EFFECT OF ENTERPRISE RISK MANAGEMENT ON FINANCIAL PERFORMANCE OF INSURANCE FIRMS IN KENYA

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DECLARATION

Declaration by Candidate

This research project is my original work and has not been presented for examination or award of any degree in any other campus or institution of higher learning.

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DEDICATION

My project paper is dedicated to my loving wife Linda Mongina Jabesh Ogallo and my lovely daughter Zaila Jelani Ogallo who have encouraged and stood by me.

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ABBREVIATION AND ACRONYMS

AKI	Association of Kenyan Insurers
CAPM	Capital Asset Pricing Model
CMA	Capital Markets Authority
COSO	Committee Sponsoring Organizations on Treadway Committee
ERM	Enterprise Risk Management
IRA	Insurance Regulatory Authority
PT	Portfolio Theory
ROA	Return on Asset
ROE	Return on Equity
VIF	Variance Inflation Factor

ABSTRACT

The project's goal was the assessment of the effect of Enterprise Risk Management (ERM) on financial performance of insurance companies in Kenya. Theoretically, ERM adds value to a firm that adopts it; but still, there is no concurrence among scholars regarding the ERM effect on financial performance. The increase in business activities, complexities in business operation, unpredictability and evolving risks have triggered clamour for ERM universally. The empirical evidence demonstrates that the risk increases, displaying weaknesses in the risk management system. This analysis investigated the general objective which was the effect of ERM on financial performance of insurance firms in Kenya. The specific objectives that guided the study were to; analyse the effect of liquidity risk management, the effect firm size and credit risk management effect on insurance firms in Kenya. The Portfolio Theory was the anchoring theory of this study and it formed the basis of explaining the connection between and financial performance of insurance firms in Kenya. Secondary data used was from 54 IRA registered insurance companies. Data collection was done from published reports provided by IRA for a period of 10 years, from 2009 to 2019. SPSS software was used in the examination of the quantitative data. The study applied regression analysis and the findings were presented using tables. From the evaluation the outcomes established a negative correlation between liquidity risk management and financial performance, all other independent variables (credit risk management and firm size) were all positively correlated with the dependent variable (financial performance). All the models were significant. From the findings a significant correlation between combined ERM variables and financial performance (p-value 0.000 < 0.005) was established. The R square value of 0.8479. The recommendation of the study was that for these insurance firms to reap greater benefit from risk management endeavours a multi-faceted approach towards risk management should be adopted.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Risks has the capacity to prevent organizations from achieving their set out objectives and therefore Enterprise Risk Management (ERM) is needed. ERM is a tool that helps firms to identify risks, assess the risks, treat them, control and monitor the risk that gears the firm towards achievement of their set out objectives (Institute of Management Accountants, 2019).

ERM is a discipline whereby corporations assess, control, finances and overseer risks from each area, for the purpose of enhancing the shareholders worth, (CAS, 2004). The process creates a path for management to enhance the outcomes with the aim of improving capabilities to create, preserve and realize value (COSO, 2018). Different firms face diverse risks and thus require risk assessment processes that are practical, simple and easy to understand. These procedures must not progress in a structured and controlled fashion. They have to be tailored to the firms size, complexity and geographical reach (Curtis & Carey, 2012).

Over the years, ERM has transformed from the departmental to the universal coordinated and assimilated approach. A holistic approach that intrinsically links ERM to the organizational business strategy is being adopted by various companies. These strategies like risk portfolio development, risk optimization, measurement and monitoring are very vital to the efficacy of ERM (KPMG, 2001). ERM is geared towards addressing, financial, strategic and operational risk, (Tazhir & Razali, 2010).

Notwithstanding, ERM taking momentum, risks continue to increase and evolve (Golshan & Rasid, 2012). The volume and scale of enterprise risk continue to increase due to factors like complications of corporate transactions, technological development, speed of product life cycles

and globalization (Beasley, Hancock & Branson, 2013). ERM is geared towards addressing these financial strategic and operational risks (Tazhir & Razali, 2010).

Enterprise risk management is the major element that determines the going concern and the level of financial performance of organizations in an economy. In banking and the overall financial sector, enterprise risk management is very dire for the reasons of loss avoidance. Since insurance firms are a major component in the financial sector and are continuously faced with numerous potential risks compared to other financial institutions, enterprise risk management practices in these institutions are very key. Insurance firms just like other corporations are formed to maximize shareholders' wealth and to achieve the said objective, they must strive to avoid losses. Risk management, therefore, becomes a very significant element in the administration and corporate functioning of the insurance companies (Mikes & Kaplan, 2014)

The insurance sector in Kenya and by extension to the world has continued to grow. The profits accrued from this sector have attracted more investors to establish and invest in more insurance firms. Since the number of entrants in the insurance sector has increased, competition in this field has become intense. Risk within the insurance industry has increased due to competition, thus making ERM is a necessity. Risks associated with every client in the business need to be identified and managed for the better financial performance of the firms.

Kodi (2003), claims that most insurance companies cover States that majority of the insurance companies do not implement proper procedures of examining their clients' claims. They do not put in place suitable enterprise risk reduction methods that can prevent them from incurring huge losses which eventually lead to poor financial performance. Insurance firms, being risk-bearing institutions, are prone to fail if no risk management systems are implemented (Standard & Poor's, 2013).

This view is also shared by Magezi (2003), who in his study also proposes that poor risk management practices in most insurance companies have contributed to huge losses either from internal or external clients. These losses have led to poor financial performances that have lead to the closure of insurance firms.

In order to prevent this occurrence, Iqbal and Mirakhor (2007), state that companies need a proper risk management model that can aid them reduce the risk exposures that can prevent them from reaching their set financial objective.

Over the years in the insurance sector, the cause of insurance companies going bankrupt is for several internal and external factors. A common reason is the combination of sub-standard management processes and insufficient risk management framework when dealing with major risks (KPMG, 2002).

Insurance firms being their clients' agents, they take on the management and risk bearing functions on behalf of their customers. Agency problems are bound to rise in such situations and therefore proper enterprise risk management procedures are very vital. These insurance firms also act as agents of the shareholders in the company, whose major goal is getting maximum value on their share. In order to ensure that they reduce agency problems and get in line with shareholder's principle of wealth maximization, the firms should be guided by proper management guidelines and adequate risk management practices that would ensure proper assessment of insurance risks that they take up so as to avoid losses (Meridith, 2014).

Insurance firms operate by taking the risk of policy holders in exchange for a first-class (premium) cover. Firms and Individuals transfer the risk to insurance firms in exchange for money also known as premiums. These premiums are significantly small when compared to the probable losses. This reduces the cost for those clients who suffer the unforeseen damages (Soekarno & Azhari, 2009).

These firms should therefore be inclined to the implementation of proper enterprise risk management practices if they want to focus on improving their financial performances. ERM will provide a rigorous framework that will facilitate an objective and consistent approach. It is a common language in view of risk that can help companies that align their risk profiles with business strategies and risk appetite (Toronto Center, 2015). These firms should also focus on qualitative discussion and deployment of professional opinion on evolving risk concerns (Mikes & Kalpan, 2014).

Three theories will be used in the study namely: Portfolio Theory, Agency Theory and Contingency theory. They will help us understand the framework, management and implementation of ERM strategies.

1.1.1. Enterprise Risk Management

This signifies a process put in place in an organization as part of internal control to identify activities that might affect organizational policies. Protection of both the shareholders' investment and company assets are the topmost objectives of companies. Therefore, ERM's purpose is to administer and meritoriously control risk appropriately within the companies' risk appetite. It strategically provides for sound assertion concerning the achievement of organizational objectives (COSO, 2004).

It can also be expressed as the process of defining an entity's uncertainties with great focus on activities that may hinder the organization from achieving its set out objective. It applies at all levels of the organization and is adjusted when needed, to mirror the frequently changing business ecosystem (Gordon, 2009). According to Tseng (2007), it is the adoption of systematic approaches that are consistent with the management's objective of preventing risk exposures that may prevent the achievement of firms' objective of shareholders' wealth maximization.

There has been a continuous need for a proper, structured and integrated approach in the management of risks since there has been an increase in market pressure in the business environment. Regulatory pressures, competition pressures, and other external factors are the elements that have led to this market pressure surge. Enterprise Risk Management practices can bring such challenges to control if they are embedded in the company's systems of control, (Corporate Executive Board, 2007).

