

**THE RELATIONSHIP BETWEEN ENTERPRISE RISK
MANAGEMENT AND FINANCIAL PERFORMANCE OF
COMMERCIAL BANKS IN KENYA**

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DECLARATION

I declare that this is my original work and has not been presented for a degree in any other university.

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DEDICATION

This research project is dedicated to my dear parents Mr. and Mrs. Omoke for laying the strong foundation to my life. I am humbled to have you.

ABSTRACT

The key object of this research exercise was to determine the relationship between Enterprise Risk Management and financial performance of commercial banks in Kenya. The study employed a descriptive research whereby such attributes as attitudes, values and behavior are established, reported and clearly described, (Mugenda & Mugenda, 2003). The population for this study was 24 Commercial banks in Kenya. The mode of data collection was primarily through use of questionnaires and secondary means as well. The data collected was run through various models so as to clearly bring out enterprise risk management practices among commercial banks. Logit model was used to analyze the regression equation. The Enterprise Risk Management practices that were analyzed included: risk and control assessment; assessment of key risk indicators, incident management, and compliance of both internal and external regulations. It was found that the determination of the bank's key risk indicators was the most important Enterprise Risk Management practice by the Kenyan commercial banks surveyed. The bank assesses soundness of its financial position to determine its vulnerabilities and develop plans to minimize their impact and also the analysis of the bank's financial health is multifaceted and includes such areas as liquidity, solvency, repayment capacity, profitability, and financial efficiency.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The entire human society has been exposed various manner of risks. In order to survive humans tended to avoid risks .The very being of human survival in the modern day is attributed to the employment of risk strategies. Banks face huge number of risks in their operations. The objective of any top level management of banks is to maximize stockholders value. It is for this reason that banks are always under immense pressure to take on sizeable number of risks while managing risks so minimize to or bring down level of losses.

Vives (2011) argues that competition might increase instability by magnifying the coordination problem of depositors on the liability side and fostering bank runs which may be systemic in nature. Further this challenge is exacerbated by increasing the incentive to take on more risk on either side of the balance sheet and thereby increasing chances of failure. This competition-stability trade-off maybe eliminated through regulation measures. However such regulation ought to consider the intensity of competition.

Ideally aggressive scramble for deposits by banks greatly influence the dropping of interest rates. Consequently defaults have little impact on banks thereby instigating the banks to act. This fact has had huge impact on banking regulations across the banking industry more especially with regard to mergers and restructuring. De Nicoló (2005) argues to the contrary asserting that critical to the stability of banks is the credit market. Whereas Nicolo, contends that borrowers have a major influence on the uptake of risks by banks, Wagner takes the opposite direction by arguing that the banks themselves have a lot do with the risk choices they make.

Industry players and analysts have always sought to investigate what it is that fuels the risk appetite of banks. However their finding has always resulted in contradictions and inconsistencies on the issue. According to Gehrig (1998) and Winton (1999) ,the banks

efficiency and risk appetite is investigated by getting their correlation using various components of risk such as credit risk, market risk. Risk is not viewed as necessarily being negative but may also lead to opportunities for growth for banks,(KPMG LLC, 2001).

Many benefits accrue by having risk management as an independent role in management. Strategically, risk management adds to the value of a firm. (Suranarayana, 2003). Many modern organizations have put into place mechanisms of leveraging on IT platform. This has helped to spotlight on the role internal controls and audit function the enterprise risk management.

KPMG (2001),argues that the new concept of company-wide risk management has replaced the traditional type of risk management, thereby aligning organizational strategy to operational risks. Doherty (2006) argues that through the application of enterprise risk management strategies a firm able either eliminates risk or accommodates it. According to Berinato (2006) ,the complexity of the modern business environment necessitates the use risk management as a key strategic tool. Research studies point to the idea of firms looking at all risks facing them in totality, though some type of risks like operational risk maybe difficult to successfully quantify.

The Central Bank of Kenya, in the year 5005, on the realization of the importance of the enterprise risk management on commercial banks operating in Kenya, issued a circular through a treasury circular 2005/5 instructing all banks to establish a companywide risk management framework. The establishment of the framework enables management to focus in a comprehensive and holistic basis on all risks facing the institution which could impact on the achievement of bank's strategic objectives and transformation agenda.

1.1.1 Enterprise Risk Management

The ultimate goal of any serious business venture is to exploit an opportunity arising from taking risk. Without controlled risk taking and effective management of these risks business would not make profit. Consequently, the management of risk is a key function for all types of business ventures. Risk management literature has tried bring out the distinction between different methods employed by companies in managing their risk and evaluating their effectiveness. From the literature, two main schools of thoughts have emerged namely: the silo approach which focuses on managing risk in isolation and the other approach which seeks to manage all risks through a holistic framework. The latter approach is referred to as Enterprise Risk Management (Nacco, 2006). The manner in which organizations view risk management has changed significantly over the last few years. The focus has now been for organizations to view risk management from holistic perspective, rather than from the silo, individual view. There is general consensus across organizations that employment of ERM concept tend to improve their financial performance.

This concept is a combination of various components, working together to ensure business risk is managed efficiently and effectively (Mackay, 2007). Industry players concede that such a concept is the most effective tool an organization may deploy to manage the various types of risks as well as natural and manmade disasters. ERM departments across the industry led by chief risk officers are tasked with the role of managing the risk function holistically. The COSO Cubel and the subsequent development of the COSO ERM Framework seeks to explain the underlying principles of ERM .The COSO ERM Framework is widely acknowledged as a benchmark to assist organizations bolster their risk management strategies (IIA, USA). As opposed to internal controls, that are limited to the internal environment of an organization, this model not only looks beyond the four corners of an organization but also helps to tackle risks in a comprehensive manner. Consequently, it is increasingly becoming a preferred model (Everson, 2006).

