicated and accompanied by explicit direction concerning what is wrong and right					

TABLE 4. Risk Monitoring

3. To what extent, does the company follow the following risk monitoring procedures? Use a scale of 1-5

ITEM	1	2	3	4	5
1. The credit limits for insurance brokers and other third parties is strongly monitored by doing background check.					
2. The insurance firm has a consistent (e.g. week after week) arranges a development stepping stool outline as indicated by settlement date and screen money position gap					
3. The insurance firm has set up a consistent reporting framework with respect to hazard administration for senior officers and administration					
4. Incapable lines of power or potentially inability to set up clear approaches or points of confinement of power that causes directors or workers to do things they ought not do or neglect to do things they ought to are accounted for to the administration.					

TABLE 5. Internal control

4. To what extent does your company employ the following internal control measures? Use a scale of 1-5

ITEM	1	2	3	4	5
1.Principles and procedures relating to decision making processes					
2. Segregation of duties in different approvals levels in the all documents processed by the Insurance company e.g. premium approvals, payment approvals					
3. The insurance has contingency plan in case of a disasters					
4. The internal auditor is mindful to audit and checks the risk administration frameworks, risk reports and adherence to rules					
5. The Insurance company has backups of data files and software in an offsite location from the insurance head office.					
6. There is a Risk Committee in the Board Level responsible for approval of audit plans.					
7. system controls to detect any fraud transactions					
8.Existence of personnel policy on guiding on frauds transactions					
9. There is relevant or reliable information supporting pricing decisions to prevent the risk of unprofitable contractual agreement.					

TABLE6. Risk Measurement

5. To what extent has your company implemented the following risk measurement process? Use a scale of 1-5

ITEM	1	2	3	4	5
1. There is a computerized support network for evaluating the inconstancy of income and hazard administration					
2. The firm frequently directs reenactment examination and measure benchmark (premium rates) rate hazard affectability.					
3. Adequate quality management processes					
4.The insurance uses Maturity Matching Analysis for life insurance					
5. The insurance uses stress testing for the risk evaluation					
6. The insurance firm has a quantitative supportive network for surveying clients' credit standing (brokers and agents)					
7.Adequate quality management processes					
8.Adequate record keeping processes					
9. Adequate internal audit processes					

TABLE7. Risk Investment Guidelines and Strategy

6. To what extent, has your company implemented the following Risk Investment Guidelines and Strategy?

Use a scale of 1-5

ITEM	1	2	3	4	5
1. The arrangement of a benefit portfolio is made of the result of an all-round .reported organized venture prepare with proper strides for usage.					
2. For any different portfolios held, for the insurance agency there is a framework for recognizable proof, estimation and evaluation of speculation risks to that portfolio and where fitting for the gathering as entirety.					
3. Satisfactory strategies for the estimation and evaluation of speculation execution					
4. Satisfactory and auspicious internal correspondence of data on investing undertakings					
5. Strategies to recognize and control the reliance on and vulnerability of the firm to important work force and the systems					
6. There are thorough and compelling review strategies and observing exercises to distinguish and report shortcomings in venture controls and consistence					

Thank you for filling this questionnaire

Appendix 3: Data

Company	riskman	riskmit	riskmon	internal	riskmeasure	riskinvest	roa
Kenindia	4.75	4.50	4.50	4.70	4.22	4.43	4.17
Liberty	4.88	4.75	5.00	5.00	4.78	5.00	2.16
GA	5.00	5.00	5.00	5.00	5.00	5.00	6.50
Sanlam	4.38	4.00	3.75	4.10	3.00	4.57	1.38
Jubilee	4.50	4.13	3.75	4.60	3.33	4.00	2.72
Xplico	3.75	4.00	4.25	4.20	4.00	4.00	0.68
Barclays	4.75	4.50	4.50	4.70	4.22	4.43	3.52
Britam	4.88	4.75	5.00	5.00	4.78	5.00	0.96
Capex	5.00	5.00	5.00	5.00	5.00	5.00	0.26
Cannon	4.38	4.00	3.75	4.10	3.00	4.57	4.02
CIC	4.50	4.13	3.75	4.60	3.33	4.00	6.24
Pioneer	3.75	4.00	4.25	4.20	4.00	4.00	6.84
Corporate	4.75	4.50	4.50	4.70	4.22	4.43	7.93
Direct Line	4.88	4.75	5.00	5.00	4.78	5.00	5.08
Occidental	5.00	5.00	5.00	5.00	5.00	5.00	9.22
Fidelity	4.38	4.00	3.75	4.10	3.00	4.57	4.37
Fists Assurance	4.50	4.13	3.75	4.60	3.33	4.00	7.10
Allianz	3.75	4.00	4.25	4.20	4.00	4.00	3.43
Gateway	4.75	4.50	4.50	4.70	4.22	4.43	0.74

Geminia	4.88	4.75	5.00	5.00	4.78	5.00	12.06
Heritage	5.00	5.00	5.00	5.00	5.00	5.00	10.06
ICEA	4.38	4.00	3.75	4.10	3.00	4.57	6.37
Intra Africa	4.50	4.13	3.75	4.60	3.33	4.00	2.79
Invesco	3.75	4.00	4.25	4.20	4.00	4.00	3.10
Trident	4.75	4.50	4.50	4.70	4.22	4.43	3.46
UAP	4.88	4.75	5.00	5.00	4.78	5.00	5.55
Kenya Orient	5.00	5.00	5.00	5.00	5.00	5.00	2.82
Pacis	4.38	4.00	3.75	4.10	3.00	4.57	8.83
Madison	4.50	4.13	3.75	4.60	3.33	4.00	8.52
Mayfair	3.75	4.00	4.25	4.20	4.00	4.00	9.27
All mean	4.54	4.40	4.38	4.60	4.06	4.50	5.00
All SD	0.41	0.38	0.52	0.35	0.72	0.41	3.08