ERM should be done in a holistic and not ad hoc manner. This is to say that it should be done in a structured integrated way across the organization (Abrams, 2006). In a study by Price Waterhouse Coopers (2006), reinforcement of corporate governance and reinforcement of internal controls in various companies have been some of the areas where ERM practices have come in handy.

The assessment and quantification of risks are of great importance as an ERM approach. This is so because these quantities of risks help in the provision of a qualitative perspective of how these risks affect the organizational portfolio. They give a clearer picture of hindrances to be experienced in the achievement of certain organizational objectives (CAS, 2003).

In conducting ERM, areas to be investigated are business knowledge, brand standards, people and intellectual resources, source of turnover and the controlling setting (Searle 2008). An assessment of various enterprise facets, there are various risks that arise firms are supposed to deal with namely: financial risk, human capital risk and technological risk (Nocco & Stulz, 2006).

Nacco and Stulz (2006) states that financial risks refer to risks that arise due to failure of corporate governance mechanisms and organizations' internal control measures that are put in place in order to manage risks that emerge from daily financial operational procedures in an institution. These failures often lead to financial losses which might affect the going concern of such institutions. Such financial losses expose the firm to risks such as liquidity risk, which refers to the potential for loss arising from the inability of an organization to meet its short-term monetary responsibilities. It is the inability to efficiently accommodate deposits by providing a cushion to cover anticipated deposit withdrawals (Al Tamini & Al Mazroezi, 2007).

To prevent or reduce financial risk, financial risk management practices should be put in place. This refers to the assessment of financial risks and development of strategies that can manage financial risks (Horsher, 2005). There are various financial strategies and tools used for response and they are grouped into internal strategies, risk sharing strategies and risk transfers. Internal strategies which involve managing risk within the framework of a normal business environment consist of activities like natural hedging and internal netting. Risk sharing strategies which are strategies of sharing risks with a third party consist of derivatives. Lastly risk transfer policies which involve paying a third party to take the downside of the peril consist of aspects like options insurance and securitization (Woods & Dowd, 2008).

ERM implementation in the insurance sector has continued to increase over the years. More companies have decided to put in place these ERM practice procedures with view of improving

their financial performance. In the implementation process, some companies still face a lot of trouble by implementing the framework that is not in in sync with their daily operational procedures. More information on how to choose the right ERM plans should be published to act as points of reference for other companies trying to adopt the same. Companies rarely publish comprehensive material about their current management systems.

Risk management practices should be clearer on how risk is recognised and managed. By identifying various categories of risk that has to be managed, one can understand the composition of that risk by application of basic knowledge of probability. From assessing the strength of the risk, a clear definition of whether one will be willing to bear the risk or not can be established. Such risk management processes should be formalized for future risk assessment references as the culture of risk is inculcated within the sector. At the beginning stages, the culture of risk management may face challenges due to a lack of adequate information of culture related to it. Once the cultures are put into practice one should be able to learn from its success or failure. For the long-term operation of a firm, risk assets and risk models should be used to help the policymaking process and just like innovation they are very essential for the continuity of the firm (Lam, 2003).

Most organizations lack ERM to treat risk exposure. This brings forth negative effects concerning the financial profitability of such firms (Saleem & Abideen, 2011). A document on risk management policy gives guidelines to risk management processes that enable a firm to reduce its risk exposures and secure its going concern. The inadequacy of such documents calls for the current study. In the meantime, most firms adopt, Kiochos (1997) risk management process.

Risk identification should be methodical and one that addresses organizational activities and associated risks. It is carried out by tools such as questionnaires, surveys, brainstorming and staff expertise. After identification, these risks are then assessed by being mapped against the likelihood matrix to assess the potential impact. The next step is response and which one should consider the effectiveness, cost and the prospective benefits (Woods & Dowd, 2008).

1.1.2. Financial Performance

An organization's capacity to generate revenue by utilizing the assets from its primary business is referred to as financial performance. It is a measure of whether the company is sustainable in the business environment or not. Through examination of a company's liquidity, competition and profitability measures a business's financial performance level can be determined.

Analysis of profitability is done by assessing the relationship between profits, revenues and expenses. When the profits are measured in relation to investment size of the business, profitability ratios give us comparisons which when analysed communicate the performance of the firm. Return on Assets (ROA) is commonly used as a tool to measure performance.

Atkinson and Lee (2008), referring to a perfect competition framework, in a sector where the firms under the framework operate under a perfect competition market model, the firms cannot absorb any incremental cost. Instead, the incremental input cost is shifted to the output prices and as a result output remains unaffected. Under the monopolistic market model, at equilibrium, any increase in input prices will result in a decreased amount of output and an increase in prices by a smaller amount compared to the input cost rise. Marginally profitable firms end up winding up.

Risk event disruptions vary across firms since different firms have different measurement standards and control mechanisms for mitigating various risk exposure. Zsidon (2003) argues that firms should make revenue that absorbs expected risk or gets insurance.

1.1.3. ERM and Financial Performance

Over the years, financial scandals have diminished investor confidence. Risk management is one of the strategies that are being implemented to realign the companies to their main objective which is a maximization of shareholder value. Several companies are trying to manage risk across the organizations which exhibits the need for adoption of enterprise risk management with corporate governance (Sobel & Redding, 2004).

ERM provides current and reliable considerate risks specific to a corporation across various areas in risk. From this assessment, the companies can know what risks to put more focus on. According to SAS (2004) ERM also plays a very vital role by ensuring compliance with the set regulations and laws which aligns an organization towards achieving its set objective of maximising shareholder's wealth.

Lam and Kawamoto (1997) states that ERM creates risk management part of the company's global approach. It enables the company to make better risk-adjusted assessments that maximize shareholder value. Over the years, risk management has been implemented for regulatory compliance and control purposes. A regulatory tool, to enhance a firm's financial performance and as a control tool that helps the organization to save on cost. Through risk management, a firm's value is increased. This is so because profitability increases because of the implementation of the practices (Banks, 2004).

It is important for factors such as poor liquidity management to be managed efficiently by insurance companies. Other factors such as under-pricing, governance issues and under reserving should also be properly addressed. For expansion and rapid growth causes financial distress in the company, (Standard & Poor, 2013). Insurance firms should keenly assess the various risks exposures that their firms are faced with. When such risk exposures are well managed within the firm level, perils that are distinctively part of its insurer's services end up being managed too (Nocco & Stulz, 2006).

With the evolution of the market environment, there is a surge in risks and most institutions are taking up measures that can manage such risks. Companies with mature risk management strategies tend to do better financially since they have proper decision-making structures while having efficient ways of resource allocation and tools for reduction of risk exposures that the firm may face (Okochi, 2008).

ERM takes an integrated structural approach that should always exist at the Board of Directors and executive management levels. This brings forth accountability in the implementation of ERM practices (Searle, 2008). ERM eases access to resources which causes a reduction of a company's

expenditure and cost. It also guides firms in dealing with negative earning shocks that cause financial distress (Anderson, 2008). Precautionary measures are one of the elements that can be used in risk management. It helps increase efficiency by managing the company's risk appetite (Jolly, 1997). From daily operations, firms are exposed to a lot of risks. If this risk is not well managed, they end up affecting the financial performance of these institutions. Therefore, a proper ERM tool should be implemented to reduce the firm's risk exposures and as a result improve on its performance.

Firm's capacity to meet its current financial obligations without upsetting its typical operations as and when they fall due is referred to as liqudity (Black, Wright & Bachman, 1998). Liquidity ratios are very instrumental in the determination of the company's viability. A firm with higher liquidity ratios is deemed to be healthier than one with a lesser liquidity ratio. They are looked at as companies with great potential to succeed. On the flip side, companies with high debt and low liquidity are risk-prone and their likelihood of failure is quite high.

In the insurance sector liquidity risk presents itself where a firm's sustainability in funding itself is shaky since it has not acquired any new business in its recent past to keep it liquid. That is a sharp decline in the premium income to the company. Even though companies might be having short term assets to cover their debt, this risk is still quite dangerous. Negative cash flows lead to loss of potential investment opportunities. At this point a company may start engaging in businesses transactions that are not financially viable and are more disadvantageous than normal, thus this kind of risk is called the market liquidity risk (Black, Wright & Bachman, 1998).