In the past, the treasury function has given more attention to the use of derivatives to manage financial risks but currently emerging risks such as operational risks and strategic risks have been tackled by the new concept of ERM. The main objective of ERM helps to achieve the tasks of managing the risks associated with aspects of supply chain, IT, human resource, logistics etc. Indeed ERM plays a pivotal role in identifying the various interrelationships amongst the different risks that affect a firm.

Through effective application of portfolio theory, a firm is able to evaluate a combination of all risks. Consequently ERM concept helps to hedge residual risk hence mitigating against bank's total risks.

1.1.2 Financial Performance

The performance of an organization maybe be measured financially or non-financially. Majority of businesses consider being financially healthy as being able to make good profits, remain adequately liquid and being solvent. Hence financial measurement of performance still remains very critical. Liquidity is the measure of the ability of a firm to pay suppliers and creditors as per agreed schedules without affecting normal day to day operations. Profitability is an indicator of how far firms employ labour, capital, and management effort etc to generate income. Profitability looks at revenues and expenses as well as level of investment in the firm, (Mesquita and Lara, 2003). Solvency deals with the relationship between level of debt and owners equity.

In an increasingly competitive climate ,the measure of performance financially has been challenged through studies not to be an effective tool of clearly bringing out the true position of the organization in terms of the overall aspects pertaining to the running of the firm including customer service, vendor management, quality assurance, supply chain management and management control (Bozac, 2005).The traditional accounting system is not able to sufficiently measure the above parameter much as they form the key component a firm's operations.

A majority of firms use both financial and non-financial tools such as downtime, customer complaints. Similarly, Ho, (2008) argues for the use effectiveness and efficiency as indicators of performance. According to Venkatraman et al, (1986) ,performance can be measured using return on investment, business performance, sales growth etc

Firm performance can be assessed by looking at the level of customer satisfaction, how good a service is, how creative employees are, efficiency of the supply chain.

Therefore generally financial performance is determined by factors both internal such as managerial decisions and external including capital market and market segmentation. Koch (1995) argues that the differentiating factor in performance amongst various banks is their management model and market orientation.

1.1.3 Commercial Banks in Kenya

Commercial Banks of Kenya are controlled through the Companies Act (Cap, 486) the Banking Act,(Cap, 488) the Central Bank of Kenya Act (Cap, 491) and the various prudential regulations issued by the Central Bank of Kenya (CBK). The banking industry was set free from government interference in 1995. Kenya's banking industry regulator, CBK, is charged with the task of coming up and implementing monetary policy and overseeing the operations of the Kenyan banks. This includes financial management and risk management. There were forty three commercial banks operating in Kenya as at 31st of Dec 2014. Commercial banks in Kenya are required by CBK to submit audited annual reports which include their financial performance and as well as disclosure of various financial risks.

The banking industry registered an improvement in the period under review. With overall assets being 18% higher in June 2014 compared to June 2013. Contributing to this marked growth includes borrowed funds, government securities and placements accounting for 58 %, 21.3 %and 5.1 % of overall assets, respectively. NPLs went up by 31.6 % from Ksh 77.3 million in June 2013 to Ksh 101.7 million in June 2014. The rise

in NPLs is a spill-over of the high interest rates in 2012 and industry market dynamics as well due to government agencies dragging their feet in meeting their financial obligations owed to contractors.

1.2 Problem Statement

In the last two decades, majority of local banks have sourced funding from other banks and other financial companies to finance their investment endeavors. Economic prospects looked bright with largely low inflation rate. There was huge expansion of balance sheets by banks. What was not clear was the risk associated with this type of arrangement. From around 2005/2006 things changed drastically sparked by the growing interest rate, occasioning huge defaults from low income end borrowers.

In the wake of the above, a major financial crisis was eminent. What initially a credit crisis snowballed to liquidity crisis where borrowers were unable to service their debt obligations on due date. Consequently the key large-scale lenders were reluctant to commit their funds to banks owing to the fear of a credit crisis.

The impact of the above was that now the concept of ERM was beginning to gain significant attention from industry players notwithstanding their might asset base. In anticipation of the likely huge role of ERM in effective management of risk, banks in their droves have began to abandon the old silo type of risk management for the the enterprise risk management model (Lienberge and Hoyt 2003).

Grow in the local banking industry in terms of customer and asset bases have been phenomenal. The expansion has gone regional and there has been close watch from CBK as the banks regulator. This is a new shift which is exacerbated by the increased adoption of IT platforms, freedom from government controls and reforms in the external environment. Consequently, cut throat competition has necessarily pushed banks to target low end customers who are largely very risky. Additionally, the huge investment in IT by banks has seen an increased level of exposure to operational risks, hence the ever too high a need to embrace an enterprise wide risk management model.

A search on studies on enterprise risk management in Kenya yielded studies done on inflation risk (Ndegwa, 2010); credit risk management (Nyambere,2006; Bonaya,2009; Magnifique,2011), information systems risk management (Weru, 2008), foreign currency risk (Chengecha,2011); operational risk (Mulu,2010) and foreign exchange risk management (Njihia, 2009). The above studies show that much work has been done on the impact of individual risk types on financial performance of various industry sectors has been undertaken in Kenya. The relationship between enterprise-wide risk management as an aggregate and how commercial banks in Kenya perform financially has not been studied. Hence the rationale of an investigation into this aspect.

1.3 Research Objective

To determine whether there exists a link between enterprise risk management and financial performance of commercial banks in Kenya.

1.4 Value of the Study

The study enriches the theory of enterprise risk management and how such knowledge is important in enhancing the performance of business organizations.

Secondly, this study is important to commercial banks as it shows the significance of management aligning its business strategy with financial performance with keen focus on an integrated approach to risk management across the enterprise.

Policy makers and industry regulators can obtain knowledge of the banking sector dynamics as regards enterprise risk management in Kenya. This study will aid in the design of appropriate enterprise risk management requirements. Thirdly, the study can provide information to potential and current scholars and researchers on enterprise risk management among commercial banks or any other firm in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter seeks to review data relating to enterprise risk management and firm performance. This section has been set out into two parts. Part one covers theoretical framework of organizational risk management, traditional risk management practice and enterprise risk management while part two focuses on how organizational performance is impacted by implementation of ERM strategy

2.2 Theoretical Framework of Enterprise Risk Management

The capital market imperfections have been found to be the major reason for firms to seek to manage risks. While these imperfections necessitate use of derivatives in managing risk, it does not mean they have to exist for this to occur. Elliott, Huffman and Makar (2003), argue that, given these incentives, firms base their decision to manage risk on the level of exposure. Additionally the use of currency derivatives is dependent upon how much a firm spends to manage foreign exchange rate risk. Thus it's not easy to make profit through foreign exchange rate forecast without government action aimed at distorting financial risk (Dufey and Giddy, 1997).

2.2.1 Stakeholder Theory

Stakeholder theory examines how an organization interacts with other actors internally and externally. The theory focuses on how this interaction affects how it does its business. Among the stakeholders that an organization interact with include shareholders, its employees, its customers, government bodies, suppliers and the community.

Freeman, (1984), argues that a serious focus on stakeholder interests is not only good for the long term survival of an organization but also positively impacts its performance.

Stakeholder theory focuses on the role of stakeholders a key influence in management policy of firms. Customer confidence in the going concern of a firm is very critical in enhancing the value of a firm. Financial distress may lead to a firm facing costs of default which costs act as incentives for reduction of the probability of financial distress, Judge (2006). However this distress can be mitigated against through adoption of hedging policies.

2.2.2 Agency Theory

Agency theory focuses on highlighting on and resolving problems that can exist between principals and agents.

The theory analyses the concept of separating the owners of a firm from its control and what motivates managers to act the way they do in the running of the business. Indeed the attitude of managers towards risk and hedging is largely driven by agency matters (Smith and Stulz 1985). Agency theory explains the distribution of income amongst the managers and shareholders which might cause conflict of interest. Such asymmetries has the potential to fuel aggressive risk taking or deter managers from engaging in any high value yet risky economic activities. Consequently, agency theory provides strong support for hedging.

Clearly this kind of conflict of interest is fuels motivation for the use of derivatives. Managers generally draw their income from their employment hence to protect their earnings they tend to be risk averse. They are very reluctant to put interest of shareholders first. They tend to allocate funds to certain select projects with a view to hedge diversifiable risk, Stulz (1990). To address this agency conflict, managers pay is linked with the firms share price, effectively reducing managers tendency towards risk aversion. Such strategy acts to drastically reduce the use of derivatives in risk management.

2.2.3 New Institutional Economics Theory

This theory seeks to explain how security component is key consideration for the acquisition of certain assets. The theory focuses on the significance of risk management

in contractual agreements between parties. This is more so in situations involving undiversifiable risk. Risk management policy maybe shaped by institutions or standard industry practice, Williamson (1998).

Regulated industries have a provision for top managers to exercise discretion when making decisions that touch on finances and investments. Smith and Watts (1992), argue that regulation does indeed shape the corporate policy and decision of a firm.

Thus, faced with possible regulatory sanctions and reduced costs of contracting, such entities tend to avoid the use of derivatives as a tool for hedging risk.

According to Froot, Scharfstein, and Stein (2003), firms tend to settle for use of derivatives especially when faced with a situation whereby they would spend more to source funding externally than from internal means.

For instance sourcing funds from the capital markets can be very costly, hence firms will opt to hedge cash flows to avoid shortfalls.

2.2.4 Financial Economics Theory

This theory tries to explain how imperfections such as bankruptcy costs, or underinvestment problems necessitates the use of corporate risk management as a strategy to increase firm value. Through clearly defined and effective financing and investment policy framework, risk management can increase shareholder value, Carter et al. (2006). Firms tend to under invest when raising funds from external sources. Shareholder value can be increased through use of derivatives. Misunderstanding between debtholders and shareholders can also contribute to the underinvestment challenge.

When leverage is high, shareholders would lay minimal claim to assets. Consequently, bondholders would be the obvious beneficiary to the safe but largely profitable projects, hence causing an underinvestment problem,(Bessembinder,1991). Firms with remarkable investment and growth prospects are more susceptible to the underinvestment challenge.

2.3 Traditional Risk Management Practices

Traditionally, risk management has focused on tackling market imperfections through use of derivatives to hedge risk. Such strategies can increase value of a firm thereby bringing down total risk. (Graham & Rogers, 2002). According to (Carter, Rogers, & Simkins, 2006; Nelson, Moffitt, & Affleck-Graves, 2005) a positive connection between use of derivatives to hedge and firm value has been shown to exist.

2.4 Enterprise Risk Management Practices

Jorion (2001), argues that the success of organizations is anchored upon having a clear appreciation of the risk management practices. According to Lam (2001), risk management maximizes shareholder value. Therefore it highly pays to implement risk management practices so as to mitigate plethora of risks facing the firm. The risk management framework entails the following key factors explained in detail.

2.4.1 Risk and Control Self-Assessment

Risk and Control Assessment is the first assessment of the risk and control existing in the firm. At this step, the risks treatment of the firm is identified across all sections as well as the available treatments in place, level of gross and residual risk is assessed.

The ERM takes into account three aspects of internal environment that entails having a risk component included in the mission statement, job roles, and in the board (Lewis et al., 2005). This emphasis on environment leads to an increased management focus. In Indeed management functions such as audit, compliance, risk management act as the the first lines of defense while top management reinforcing the tone and culture of a firm is takes over as the next line of defense. According to COSO, management decisions create value and enhance firm performance. COSO argues that a firm's value is created and maximized through a strategic balance between growth and risk as well as prudent allocation of scarce resources thereby yielding a positive impact on performance.