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Most insurance companies carry out an assessment of current ratio as the first measure of liquidity. It is a liquidity ratio that helps determine if insurers can meet their financial obligations. This pointer measures the capability of a business entity to settle its short-term liabilities (Karanovic, 2019).

Credit risk management was the second variable under ERM. It refers to the inability of one party to meet its obligation as was previously stipulated under a contract. In the insurance business

sources of credit risk include policy holders, reinsurers, intermediaries and other counter parties. Such risks borne include default risk, spread risk, indirect credit and migration risk

Large firms are more inclined to pay attention to risk management, because their activities are more complicated and vulnerable to risk. The more complicated the operations, the higher the chances of operational failure or vulnerability to risks. Hence firms that have complicated business segments, would implement ERM compared to companies that have only one to two (Gordon, 2009). Due to such factors the study opted to use underwriting premium as a measure of firm size.

According to Amer and Mrwan (2016), frequency of audits and frequency of board meetings are considered two of the main corporate governance mechanisms that have influence on firms' financial performance. In a study that they carried out among 56 listed firms in Egypt, it was found that frequency of audit and frequency of board meetings had an affirmative and noteworthy effect on financial performance of these firms. The analysis used these two aspects as the control variables in the conceptual framework by considering only the statutory numbers of audits and statutory number of board meetings required by the 54 firms

1.1.4. Insurance Companies in Kenya

This sector has an organisation assigned to regulate its insurance companies and it is known as Insurance Regulatory Authority (IRA). It is an industry regulatory body that is mandated with the supervision and regulation of the insurance industry players. According to the IRA there are 54 insurance firms in Kenya. Over the years these insurance firms have faced various challenges that have ranged from delayed premium collection, delayed claim settlement, employee and clientele fraud to low penetration of insurance services. Out of necessity, this made the IRA come up with a risk management framework for the insurance industry. This came into effect in June 2013.

Insurance companies have also formed a self-regulatory body that helps them deal with the challenges facing the industry. This organization is the Association of Kenya Insurers. In the past decade, several organizations have shut down and this clearly shows that more studies need to be done to help improve risk management in these companies to increase profitability

1.2. Research Problem

Various studies have focused on ERM in the banking sector, but little focus has been on the insurance sector. The influence of ERM practices on performance of insurance companies' empirical literature is hardly available. Insurance companies' activities exposes them to various financial risks. Such financial risks are the liquidity risks, credit risks and firm size. For an optimal balance between risk and return, there is a requirement for dynamic and sound ERM practices. If the framework is properly implemented enterprise risks can be managed and the firms' financial objectives can be achieved (Jorion, 2001). The following selected studies shows gaps that our study delved to fill.

In a study by Tahir and Razali (2011) of 528 Malaysian firms in 2007 regarding the effect of ERM on shareholder value, ERM was measured by using database from Osiris whereas Tobin Q was used in the measurement of shareholder value. The model used in the study was linear regression and the finding was that an affirmative relation exists amongst ERM and shareholder value. But the study had the following limitations which our study will seek to address. First, secondary data for a period of one year was used, which is not sufficient time to effectively observe ERM. This is so because of the low percentage of respondents in a short time which made the study limiting.

In another study by Altuntas, Stolze and Hoyt (2011) on determinants of ERM adoption in property liability insurance industry in Germany. The study focused on factors that influence a firm to start an ERM program and therefore never focused on the ERM effect which our study explored. Besides that, the study also used telephone in answering a questionnaire with 81 items which might not have been an appropriate medium for quality responses.

Pagach and Warr (2010) studied how firms adopted the ERM principles and its long term effect on the performance. This was done by studying how financial, asset and market characteristics adjust when ERM was implemented. in the United States of America. From the 106 companies that were taken as sample size, the results from the study showed little evidence on effect of ERM adoption on firm's performance. However, the study was limiting since the sampled firms were from a well-regulated (financial and utility) industry and using appointment of chief risk officer

(CRO) might not have provided an opportunity for analysis of firms that had effective ERM without designating the person in charge of risk management as CRO.

Waweru and Kisaka (2013) recognized a significant positive connection between the extent of ERM implementation and the effect on firm value. Despite the fact that the results of Waweru and Kisaka (2013) concurs with the hypothesis of our study, caution should be taken due to the following: the study used email questionnaire to collect data, and therefore the people who responded to the 73 questionnaires might not be involved on ERM activities; the response rate was low (49%) and concentrated in three sectors (commercial services, industrial and finance) and the financial statements used was for one year. The small (22) size of respondents limited the extent of statistical analysis and therefore implying that care is needed before generalizing findings to the NSE listed firms.

According to Nyagah (2014), in examining extent of ERM implementation on pension management firms, an analysis using both primary and secondary data was done which focused on the 19 registered pension fund management firms in Kenya. ERM activity was used as a measure of ERM and cost and revenue efficiency as measures of financial performance. On analysing the data, where regression analysis was used, it was established that ERM adoption had a remarkable effect on the performance of those organizations. This study took a departure from adoption and implementation of ERM to finding out the result of ERM on financial performance.

The study's research questions were:

1. What is the effect of liquidity risk management practices on the financial performance of insurance firms in Kenya?
2. What is the effect of credit risk management on the financial performance of insurance firms in Kenya?
3. What is the effect of firm size on the financial performance of insurance firms in Kenya?

1.3. Objective of the Study

1.3.1. General Objective

1. To determine the effect of enterprise risk management and financial performance of insurance firms in Kenya.

1.3.2. Specific Objective

1. To determine the effect of liquidity risk management practices, that influence the financial performance of insurance firms in Kenya
2. To determine the effect of credit risk management practices, that influence the financial performance of insurance firms in Kenya.
3. To determine the effect of the firm size that influence the financial performance of insurance firms in Kenya.

1.4. Value of the Study

The study aided the understanding of enterprise risk management and the effect on the financial performance of insurance firms. Besides that, it added to the empirical existing knowledge on ERM which will be of great value to scholars in regard to further research on enterprise risk, ERM and the impacts on the insurance sector.

This study's aim was also to help insurance companies in Kenya to adopt various enterprise risk management practices that can be of great impact on improving their financial performance. The firms can therefore make more informed decisions concerning taking up risks since the study contributes to the knowledge on how to have good risk management policies. In addition to that, the study was also aiming to help the government by providing a framework that can be used in the formulation of policies that can help improve insurance practices in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This area will cover the literature review, theoretical literature review, financial performance determinants, empirical literature review, conceptual framework which ties theoretical literature and empirical literature were discussed. The study identified the existing gap in literature with regards to ERM and Insurance firm's performance in the financial sector, which was the aim of the study.

2.2. Theoretical Review

Relevant theories on ERM were covered. These theories reviewed included Portfolio, Agency and Contingency theory.

2.2.1. Portfolio Theory

It is an investment theory developed in 1952 by Markowitz. Prior to the portfolio theory, practitioners would often speak on risk and returns but they never did quantify these two measures. This made the objective of constructing an optimal portfolio quite subjective and as result provided no insight about the returns the investors should expect. Portfolio theory was therefore developed with the objective of constructing a portfolio that is efficient.

Markowitz diversification strategy provided the base for portfolio theory. He argued that events are not perfectly correlated. So prudent investors should construct a portfolio in that reduces portfolio risk without sacrificing the return. The theory further proposes that risks should not be managed in "silo" fashion but rather in holistic fashion. ERM just as portfolio theory requires enterprises to view their risk in a holistic fashion. In doing so, they let independence among most

of its risks and as a result of natural hedging, some of their effects play out (Mandelbrot & Hudson, 2004).

Since shareholders' goal is maximization of their wealth, the firms that they invest in must be in line with this objective. So, they must endeavour to invest in portfolios that maximize returns and minimize risks. Therefore, makes enterprise risk management an integral part of the firm's operations if they are to be in line with the principle of shareholders' wealth maximisation. (Barton, 2002).

2.2.2. Agency Theory

Developed by Jensen and Meckling (1976). Managers are deemed to act as agents of shareholders but not in all cases do, they act in the interest of the shareholders. Therefore, conflict arises between managers and shareholders who then must put in place mechanisms to align manager's interest and their own interest. Agency problems result from information asymmetries. This is where agents have more information than shareholders and thus shareholders must depend on manager's decisions (Nwidobie, 2013).

Conflict might also arise due to managers preferring greater levels of consumption and less intensive work, preferring short term investment horizon, less risky investments and lower financial leverage. They prefer these conditions since it reduces the danger of bankruptcy and loss of their managerial capital portfolios (Massulis,1998).