2.4.2 Identification of Risk Indicators

This process involves determination of present risk levels, control performance controls, hotspots and study of the past trends. The aim is to establish what level of risks will be considered catastrophic, as part of normal business without taking any further action to improve or better still to identify the risk that require immediate corrective action. Simmons (2000) argues that clearly defined business objectives which entails review of strategy and plans, interviews and management involvement, is a key foundation for risk analysis and hence effective identification of risks associated with the set objectives. Further noted by Kersnar (2009) is that risk identification process should as clear as possible and harmoniously for it to be effective. It's therefore imperative that an organization identifies objective related risks.

2.4.3 Incident Management

The Incidents management practice involve the manage and analysis of actual risk incidents to ensure to that the incident is managed correctly by ensuring that the negative consequences from the incident are minimized and improvement are put in place to ensure the incidents does not recur. According to Hallikas (2004), the aim of incident management is to enhance organization transparency, determine improvements to avoid the same incident recurring, provides objectives data of various risk types, identification of risk problem areas and acts as a staff problem recording system. Further , Jhangiani (2007), note that incident management ensures that the organization learn from past mistakes, ensure one business unit learns from another , monitoring of high frequency, low consequence items as well as identifying which controls are not working and that can be fixed.

2.4.4 Compliance of Internal and External Regulations

An organization should comply with both internal and external regulations. Noncompliance to all applicable laws and regulations as well as code of conduct and ethical practices would attract associated sanctions and possible loss financially and reputational damage to the organization. The evaluation of how effective the control

mechanism in place is should answer such questions as does control exist, is it well designed, does it link to legislation, does it link with other risk management process e.g. RCSA (Ojala and Hallikas, 2006).

2.5 Chapter Summary

Every day, the global markets experience volatility based on economic data, political news and other social-economic factors and as a result, the companies need to employ a management system that can easily identify the existence of the risk and also come up with the mechanism of mitigating itself against the risk. Effective risk management entails ability to identify, analyze and implement policy to help avoid or bring down level of risk related to a firm's business.

A number of ERM practices employed by various firms include; risk identification, determination of organizations health, risk analysis, information and communication, risk evaluation. These measures are taken to mitigating underinvestment problem, to reduce asset substitution problem, undiversified managers wanting to reduce risk and management incentives structures, harmonizing investment and financing policies reducing bankruptcy and financial distress costs, reducing the corporate tax burden. Despite the numerous studies carried out, managers are still not clear on a robust model upon which to establish an appropriate ERM practices for a particular industry or business line. Instead the literature and studies suggest the various ERM practices that can be adopted by a firm and also there exist an empirically validated model that will provide the relationship that exists between adoption of various ERM practices and firm performance.

CHAPTER THREE

RESEARCH METHODOLOGY AND DESIGN

3.1 Introduction

This chapter dwells on the research methods employed to satisfy the stated objective of the study. The chapter deals with the design, population, collection of data and how it was analysed.

3.2 Research Design

A research design is defined as a planning framework and includes methodology to be applied, assumptions and models (Neuman, 2006). This research employed a positivist ontological paradigm. According to Henning, Van Rensburg & Smit (2004), a positivist ontological model describes and explains the real features by collecting data on observable behaviors of a sample. The research problem was studied by using a descriptive research design.

3.3 Population of the Study

This study will consider all the commercial banks in Kenya totaling 43 in number operating in Kenya that constituted the requisite population (Appendix I). Castillo (2009), defined a population as clearly defined objects possessing similar attributes. (Mugenda and Mugenda, 2003), argue that a population should possess observable traits, upon which to base an opinion.

3.4 Data Collection

Data was mainly collected using primary data collection method. This was achieved through use of a questionnaire. (Given, 2008) defines a questionnaire as a tool for collecting data from respondents that consists of a series of verbal or written questions. Further, data was obtained from the various bank websites, published annual financial reports as well as from Central Bank of Kenya website.

3.5 Data Analysis

Data analysis entails summarily organizing data using mathematical tools with a view to establishing the existing relationship with collected data. Yomere (1999) describes data analysis as a method of extracting useful and relevant information from data so as to facilitate brief description of research work. This study used both regression analysis and quantitative stats.

To establish the relation between enterprise risk management and financial performance of commercial banks in Kenya, a logical regression was used as shown in equation below:

$$ROA = f(x_1, x_2, x_3, x_4);$$

More specifically, the regression will be as below;

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4$$

The Y being the dependent variable denotes return on assets (ROA) of a commercial bank in a particular year; X represents the independent variable which is the enterprise risk management.

The independent variables for the study will be the various ERM components namely; Risk and Control Self-Assessment, Risk Indicators, Incident Management, Compliance of both Internal and External Regulations

β_0 = Constant

x_1 = Risk and Control Self Assessment

x_2 = Risk Indicators

x_3 = Incident Management

x_4 = Compliance to both Internal and External Regulations

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter discusses the interpretation and presentation of the findings obtained from the field, with particular focus on summary of statistics, estimated model, discussion and the summary.

4.2 Summary of the Statistics

The analysis below indicates the average, and std of the different variables in the study. It also presents the overall mean that will be used in determining the overall regression of the relationship between ERM policies and the performance of the banks. The findings have been discussed using inferential and descriptive stats. A total of 43 respondents was considered out of which 24 filled and returned the questionnaires generating a response rate of 49%.