Since shareholders want to maximize their wealth, they have over the years put in place various mechanisms to aid in control of agency problems. One such mechanism is implementation of internal audit. This mechanism is put in place to safeguard continuity and improvement of the company. It evaluates effectiveness of the firm to reveal and prevent unproductive procedures which assists in protecting assets and capital (Jovanova, 2014).

Financial rewarding of managers also helps mitigate agency problems. They can be motivated to reach their goals through incentives like bonuses should be calculated as a proportion of realized return of the company (Wasterfield & Jaffe, 2008). Besides that, concentrate ownership, which is a system where managers can own shares in the company by providing them with good share plans that increases their appetite to buy more. Managerial ownership increases their interest to be aligned with shareholder's interest that will increase shareholder value (Eun & Resnick, 2004).

A suitable system of corporate governance is also of pronounced importance for reducing agency problems. It ensures efficient control of the company and enhances their performances. This provides the company with an avenue for good external financing (Lacker & Tayan, 2011).

Managers draw their income from employment and since they aim at keeping their financial situation in good place, they do all it takes to ensure their jobs are secure. One of the ways they do to protect their earnings is by being risk averse. They tend to keep away from high-risk business projects and instead allocate funds to certain select projects with a view to hedge diversifiable risk. In doing this, it clearly shows that they are reluctant to put shareholders' interest, which is maximisation of their wealth. To reduce this risk aversion, the board can decide to link managers' pay with the firm's share price

2.2.3. Contingency Theory

This was developed in 1960's as a follow up from the ideas of the open systems theory. Open system theory main focus was the idea of uncertainties in the business environment being a variable that is not in the businesses' realm of control. This theory recognizes that there are inevitable changes in the environment of a firm that a firm need to adapt to for it to able to survive. So basically, contingency results to structure. The contingent variable in this was firm size.

As size of the organization increases structural differentiation also occurs. These differentiations can be grouped into three: vertical, horizontal and spatial differentiation. Vertical differentiation is the hierarchy of subordinates and span of control within a management layer. Horizontal

differentiation on the other side refers to the number of various departments and their areas of specialization. Spatial differentiation refers to the geographic spread. This is the physical separation of personnel and facilities. These three changes do occur in terms of structural differentiation as the size of the organization increases (Blau & Schoenner, 1971).

Hoyt and Liebenberg (2009) stated that size of the firm is positively related to the implementation of ERM. Beasley (2008) established that the reaction to ERM system implementation is positively related to size of the company, where ERM system adoption is signaled by CRO hiring. COSO (2004) also notes that firm size is very vital when designing an ERM system.

2.3. Empirical Review

Yuswan, (2008), carried out a study of companies within Klang Valley, Malaysia. The study which was on construction project examined strategies implemented when dealing with risk exposures and risks in that project. Identification of risk management challenges and possible solutions were taken as part of the tools needed in dealing with risks. Management of 27 companies (private and public) operating in Klang Valley was the sample size to whom questionnaire surveys were employed and it was found that 51.9% of the participants assumed that risk management could add value to their daily work. It was concluded that risk management, productivity had a momentous relationship with financial performance.

Pourquery and Moulder (2009), on investigating the importance of operational risk management as part of business, they found out that indeed operational risk management practices are getting acknowledged as part of the business. In various businesses, operational risks exposing different units are overseen. From their study, 70% of the CEOs from 60 selected banks from around the world found operational risk as imperative. Through a creation of a proper risk culture operational risks can be properly recognized, evaluated and overseen.

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Siba (2012), in a study on the financial performance of commercial banks in Kenya and risk management practices, forty (40) commercial banks in the country were taken as the sample population. Primary data was collected by administration of questionnaires. CBK annual supervision report was the source for secondary data. From the findings these banks had a risk management system. They had a similar risk management environment and internal control measure of policies and procedures that ensured efficient risk monitoring These banks had different mixes of risk monitoring schedules and disparities in the identification, management, and control of risks

Ogilo (2012) on examining risk management relations to the financial performance of Kenya's commercial banks, where CAMEL (Capital adequacy, Asset quality, Management efficiency, Earnings, and Liquidity) indicators were used as determinants of credit risk management. Multiple regression was used on secondary data from CBK reports, that showed a substantial influence between CAMEL elements and the performance of the commercial banks. Earnings component had an added substantial relationship with the commercial banks with the financial performances in comparison to the other components.

McShane (2013), on assessing ERM impact on the performance of 523 insurers in the US focusing on the period between 2004 and 2006. ERM activity was used as measure of ERM and revenue efficiency together with cost depending on ERM activity were used as measures of performance. Linear regression analysis was applied to the model and it was found that there was a affirmative influence of ERM on cost and revenue efficiency depending on the activity of ERM. Nyandaya (2012), highlights the key risks affecting firms in Kenya. The operational risk was at 95%, the regulatory risk was at 89% and market risk at 83%.

Njuguna (2013) in the analysis of the effect of financial risk management strategies on the growth of the microfinance sector in Kenya. A sample of 17 microfinance institutions was taken from a populace of 57 institutions. The study embraced a correlation survey research design that used questionnaires and interviews as source of the primary data. Descriptive regression was used for quantitative data while qualitative data was analysed using content analysis. It was found that

strategies in financial risk management are a major determinant of growth in microfinance institutions.

Nyagah (2014), in examining the extent of ERM implementation on performance of 19 pension management firms in Kenya. Primary and secondary data were used. ERM activity was used as a gauge of ERM while financial performance was measured using revenue and cost efficiency. On analysing the data, where regression analysis was used, the findings were ERM implementation had a significant effect on the financial performance of pension fund management firms in Kenya.

Kimotho (2015), in investigated the connection between ERM and performance of Kenya's commercial state corporations. The focus was on 55 state corporations taking data from the 2010 to 2014 period. ERM measures used were implementation levels of operational and strategic risk management practices whereas the measure of financial risk management practices was ROA. His finding was that ERM practices had constructive effect on financial performance of the state corporations.

Yegon (2015), on examination of effect of ERM managerial determinants and the performance of NSE listed firms. Focus was 44 listed companies that had been submitting their audited financial statements from the period of 2008 to 2012. It was found that the majority of NSE listed firms did not have existing policies and regulations on ERM but for the few that had adopted ERM policies, they had significant positive effects on their financial performance.

.Kiunyu (2017), examined the impact of ERM on SACCOs performance in Kenya. His sample was 41 SACCOs and used secondary data from SASRA reports. The study also used a panel data analysis approach and on analysing the data using STATA it was established that ERM practices had a positive significant relationship on the financial performance of the SACCOs.

Soliman, Mutcher and Adam (2017), studied ERM and performance of banks in Nigeria. Using 10 listed commercial banks and applying regression on the data, the study showed robust data of a positive relationship between ERM execution and performance in the Nigerian banking sector. Alawattegama (2018), study on the effect of adoption of ERM on performance of diversified

industry of Sri Lanka. 17 firms were taken as the sample size and primary together with secondary data was used. It was discovered that ERM had no significant impacts on firm's performance which is contradictory to previous research.

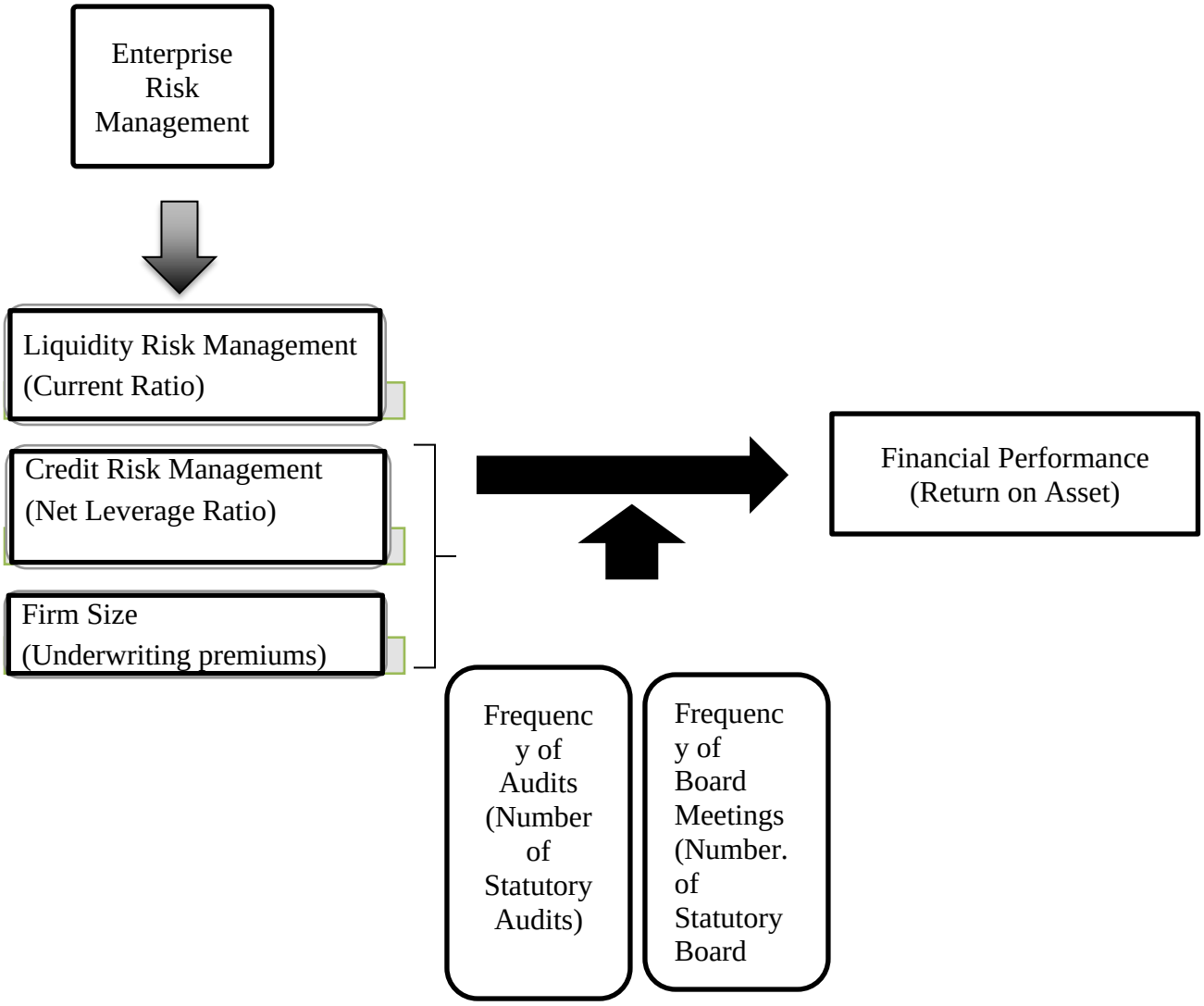
Oyegbile (2018), studied ERM and performance of 20 selected registered consumer goods companies in Nigeria. The study used ex post facto research strategy and analysed the data using descriptive statistics. In its findings, ERM had a significant positive relationship on performance of consumer goods companies.

2.4. Financial Performance Determinants

Profitability is a measure of performance that determines a lot of investment decisions. According to Santomero and Babbel (1997) insurance companies' profits are classified into three; income from underwriting, income from investments and premiums. Underwriting income refers to the income that is generated when insurance policies are issued to clients. Different companies have different growth rates for the premiums to determine the growth trends we must average the premium development rates over the years. Picky firms are found of having slower rate of incremental premium income this is because they are only looking for high-quality insurance. The ones with a lower number of claims and contribute more to the bottom line. For those companies, whose premiums are growing at a fast rate, it is an indication that there is high premium accumulation. These firms are not too picky compared to the previously mentioned. It is key to note that higher premium accumulation is not equal to high profits.

Investment income, on the other hand, refers to income that is accumulated from the firm's business endeavours. Insurance companies consider investing in low-risk bonds, equities or other securities since it is less risky. The companies' main objective is the maximization of shareholders' wealth so they must try and not jeopardize stockholder's investments by not carrying out proper risk management. These investment incomes are usually stated in the financial statements notes, particularly the statements of financial position.

2.5. Conceptual Framework



2.6. Summary of Literature Review

It can be established from the literature review that most studies on ERM have been done in developed countries. A fairly large proportion of these studies focused on banking institutions leaving other sectors like insurance with scarce data. Due to this knowledge gap, the local insurance sector just like insurance sectors globally require thorough investigation regarding the effects of ERM on the financial performance of these institutions in various economies.

Besides that, large parts of the empirical studies relied on secondary data from computer search engines. The sampling in most studies concentrated on the banking sector, which is highly regulated and therefore it is hard to determine whether ERM or compliance to other statutory obligations contributed to the banks financial performance.

In addition to that, the measurement of ERM was also subjective. Cases where the Chief Risk Officer in charge might not have an ERM in place. The study looked into the mentioned aspects in attempt to bridge the knowledge gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction.

Research methodology gives insights concerning the systems to be utilized as a part of directing the study (Cooper, 2015). Perera (2005), stated that research methodology gives a step-by-step blueprint on how to collect data and investigate the information. This methodology entails, design, the population study, instruments of data collection, data collection, variable measurements and analysis techniques.

3.2. Research Design.

According to Cooper (2015), it is suggested that research design provides a structure by which examination of relationships of the variables gives solutions to the research questions through usage of diagrams of the exploration work, so as to enhance the result of the representation. Through tools such as observation and interpretation, descriptive research design aids the researcher in explaining the existing relationship among the variables.

3.3. Population of Study

This section refers to an area where statistical sample is drawn with the objective of making some inferences (Cooper, 2015). This study looked at a survey of 54, IRA 2019, registered insurance firms that are operational in Kenya. For more accurate and reliable data survey approach is used. The characteristics that are intended to be generalized by the study should be strongly related to the observable characteristics of the target population. Appendix 1 shows a list of all the 54 insurance companies registered under IRA.

3.4. Data Collection

Secondary reports collected from IRA, CMA as well as survey reports from Association of Kenya insurers (AKI). The data included audited financial statements, focusing on the following; return on asset, audit opinions and financial leverage. The population study used 54 registered insurance companies for the period 2009-2019

3.5. Diagnostic Tests

These are carried out in a study to confirm the reasonableness (measurement of errors) of the variables, coefficients and error term used in the model. The following tests were conducted to establish the soundness of the models used by the scholar to conclude the study. The major area is linear regression. Linear regression has several key assumptions on parameters, variables and the error term. These include Linearity, normality (tested by kurtosis), no autocorrelation (tested by Durbin-Watson *d* statistical test), no or little multicollinearity (Variance Inflation Factor Test) and homoscedasticity (tested by Wald Test and Levene Test). Saunders (2009) argues that where the above assumptions are violated the results of the study are likely to be biased. In case of the failure of diagnostic test the study opted to use the robust test to cure that.

3.5.1. Test of Linearity

When multi-linear regression is used, in linear relationships, it can only accurately estimate the connection between the estimated coefficients and the dependent variable. There are instances where non-linear relationships, in such a case it is vital to analyse for non-linearity. If the relationship between the dependent variable and coefficient are non-linear, the results of the examination will underestimate the true relationship. Cohen, Manion and Morrison (2000) suggest ways of detecting non-linearity, one of these is to run a regression analysis that incorporates curvilinear components and the other is to plot a scatter graph.

3.5.2. Test of Normality

In regression analysis the variables are presumed to have a normal distribution. The non-normally distributed variables have a tendency to distort relationships and significance tests. Normality tests were used to test the error term. These are found in cases where variables are highly skewed or whose Kurtosis variable or variables are with substantial outliers. A goodness of fit test can be used to check for the normality. (Razali & Wa, 2011).