Table 4.1: Age of Banks Operations in Kenya

	Frequency	Percentage %	Cumulative Percentage %
Less five years	2	8	8
6-10 years	7	29	37
11-15 years	9	38	75
Over 16 years	6	25%	100
Total	24	100 percent	

Source of data: Research Results

The Table 4.1 above shows that majority of the banks that responded had operated for a period between 11-15 years (75%) while only 10% of them had operated for few than five years. This results means that majority of the banks had operated long enough to have established adequate enterprise risk management practices to cushion them against adverse risk coming from their operations. On the question of whether the banks have a structured risk management practices, all the respondents answered to the affirmative. It was pointed that effective implementation of Enterprise Risk management an organization will affect positively its performance.

4.2.1 Banks Financial Performance

Table 4.2 Banks' Financial performance

	Mean	Std Deviation
Return on Investment	3.7195	.79419
Market Growth	3.6418	.83428
Sales growth	4.8947	.97843
Total cost reduction	4.8696	.79872
Overall Mean	4.2814	.85140

Source: Research Findings

The study aimed to determine extent to which return on the investment, market growth, sales growth and cost reduction explain the possible effect of ERM on bank performance. The findings show that most of the banks consider implementing of Enterprise Risk Management as influencing the performance of the firm determined through return on investment, market growth, sales growth, and total cost reduction with an average of 4.2814 and std of 0.85140. With a standard deviation averaging 0.8 for most of the results, it shows existence of moderate variability among the respondents as to the extent of the influence of companywide Risk Management on the financial performance of the banks.

4.2.2 Enterprise Risk management Practices Adopted by Commercial Banks

Table 4.3: Risk and Control Self-Assessment practices

	Mean	Std Deviation
Business unit managers are the key persons in charge of identifying risk after the board of directors	4.1214	1.15737
The organization has established a comprehensive risk register that it expects the managers to manage	4.6862	.70998
Techniques such as scenario and (SWOT) analysis in frequent use in case of board of directors being responsible	4.4564	.81134
Guidance on risk identification is offered by the organization both directly (internal consulting services) or indirectly (documents, such as "tool kits")	4.2120	.68490
There exist a marriage between the mission of the bank and risk management process	4.3636	.81483

The business unit uses risk and control self- assessment checklist to map risks	4.0107	1.16812
Overall Mean	4.3084	.89109

Source: Research Findings

The study set out to how far the respondents agreed to the above statements in relation to the Commercial Bank Financial Performance specifically risk and control assessment practices. The findings show that risk and control -assessment practices had an aggregate of 4.3084 and standard deviation of 0.89109. The banks have established a detailed register of risks that it expects the managers to manage with a mean of 4.6862 and 0 .70998. The process of risk and control self-assessment involves the organization establishing a comprehensive risk register that it expects the managers to manage and also ensuring that line managers and the executive directors are responsible for the risk and control self-assessment process.

Table 4.4: Identification of Risk Indicators

	Mean	Std Deviation
The bank assesses the financial soundness of its core business to determine its vulnerabilities and therefore develop plans to minimize their impact	4.7125	.61752
The practice may assist in identifying areas if under capacity, perhaps so as to focus on developing opportunities.	4.5522	.58429
The analysis of the banks financial soundness is multifaceted and includes key aspects such as liquidity, solvency, repayment capacity, profitability, and financial efficiency	4.3913	.54723
The banks response policies namely risk avoid, risk decrease, risk share, and risk accept	4.8120	.68255
Overall Mean	4.6170	.60790

Sources: Research Findings

The study determined to find out how identification of risk indicators is done by commercial banks in relation to the above statements. The findings show that of identification of risk indicators practices had an aggregate of 4.6170 and standard deviation of 0.60790. The finding show that the banks responses strategies namely risk

avoidance, risk reduction, risk sharing, risk acceptance with a mean of 4.8120 and a stand deviation of 0.68255. It was further established that the banks have an elaborate assessment of the soundness of the financial resources to determine its vulnerabilities and therefore develop plans to minimize their impact to the banks' businesses with an aggregate of 4.7125 and a standard deviation of 0.61752.

Table 4.5: Incident Management

	Mean	Std Deviation
The bank is keen on resource limitations, considers alternative ways of risk management, and is clear on specific steps to followed	4.5321	.62435
The bank quantifies its key risks extensively	4.3284	.76492
The bank focuses on the integration of the impacts of the major risk types (credit, operational risk, , IT, market)	4.1283	.67648
The bank has a risk management implementation team that works with other departments to link the bank's strategy to that department's objectives and residual risks	4.4845	.58634
The banks business units come up with and determine risk mitigation strategies	3.2962	1.25107
Risks and its characteristics is identified widely from issues such as strategy, operations, culture, systems,	4.4625	.596917
Overall Mean	4.2053	0.7500

Sources: Research Findings

The study was keen to determine extent to which the respondents agreed to the above statements in relation to the Commercial Bank Financial Performance specifically on incident management practices. The findings show that incident management practice had an aggregate of 4.2053 and standard deviation of 0.7500. it shows that the banks have established a risk management function that collaborate with departments to connect the bank's strategy to that department's objectives and residual risks with a average of 4.4845 and a std of 0.58634.

Table 4.6: Compliance of both internal and external regulations

	Mean	Std Deviation
The bank has a company-wide clear communication strategy on risk management.	4.6511	.71354
The bank makes briefs to the bank directors on risk management affairs on regular basis	4.7346	.68239
The bank has shared with top managers mission ,values, and benefits statements regarding the risk strategy	4.1009	.72445
The bank has included risk management pillar into the role profile of managers	4.4660	.61255
The bank board of directors plays an active part in the risk management process	4.7100	.50946
Expected gains of ERM to evaluate risk-adjust performance of business departments in the bank	4.2012	.67012
Expected gains of ERM to enhance ability of bank to meet strategic objectives	3.7018	.62258
Expected gains of ERM to tame earnings volatility in the bank	3.8010	.63341
Perceived benefit of ERM to improve profits in the bank	3.9687	.64843
Overall Mean	4.2595	0.64633

Sources: Research Findings

The study was keen to find out the extent to which banks' compliance to both internal and external regulations and how it is practiced by commercial banks in relation to the above statements. The findings show that compliance of both internal and external regulations practices had an aggregate of 4.2595 and standard deviation of 0.64633. The finding show that regular briefs are made to bank directors on risk management matters with an aggregate of 4.7346 and a stand deviation of 0.68239. It was further established that the bank's board of directors play an active role in the risk management process with an aggregate of 4.7100 and a standard deviation of 0.50946.

4.3 Estimated Model

Table 4.7 Model Summary

Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	.713^a	.684	.637	.02875

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Source: Research Findings

R Squared indicates the variation in the dependent variable resulting from changes in the independent variable. From the above table the value of adjusted R squared was 0.637 which shows that there was variation of 63.7% on Commercial Bank Performance attributed to changes in the independent variable at 95 percent confidence interval. This shows that 63.7% changes in Commercial Bank Financial Performance could be attributed to changes in risk and control self-assessment, risk Indicators, incident management, and compliance of both internal and external regulations. R indicates the link between the study variable and independent variables, findings above indicate a positive relationship at 0.684.

Table 4.8: Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	.568	.460		1.354	.003
	Risk and Control	.682	.081	.622	1.863	.026
	Risk Indicators	.962	.063	1.834	9.352	.000
	Incident Management	.771	.056	1.712	8.412	.000
	Compliance	.743	.024	1.316	6.325	.002

Source: Research Findings

The established regression equation was

$$Y = 0.568 + 0.682x_1 + 0.92x_2 + 0.771x_3 + 0.741x_4$$

The equation shows that with Risk and Control Assessment, Risk Indicators, Incident Management, and Compliance to both Internal and External Regulations held constant i.e. zero, Commercial Bank Financial Performance stands at 0.568; a unit increase in Risk and Control Self-Assessment makes Commercial Bank Financial Performance level to rise by 0.682; a unit increase in Risk indicators makes Commercial Bank Financial Performance level to go up by factor of 0.962; a unit increase in Incident Management makes Commercial Bank Financial Performance level to go up by 0.771, and a unit

increase in Compliance of both Internal and External Regulations makes Commercial Bank Financial Performance level to rise by a factor of 0.743.

4.4 Discussion

The study findings show that was variation of 63.7% on the Enterprise Risk Management practices resulting from changes in the independent variables namely: Risk and Control Assessment, Risk Indicators, Incident Management, and Compliance to both Internal and External Regulations. The study also established the existence of a strong relationship between Enterprise Risk Management practices and the mentioned independent variables as indicated by correlation coefficient of 0.713. The study reveals a positive connection between independent variables and financial performance. The study further established that a unit increase in Risk and Control Self-Assessment would result to a rise in commercial banks' financial performance, a unit increase in Risk Indicators occasions a rise in commercial banks' financial performance level, unit increase in Incident Management leads to a rise in commercial banks' financial performance level , and a unit rise in Compliance of both Internal and External Regulations would results to a rise in commercial banks' financial performance level.

The study findings echoes Doherty (2000) who argued that ERM need to adopt an integrated approach whereby it should be geared towards boosting optimal investment. The risk management practices take a strategic angle while risk engagement ought to be companywide and taken seriously.

4.5 Summary

From the findings on the Adjusted R squared the study established the existence of a variation of 63.7% on the Commercial Bank Financial Performance due to changes in Risk and Control Assessment, Risk Indicators, Incident Management, and Compliance of both Internal and External Regulations. There was a strong connection between Commercial Bank Financial Performance and Risk and Control Assessment, Risk

Indicators, Incident Management, and Compliance of both Internal and External Regulations as shown by the correlation coefficient of 0.713. The study also established a positive connection between Risk and Control Assessment, Risk Indicators, Incident Management, and Compliance of both Internal and External Regulations and financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Following data collection and analysis, discussion, conclusions and recommendations were made. The responses were dependent on the objectives of the study. In particular section 5.2 reviewed the summary of the study, section 5.3 conclusion, section 5.4 reviewed the limitation of the study and finally section 5.5 reviewed the recommendation for more research.

5.2 Summary of the Study

Data was collected from the target commercial banks. The population of study zeroed in on the commercial banks operating in Kenya. From the targeted population of 43 firms, the researcher successfully got data from 21 of the firms. The need for an enterprise risk management practice has necessitated banks to adopt a holistic, portfolio approach in the management of their risk. The banks no longer concentrate on their internal operations alone as the source of risk but rather a more strategic approach where external operating environment is also analyzed to enable the bank develops appropriate risk mitigation measures.

The Enterprise Risk Management practices that were analyzed included: risk control self-assessment; assessment of risk indicators, incident management, and compliance of both internal and external regulations. It was found that the determination of the bank's key risk indicators was the most important Enterprise Risk Management practice by the Kenyan commercial banks surveyed. The bank evaluates the soundness of its position financially to determine its vulnerabilities and map out strategies to minimize their impact.

5.3 Conclusion

Enterprise risk management has become an important strategic pillar for banks focus due to the complexity and turbulence of the environment in which banks generally operate. Traditionally, firms have tended to managed risk in silos but this old approach is no longer sustainable and valuable in such a competitive environment. Integrated risk philosophy has replaced the silo system there is need for capacity building on the new model so as to enhance effective implementation. Enterprise Risk Management solutions are costly and need huge IT infrastructural input that will integrate the ERM network with banks' objectives.

5.4 Limitation of the Study

The study was limited to 24 commercial banks in with only one respondent per bank. The use of descriptive research design meant that researcher had no room to controls the variables. The study was also limited to the use of questionnaire due to time constraints. The study focused on only one sector due to financial constraints.