3.5.3. Test of Autocorrelation

Autocorrelation (sometimes referred to as serial correlation) is defined as the extent to which the value of a variable at a particular time (t_1) is related to its value at the previous period (t-1). When using regression analysis there is a need to ensure that the data has little or no autocorrelation. This (autocorrelation) occurs when the residuals (the differences between the obtained and the predicted dependent variable scores) are not independent of each other. The independence of the independent variable was measured by Durbin-Watson *d* statistical test was used to test to ensure that no independent variables repeat itself in the model. The projected residuals are routinely computed in regression analysis. The *d* statistic includes the intercept term. Where the intercept term is not current as in the case where regression is through the source, then the regression must be rerun to include the intercept term to obtain RSS, (Farebrother, 1980)

3.5.4. Test of Multi- collinearity

Multicollinearity can be perfect or less than perfect. If multicollinearity is flawless, the regression coefficient of the X variables is undefined, and their standard errors are infinite. On the other hand, if multicollinearity is less than perfect the regression coefficients, though determinate holds large standard error which means that the coefficients cannot be projected with greater accuracy. In testing multicollinearity, the rule of thumb may be used as High R square but few significant *t* ratios, High air-wise correlations among regressions and Eigenvalues and condition index (using E views & stata). Since multicollinearity refers to the state of descriptive variables that are presumed to be non-stochastic, it is a feature of a sample and not of the population (Kmenta ,1986). Gujarati & Porter (2009), posit that multicollinearity is essentially a data deficiency problem and

scholars may have no choice over data available for empirical analysis. Multicollinearity is indicated by a tolerance of less than 0.1 or a VIF (variance inflation factor) of over 10.

3.5.5. Test of Homoscedasticity or Constant Variance of ^{E} term

This means that the variation around the regression line of the average relationship between Y and X is the same across the value of X. When the variance of errors differs at different values of the independent variables then the situation is described as heteroscedasticity. Berry and Feldman (1985), Tabachnick argue that slight Heteroscedasticity has little effect on significance tests. The study used both the Wald test and Levene test to test Homoscedasticity. Heteroscedasticity can lead to serious distortion of findings and seriously weaken the analysis leading to the possibility of type 1 error.

This test examined whether the error term between ERM practices and financial performance of insurance firms is the same across all values of the financial performance. This can also be referred to as homogeneity of variance.

3.6. Data Analysis Techniques

The below regression model was used

$$Y = \beta_0 + \beta_{1X1} + \beta_{2X2} + \beta_{3X3} + \beta_{4x4} + \beta_5 x_5 + €$$

Where:

Y = Return on Asset (Financial Performance)

β_0= Constant

x_1 = Liquidity Risk Management (measured by current ratios).

x_2 = Credit Risk Management (measured by net leverage ratio)

x_3 = Firm Size (measured by underwriting premiums)

x_4 = Frequency of Audits (number of statutory audits)

x_5 = Frequency of Board Meetings (number of statutory board meetings)

€ = the error term

Source references: Kelliher & Wilmot, (2011); Dang & Li, (2015); Amer & Mrwan, (2016); Karanovic, (2019).

3.7. Tests of Significance

These were used as tests of hypothesis for individual explanatory variables. Two-tailed tests were applied, and a given level of confidence. There was test of significance using the P- values as a measure. If the null hypothesis is accepted, then it means that is no suggestion of a linear relationship between say X_i and Y_1 so X_i is deleted from the model.

CHAPTER FOUR

4.1. Introduction

The results and findings of this study are discussed in this chapter. The presentation is organized as follows, Introduction, regression table correlation table analysis, covariance table analysis, regression analysis model and ANOVA table analysis.

4.2. Descriptive Statistics

4.2 1. Regression Table

Financial Performance (ROA)		Frequency of Audits		Number of Board Meetings		Liquidity Risk Management (Current Ratio)		Firm Size (Gross Premium)		Credit Risk Management (Net Leverage Ratio)	
Mean	0.409270019	Mean	1	Mean	4	Mean	1.519004572	Mean	2670864.437	Mean	15.5451401 4
Standard Error	0.024792102	Standard Error	0	Standard Error	0	Standard Error	0.094986169	Standard Error	348743.2856	Standard Error	7.498164812
Median	0.389194606	Median	1	Median	4	Median	1.407671333	Median	1940274.625	Median	12.9194212 8
Mode		Mode	1	Mode	4	Mode		Mode		Mode	
Standard Deviation	0.182183995	Standard Deviation	0	Standard Deviation	0	Standard Deviation	0.698002942	Standard Deviation	2562729.303	Standard Deviation	55.1000333 9
Sample Variance	0.033191008	Sample Variance	0	Sample Variance	0	Sample Variance	0.487208107	Sample Variance	6.56758E+12	Sample Variance	3036.013679
Kurtosis	0.110786027	Kurtosis		Kurtosis		Kurtosis	20.78926084	Kurtosis	6.112825663	Kurtosis	3.218039178

Skewness	0.4819058 79	Skewness		Skewness		Skewness	3.7379479 79	Skewness	2.0832756 53	Skewness	-0.47903906 5
Range	0.8387404 65	Range	0	Range	0	Range	5.3374058 63	Range	13899822. 68	Range	329.993565 5
Minimum	0.0909166 84	Minimum	1	Minimum	4	Minimum	0.1992604 52	Minimum	24670.2	Minimum	-157.520300 8
Maximum	0.9296571 49	Maximum	1	Maximum	4	Maximum	5.5366663 14	Maximum	13924492. 88	Maximum	172.473264 8
Sum	22.100581 03	Sum	54	Sum	216	Sum	82.026246 89	Sum	144226679.6	Sum	839.437567 7
Count	54	Count	54	Count	54	Count	54	Count	54	Count	54
Confidence Level(95.0%)	0.0497266 58	Confidence Level(95.0 %)	0	Confidence Level(95.0%)	0	Confidence Level(95.0%)	0.1905181 29	Confidence Level(95.0 %)	699490.44 86	Confidence Level(95.0 %)	15.0394140 4

Source: Research Findings

The table above shows various descriptive data (mean, standard error, median, mode standard deviation, sample variance, kurtosis, skewness, range, sum, count and confidence levels) that were used to determine the linkages between the variables.

4.3. Correlation Analysis

4.3.1. Correlation Table

	Financial Performance (ROA)	Frequency of Audits	Number of Board Meetings	Liquidity Risk Management (Current ratio)	Firm size (Gross premium)	Credit Risk Management (Net

						leverage ratio)
	1					
Financial Performance (ROA)						
Frequency of Audits	0	1				
Number of Board Meetings	0	0	1			
Liquidity Risk Management (Current ratio)	-0.200194622	0	0	1		
Firm Size (Gross premium)	0.191707178	0	0	-0.168618533	1	
Credit Risk Management (Net leverage ratio)	0.085261432	0	0	-0.208696398	0.195536218	1

Source: Research Findings

The correlation coefficient of liquidity risk management and financial performance is -0.2001. This indicates a negative affiliation between these two variables.

The correlation coefficient of firm size management and financial performance is 0.1917. An indication of a weak positive affiliation between the variables.

The correlation coefficient of credit risk management is 0.0852 to financial performance. This was an indication of a weak positive relationship between the variables.

The two intermediate variables, frequency of audits and frequency of board meetings have no linear relationships with financial performance.

4.4. Covariance Analysis

4.4.1. Covariance Table

	Financial Performance	Frequency of Audits	Number of board meetings	Liquidity risk management (Current ratio)	Firm size (Gross premium)	Credit risk management (Net leverage ratio)
Financial Performance(ROA)	0.03257636					
Frequency of Audits	0	0				
Number Of Board Meetings	0	0	0			
Liquidity Risk Management (Current ratio)	-0.024986302	0	0	0.478185735		
Firm Size (Gross premium)	87848.31607	0	0	-296037.9616	6.44596E+12	
Credit Risk Management (Net leverage ratio)	0.840033909	0	0	-7.877822271	27099664.77	2979.7912

Source: Research Findings

The covariance between liquidity risk management and financial performance is -0.024. An indication of negative relation between the variables.

The firm size management and financial performance covariance is 87848.316 which demonstrates that the connection between the two variables is affirmative.

The covariance between credit risk management and financial performance 0.84 which demonstrates that the relationship between the two variables is affirmative.

The covariance between the intermediate variables, frequency of audits and number of board meetings, and financial performance is zero.

4.5. Regression Analysis

4.5.1. Regression Analysis Model

Regression Analysis Model	
Multiple R	0.920837319
R Square	0.847941367
R Square (Adjusted)	0.798817849
Standard Error	0.181266447
Observations	54

Source: Research Findings

Multiple R

This is the correlation coefficient and it tells us how strong the linear relationship is. The value of 0.9208 shows a positive correlation between enterprise risk management and financial performance.

R Square

It shows that 84.79% of the financial performance values around the mean are explained by enterprise risk management values. In other words, 84.79% of the values fit the model.

Standard Error

This is an indication of the reliability of the mean. The study has a standard error of 0.1812.