5.5 Recommendation for Further Research

The results of the study have ramifications on depositors, borrowers, bank managers and regulators. Depositors face a higher risk in there dealings with the bank. Borrowers too expect to pay high interest rates to banks since there shared asset risk.

The bank regulators and management are required to enhance capacity on the enterprise risk management policies so as to be able to adequately and transparently monitor and manage risk in all its forms and shades.

From the findings and conclusion, the recommendation for a study to be carried out on the effect of companywide risk management policies on the performance government organizations.

The study also recommends future study the factors that have an impact on the implementation of Enterprise Risk Management in commercial banks in Kenya.

REFERENCES

- Beasley, M. S., Clune, R., & Hermanson, D. R. (2005). Enterprise risk management: An empirical analysis of factors associated with the extent of implementation. *Journal of Accounting and Public Policy*, 24, 521–531.
- Beasley, M. S., Pagach, D. P., & Warr, R. S. (2008). Information conveyed in hiring announcements of senior executives overseeing enterprise-wide risk management processes. *Journal of Accounting, Auditing, & Finance*, 23, 311–332.
- Berinato, S. (2006). *Risk's rewards – are you on board with enterprise risk management?* You had better be. It's the future of how businesses will be run, available at: www.cio.com
- Bessembinder, H. (1991). "Forward contracts and firm value: investment incentive and contracting effects", *The Journal of Financial and Quantitative Analysis*, Vol. 26 No.4, pp.519-32.
- Blanco, C. and Regan, B. (2006). *New frontiers in risk management: reputational risk and crisis management*, *Commodities Now*, September.
- COSO, *Where Board of Directors Currently Stand in Executing Risk Oversight Responsibility*, www.coso.org, 2010.
- Delaney, J.T. and Huselid, M.A. (2006). The impact of human resource management practices on performance in for-profit and nonprofit organizations', *Academy of Management Journal*, Vol. 39, pp. 949–969 46.
- Deloitte & Touche (2008), *The value agenda' along with the Institute of Internal Auditors – UK and Ireland 2003 as quoted in their Position Statement: The Role of Internal Audit in Enterprise-wide Risk Management*, Deloitte & Touche, New
- Froot, K.A., Scharfstein, D.S., and Stein, J.C. (2003), "Risk management: coordinating corporate investment and financing policies", *The Journal of Finance*, Vol. 4 No.5, pp.1629-58.

- Gordon, L. A., Loeb, M. P., & Tseng, C. (2009). Enterprise risk management and firm performance: A contingency perspective. *Journal of Accounting and Public Policy*, 28, 301–327.
- Graham, J.R., and Rogers, D.A. (2002), "Do firms hedge in response to tax incentives?", *The Journal of Finance*, Vol. 57 No.2, pp.815-39.
- Green, K.W. and Inman, R.A. (2007). *The impact of JIT-II-selling on organizational performance*, *Industrial Management & Data Systems*, Vol. 107, No. 7, pp.1018–1035.
- Gupta, P.K. (2009). *Enterprise wide risk management-strategic implications*, *Challenges of the Knowledge Society*, 3rd ed., Economics Series, Universitatea Nicolae Titulescu Publication, Romania.
- Jorion, P. (2001). *Value at Risk – The New Benchmark for Managing Financial Risk*, McGraw- Hill, New York, NY.
- Kersnar, J. (2009). "Warning signs: why risk management is letting down companies and what to do about it", *CFO Europe Magazine*, No.2 February, pp.25-30.
- Klimczak, (2005). "International competition and exchange rate shocks: a cross-country industry analysis of stock returns", *Review of Financial Studies*, Vol. 14 pp.215-41.
- KPMG LLC (2001). "Understanding Enterprise Risk Management – An Emerging Model for Building Shareholder Value," KPMG, available at: www.kpmg.ca
- Lam, J. (2003). *Enterprise Risk Management: From Incentives to Controls*, Wiley Finance Series, Wiley, Hoboken, NJ.
- Liebenberg, A. P., & Hoyt, R. E. (2003). *The determinants of enterprise risk management: Evidence from the appointment of chief risk officers*. *Risk Management and Insurance Review*, 6, 37–52.

- Modigliani, F., & Miller, M. H. (1958). *The cost of capital, corporation finance and the theory of investment*. American Economic Review, 48, 261–297.
- Moeller, R.R. (2007). *COSO Enterprise Risk Management – Understanding the New Integrated ERM Framework*, Wiley, Hoboken, NJ. 48
- Nishat Faisal, M., Banwet, D.K., and Shankar, R. (2007). "Supply chain risk management in SMEs: analysing the barriers", *International Journal of Management & Enterprise Development*, Vol. 4 No.5, pp.588-607.
- Ojala, M., and Hallikas, J. (2006). "Investment decision-making in supplier networks: management of risk", *International Journal of Production Economics*, Vol. 104 No.1, pp.201-13.
- Pagach, D. P., & Warr, R. S. (2011). The characteristics of firms that hire chief risk officers. *Journal of Risk and Insurance*, 78, 185–211.
- Robinson, D. G., and J. C. Robinson, (2004). Strategic business partner: ligning people strategies with business goals. San Francisco. CA: Berret – Koehler Publishers. Inc.
- Simons, R. (2000). *Performance Measurement & Control Systems for Implementing Strategy*, Prentice Hall.
- Smith, C., and Stulz, R., (1985). Determinants of a firms Hedging Policies, *Journal of Financial and Quantitative Analysis*, Vol.20, No 4, pp 391-405.
- Suranarayana, A. (2003). *Risk management models: a primer*l, ICFAI Reader, ICFAI Press, New Delhi, January.

APPENDICES

Appendix I: Introductory Letter

From: Joel Machini

To: Respondent

Dear, Respondent

REF: DATA COLLECTION

I am a postgraduate student at University of Nairobi pursuing MBA Finance pursuing a research on **RELATIONSHIP BETWEEN ENTERPRISE RISK MANAGEMENT AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA.**

You are kindly requested to assist in collection of data from your organization to facilitate the study. I promise to handle the data provided with utmost confidentiality and will use the data only for the intended academic purpose.

Sincerely,

Joel Machini

University of Nairobi, Kenya

Appendix II: Questionnaire

PART A: GENERAL INFORMATION

1) Name of respondent (optional).....

2) For how long has your entity been in operation in Kenya?

Less than two years [] 6-10 years []

2-5 years [] Over 10 years []

3) Does your entity have well defined and documented enterprise risk management policy?

Yes () No ()

4) Does enterprise risk management improve your entity's financial performance?

Yes () No ()

Part B: Financial Performance

The statements below indicate the impact of ERM on organizational performance. Kindly show the degree to which your bank's performance has been impacted by the ERM implementation:

5) Very great extent 4) Great extent 3) Moderate extent

2) Low extent 1) Very low extent

		1	2	3	4	5
1	Return on Investment					
2	Market Growth					
3	Sales growth					
4	Total cost reduction					

PART C: ENTERPRISE RISK MANAGEMENT PRACTICES

5) Please tick appropriately the degree to which your entity has adopted the following enterprise risk management practices and its impact on firm's performance (use the scale below to tick aptly).

5) Strongly agree; 4) Agree; 3) Moderate extent; 2) Disagree; 1) strongly disagree

	ERM PRACTICE	5	4	3	2	1
	Risk and Control Self-Assessment					
1	Business unit managers are the key persons responsible for the risk identification after the board of directors					
2	The organization has established a comprehensive risk register that it expects					

	the managers to manage					
3	Techniques such as scenario and (SWOT) analysis are frequently used in case of board of directors being responsible					
4	Guidance on risk identification is offered by the organization both directly (internal consulting services) or indirectly (documents, such as "tool kits")					
5	There exist a marriage between the mission of the bank and risk management process					
6	The business unit uses risk and control self-assessment checklist to map risks					
	Identification of Risk Indicators					
1	The bank assesses the well-being of the business's financial resources to determine its vulnerabilities and therefore develop plans to minimize their impact					
2	The practice may assist in identifying areas if under capacity, perhaps so as to focus on developing opportunities.					
3	The analysis of the banks financial soundness is multifaceted and includes key aspects such as liquidity, solvency, repayment capacity, profitability, and financial efficiency					
4	The banks response policies namely risk avoidance, risk reduction, risk sharing, and risk acceptance					
	Incident Management					
1	The bank is keen on resource limitations, considers alternative ways of risk management, and is clear on specific steps to follow					
2	The bank quantifies its key risks extensively					
3	The bank focuses on the integration of the impacts of the major risk types (credit, operational risk, IT, market)					
4	The bank has a risk management implementation team that works with other departments to link the bank's strategy to that department's objectives and residual risks objectives and residual risks in the bank					

5	The banks business units come up with and determine risk mitigation strategies					
6	Risks and its characteristics is identified widely from issues such as strategy, operations, culture, systems,					
	Compliance of both internal and external regulations					
1	The bank has a company-wide clear communication strategy on risk management.					
2	The bank makes briefs to the board of directors on risk management affairs on regular basis					
3	The bank has shared with top managers mission ,values, and benefits statements regarding the risk strategy					
4	The bank has included risk management pillar into the role profile of managers					
5	The bank board of directors plays an active part in the risk management process					
6	Expected gains of ERM to measure risk-adjusted performance among business departments in the bank					
7	Expected gains of ERM to enhance ability of bank to meet strategic objectives					
8	Expected gains of ERM to tame earnings volatility in the bank					
9	Perceived benefit of ERM to improve profits in the bank					

THANK YOU FOR YOUR TIME

Appendix III: List of Licensed Commercial Banks in Kenya as at 31.12.2014

1. African Banking Corporation Ltd.
2. Bank of Africa Kenya Ltd.
3. Bank of Baroda (K) Ltd.
4. Bank of India
5. Barclays Bank of Kenya Ltd.
6. CFC Stanbic Bank Ltd.
7. Charterhouse Bank Ltd
8. Chase Bank (K) Ltd.
9. Citibank N.A Kenya
10. Commercial Bank of Africa Ltd.
11. Consolidated Bank of Kenya Ltd
12. Co-operative Bank of Kenya Ltd.
13. Credit Bank Ltd.
14. Development Bank of Kenya Ltd
15. Diamond Trust Bank Kenya Ltd
16. Dubai Bank Kenya Ltd.
17. Ecobank Kenya Ltd
18. Equatorial Commercial Bank Ltd.
19. Equity Bank Ltd.
20. Family Bank Limited
21. Fidelity Commercial Bank Ltd
22. Fina Bank Ltd
23. First community Bank Limited
24. Giro Commercial Bank Ltd.
25. Guardian Bank Ltd
26. Gulf African Bank Limited
27. Habib Bank A.G Zurich
28. Habib Bank Ltd.

- 29. I & M Bank Ltd
- 30. Imperial Bank Ltd 47
- 31. Jamii Bora Bank Limited.
- 32. Kenya Commercial Bank Ltd
- 33. K-Rep Bank Ltd
- 34. Middle East Bank (K) Ltd
- 35. National Bank of Kenya Ltd
- 36. NIC Bank Ltd
- 37. Oriental Commercial Bank Ltd
- 38. Paramount Universal Bank Ltd
- 39. Prime Bank Ltd
- 40. Standard Chartered Bank Kenya Ltd
- 41. Trans-National Bank Ltd
- 42. UBA Kenya Bank Limited
- 43. Victoria Commercial Bank Ltd

Source: Central Bank of Kenya (www.centralbank.go.ke).