4.5.2. ANOVA Analysis

4.5.2.1. ANOVA Analysis table

ANOVA					
	Df	SS	MS	F	Significance F
Regression	5	9.161352416	1.832270483	69.70513224	7.77159E-21

Residual	50	1.642876235	0.032857525
Total	55	10.80422865	

Source: Research Findings

The ANOVA output presented in table 4.5, shows the calculated F-value is equal to 69.705 with (P = 0.000< 0.005) level of confidence. This explains the models goodness of fit and its significance in the prediction of financial performance of the insurance firms in Kenya.

4.5.3. Regression Coefficient Analysis

4.5.3.1. Regression Coefficient Analysis Table

	Coefficients	Standard Error	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A
Frequency of Audits	0	0	65535	#NUM!	0	0
Number of Board Meetings	0.11129669	0.0176435	6.3080578	#NUM!	0.0758585	0.146734853
Liquidity Risk Management (Current Ratio)	-0.044213395	0.0368029	-1.201353	0.2352737	-0.1181343	0.029707551
Firm Size (Gross Premium)	0.000000011337596	0.0000000	1.1341957	0.2621210	-0.0000000	0.00000003141
Credit Risk Management (Net Leverage Ratio)	6.19116E-5	0.0004685	0.1321239	0.8954164	-0.0008792	0.001003096

Source: Research Findings

The regression coefficient of liquidity risk management is negative (-0.044) which means that change of one unit in liquidity risk management results to a decrease in 0.044 in financial performance. The regression coefficient of firm size is positive (0.0000000113375966). The regression coefficient of credit risk management is (0.000) in 3d. p. The regression coefficient of frequency of audits is 0 and the regression coefficient of number of board meetings is 0.11129669.

T values indicates that among the independent variables, firm size is the most useful predictor (t= 1.1341957358077300) followed by credit risk management (t = 0.132123974) then lastly liquidity risk management (t= -1.201353906). Between the intermediate variable frequency of audits is the most useful predictor (t= 65535) then followed by number of board meetings (t= 6.308057816).

4.7. Discussion of Research Findings

This section presented detailed results in data analysis, discussions and their respective interpretation. A recap of the main objective and the specific objectives of the study were presented. Preliminary study results discussed correlation and regression analysis were included. Descriptive 54 statistics of the study were analysed, corroborated with the literature reviewed and the appropriate inferences drawn. Most of the ideas and theories reviewed were confirmed by the findings of this study. In some cases, the theories and ideas reviewed were contradicted. Regression and other statistics tests were performed to enhance data interpretation and discussions. Regression models to predict the independent variable were also presented in the chapter. In conclusion, this research endeavoured to establish, and indeed established that ERM variables (liquidity risk management, firm size and credit risk management) have a combined affirmative result on financial performance. The next chapter presents summarised findings of each research objective, provides drawn conclusions and the recommendations made on policy and on proposed areas for further research.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

The research established that liquidity risk management, firm size and credit risk management had correlation with financial performance. This section grants the summary of the outcomes, inferences and suggestions of the study.

5.2. Summary of Findings

The research showed a negative linear correlation between liquidity risk management and performance indicated by correlation co-efficient of -0.2009. The R-squared was 84.79% . An F statistic of 69.70 and (0.000< 0.005) probability value was an indication that the model was significant and can predict the outcome of the variables. This led to the conclusion that liquidity risk management had a weak negative influence on insurance firm's financial performance.

Positive linear correlation between firm size and performance of insurance companies can be established from the findings. This was illustrated by correlation coefficient of 0.1917. the R squared was 84.79% of the variation financial performance of insurance.

The correlation of credit risk management and performance indicates a positive linear correlation between these two variables. This was illustrated by correlation coefficient of 0.085261. The variation on financial performance attributed to credit risk management (R squared) was 84.79% of 54 IRA registered insurances firms in Kenya. The F-statistics of 69.70513 was significant ($p=0.000 < 0.05$) indicated that the model applied significantly predict performance.

Besides that, those findings presented a weak positive combined effect of the ERM determinants (liquidity risk management, firm size and credit risk management) on financial performance of insurance firms in Kenya. The findings indicated that the variable (independent) in the prediction framework for example; firms size as well as credit risk management had a weak contribution to financial performance. In addition, liquidity risk management had a negative contribution on financial performance.

The two intermediate variables (frequency of audits and number of board meetings) have no linear relationships with the financial performance of these insurance firms.

5.3. Conclusion

With regards to evidence adduced from the study, several conclusions can be made:

A conclusion was made that there exists a negative correlation between liquidity risk management and performance of these firms. This infers that liquidity risk management contrarily influences financial performance of insurance firms in Kenya.

The firm size and financial performance positive correlation suggests that a firm can leverage its financial performance by ensuring that there is proper development of policies ERM and effective coordination as firm activities increase in size so as to increase its risk management capabilities as well. Capital structure of these firms had a vital role in the determination of whether the firm sizes had any influences on financial performances of these firms. This is so because capital structure remains the life blood and nerve centre of any firm's business. Weak capital structure in most insurance companies might have contributed to the low correlation on size of the organisation and financial performance.

Positive correlation between the size of the company and performance of the companies infers that with proper implementation of risk management protocols, performance of insurance firms can be positively influenced.

5.4. Recommendations

There are two types of recommendations provided in this study, the first one is recommendation regarding policy development for actions and recommendations for further research.

Currently there are no proper guidelines on how firms should report ERM in their financial books. Firms should come up with relevant policies for development of ERM. More resources should also be dedicated towards the implementation of these ERM policies.

Liquidity risk management has a significant part in the implementation of enterprise risk management. The top management should ensure that proper liquidity management risks procedures like early detection of liquidity risks, regular monitoring and control of liquidity, conducting of stress tests and creation of a proper contingency plan. These aspects can help these firms improve on their liquidity management which can in turn have a affirmative impact on the financial performance of these businesses.

Built on the findings from the study where the study observed that firm size has a positive significant result on financial performance of insurance firms in Kenya, it is therefore suggested that the firms in the insurance environment should minimize the cost associated with expansion and adopt every possible strategy to utilize maximum benefit of economies of scale. Kenyan insurance industry should consider other quantitative and qualitative factors towards improving the financial performance rather than relying on firm size which has a weak significant positive effect.

Credit risk management as well plays a very important role in enterprise risk management. The firms should focus on facets that can help improve on credit risk management, and since a positive correlation has been established among credit risk management and financial performance of these firms, it can be right to infer that improved credit risk management will lead to an escalation in performance of these insurance firms.

5.5. Limitation of the Study

Two challenges were faced in the analysis. The firms that did not have all the audited financial statement published in IRA handbook for the 10-year study period, however, information was collected from Association of Kenyan Insurers. Secondly under the period of study some of the companies existed as two different entities before amalgamation or take over which posed a major challenge in data continuation.

5.6. Suggestions for Further Research

This project was mainly domesticated in the areas of finance and audit, yet insurance firms are currently in the process of adopting and implementing a full enterprise risk management program in the firms. So, a gap for further studies arises from these functional areas where ERM is in the beginning phases of adoption and realization. Factors that similarly hinder the adoption and implementation of ERM is also another area that can be looked at.

Besides that, the focus on the 54 IRA registered insurance companies still leaves a lot of room for studies in various branches of the economy like manufacturing or the telecom, to determine whether ERM has influence on financial performance of firms in those industries.

REFERENCES

Baney, D.F. & Santomero, A.M. (1996). *Risk Management by Insurers: An Analysis of the Process*, Wharton Financial Institutions Center, *Working Paper, 96-1.*,

Berry, W.D., & Feldam, S. (1985). Multiple regressions in practice: sage publication inc.

Casualty Actuarial Society Advisory Committee (2003*) Report of the Advisory Committee*

Calomiris, C.W.& Herring, R.J. (2002). "The Regulation of Operational Risk in Investment Management Companies." *Investment Company Institution– Perspective 8, No.2*

Charnes, A., Cooper, W.& Rhodes, E. (1978). "Measuring the Efficiency of Decision-Making Units." *European Journal of Operational Research, 429-444*

Cohen, L., Manion, L., & Morrison, K. (2000) *Research methods in education (5th Edition)*

Cooper, D.R. (2015). Business research methods. *Value edition*

Cooper D., and Schindler P., (2011). *Business Research Methods*. New York: McGraw-Hill

Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2009). *Strengthening Enterprise Risk Management for Strategic*

Chapman C. (2003). *Bringing ERM into focus: A new COSO study provides some much-needed clarity and structure to the fluid topic of enterprise risk management.* Internal Auditor (Vol. 60, Issue 3)

Crouhy, M., Galai, D. & Mark, R. (2003). *Essential of Risk Management*. McGraw-Hill: London.

Cruz, Marcelo G., 2002. *Modeling, Measuring and Hedging Operational Risk*. New York: John Wiley& Sons, LTD

Christopher K., Jeffery G. & Kenneth W (2014). *Effects of Firm Size on Enterprise Risk Management of Listed Firms in Kenya.* IOSR Journal of Business and Management (IOSR-JBM)

Capital Market Authority of Kenya (2010). *Stakeholders Consultative Workshop on Risk Based Supervisions. Nairobi*: CMA Publication.

Dornberger K. & Oberlehner S. (2014). *Challenges in Implementing Enterprise Risk Management.* ACRN Journal of Finance and Risk Perspectives Vol. 3.

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

Farebrother, R. W (1980). "The Durbin-Watson Test for serial correlation where there is No Intercept in The regression" *Economicetric*a *48, 1553-1563*

Flores, F., Bonson-Ponte, E.& Escobar-Rodriguez, T. (2005). "Operational risk Information System: Challenge for the Banking Sector." *Journal of Financial Regulation and Compliance,*

Goosen, R. (2016). *Southern Africa Journal of Accountability and Auditing Research.* Volume 18, Number 1, pp. 63-71(9).

Gujarati, D. N & Porter, D.C (2009). *Basic Econometrics*, McGraw-Hill International Edition, 5th edition

Davies, J. & Haubenstock, M. (2002). "Building Effective Indicators to Monitor Operational Risk," *The RMA Journal. Page 9-13*

Kamau, W. K (2010). *Adaptation of Risk Management by Commercial Banks in Kenya*. Unpublished Paper, University of Nairobi.

Keyleen P. & Andy T. (2018). *COSO's Updated Enterprise Risk Management Framework—A Quest For Depth And Clarity*. https://doi.org/10.1002/jcaf.22346

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

Kmenta, J. (1986). *Elements of Econometrics*, (2nd ed.): Macmillan, New York, 431.

Kithinji, A.M, (2010) *Credit Risk Management and Profitability of Commercial Banks in Kenya*. Unpublished MBA Project, University of Nairobi, Kenya.

Kombo, A Wesonga, J Mururmba (2011). "An Evaluation of the Impact of Risk Management Strategies on Microfinance Institutions," *Financial Sustainability.*

Lam J, (2003) *Enterprise Risk Management; From Incentives to Controls*, Wiley Finance Series, Wiley Hoboken.

Leinberg, A.P & Hoyt, R.E, (2003). "The Determinants of ERM Evidence from the appointment of Chief Risk Officers)," Risk Management and Insurance Review.

Mango, D. (2007). "An Introduction to Insurer Strategic Risk," *Guy Carpenter and Company LLC 144-172*

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

McShane and Rustambekov, E. (2013) "The Value of Investing in Enterprise Risk Management," Journal *of Accounting, Auditing, and Finance.*

Modigliani, F and Miller M.H (1959), "The Cost of Capital, Corporate Finance and the Theory of Investment," *American Economic Survey 261-297*

Mwangi, N.G (2012), *The Effect of Credit Risk Management on Financial Performance of Commercial Banks in Kenya*, Unpublished MBA dissertation, University of Nairobi.

Moosa, I.A. (2007). "operational risk: a survey, financial markets, Institutions, and Instruments," *Journal of Financial Regulation Vol 16, No4. 8-11*

Nayak K & Mohanty H. (2009). "The Importance of ICT Risk Management in Small to Medium-Sized Enterprises, United Kingdom," *Journal for Technology Engineering Sciences.*

Ngare E.M, (2008). *A Survey of Credit Risk Management Practices by commercial banks in Kenya,* Unpublished MBA project, University of Nairobi.

Njiru GM (2003). *Credit Risk Management by Coffee Cooperatives in Embu District*, Unpublished MBA project, UoN.

Nocco, B.W, and Stule, R.M., (2006). "Enterprise Risk Management; Theory and practice," *Journal of Applied Corporate Finance*.

O'Brien, R.M. (2007). "A caution regarding rules for variances inflation factor," *Quality and Quantity, 41:673-690*

O'Donnell E. (2005). *Enterprise risk management: A systems-thinking framework for the event identification phase.* International Journal of Accounting Information Systems, Volume 6, Issue 3.

Okoch J. (2008). Commodity Hedging; "Best Practices for Modelling Commodity Exposures," *Journal of Corporate Treasury Management, 42-46.*

Pagach, D.P, and Warr, R.S. (2008). "The Effect of Enterprise Risk Management on Firm Performance." *Journal of Finance 737-783.*

PriceWaterhouseCoopers (PWC) (2012). *Rising to the Next Flow. A Kenya Perspective on 2012 State of Internal Audit Profession Study*, Nairobi PWC publication.

Razali, N. & Wah, Y. B (2011). "Power comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lillieforsand Anderson-Darling tests," *Journal of statistics modelling and analytics, 2,21-33.*

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods of business students*. (6th Edition), Prentice Hall.

Searle, I. (2008). *Enterprise Risk Management*, London, Spiramus Press.

Stulz, R. (2003). *Rethinking Risk management*; The Revolution in Corporate Finance (4th Edition) Blackwell publishing.

Tapiero, C. (2004). *Risk and Financial Management, Mathematical Computational Methods*, John Wilag, and Sons.

Vicente Lorento, J.D (2001) "Specificity as Resource-Based Determinant of capital structure. Evidence of Spanish Manufacturing Firms," *Strategic Management Journal*.

APPENDIX 1: INSURANCE COMPANIES IN KENYA, IRA 2019.

Insurance Regulatory Authority (IRA) Companies

Insurance Companies	
1.	AAR Insurance Company Limited
2.	Africa Merchant Assurance Company Limited
3.	AIG Kenya Insurance Company Limited
4.	Allianz Insurance Company of Kenya Limited
5.	APA Insurance Limited
6.	APA Life Assurance Company Limited
7.	Barclays Life Assurance Kenya Limited
8.	Britam General Insurance Company (K) Limited
9.	Britam Life Assurance Company (K) Limited
10.	Metropolitan Cannon General Insurance Company Limited
11.	Capex Life Assurance Company Limited
12.	CIC General Insurance Company Limited
13.	CIC Life Assurance Company Limited
14.	Corporate Insurance Company Limited
15.	Directline Assurance Company Limited
16.	Fidelity Shield Insurance Company Limited
17.	First Assurance Company Limited
18.	GA Insurance Limited
19.	GA Life Assurance Limited
20.	Geminia Insurance Company Limited
21.	ICEA LION General Insurance Company Limited
22.	ICEA LION Life Assurance Company Limited
23.	Intra Africa Assurance Company Limited
24.	Invesco Assurance Company Limited
25.	Kenindia Assurance Company Limited

26.	Kenya Orient Insurance Limited
27.	Kenya Orient Life Assurance Limited
28.	KUSCCO Mutual Assurance Limited
29.	Liberty Life Assurance Kenya Limited
30.	Madison Insurance Company Kenya Limited
31.	Madison General Insurance Kenya Limited
32.	Mayfair Insurance Company Limited
33.	Metropolitan Cannon Life Assurance Limited
34.	Occidental Insurance Company Limited
35.	Old Mutual Assurance Company Limited
36.	Pacis Insurance Company Limited
37.	MUA Insurance (Kenya) Limited
38.	Pioneer General Insurance Company Limited
39.	Pioneer Assurance Company Limited
40.	Prudential Life Assurance Company Limited
41.	Resolution Insurance Company Limited
42.	Saham Assurance Company Kenya Limited
43.	Sanlam General Insurance Company Limited
44.	Sanlam Life Insurance Company Limited
45.	Takaful Insurance of Africa Limited
46.	Tausi Assurance Company Limited
47.	The Heritage Insurance Company Limited
48.	The Jubilee Insurance Company of Kenya Limited
49.	The Kenyan Alliance Insurance Company Limited
50.	The Monarch Insurance Company Limited
51.	Trident Insurance Company Limited
52.	UAP Insurance Company Limited
53.	UAP Life Assurance Limited
54.	Xplico Insurance Company Limited

Source: Association of Kenya Insurers, 2019