

**THE IMPACT OF ERM PRACTICES ON THE 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

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## **ABSTRACT**

The purpose of this research is to investigate the impact of Enterprise Risk Management on financial performance of commercial banks in Kenya and if the performance is positively affected by risk and control self-assessment, key risk indicators, incident management, compliance of both internal and external regulations, and action tracking. The Kenyan banks are found to understand well the need of establishing a companywide risk management practices and incorporate a number of practices which include risk identification assessment and monitoring practices. They were found to have moved from being considering the risk management practices to relate only on the operation of the bank instead, the current risk management process is more strategic in nature such that the influence of the external environment on the operations of the firm is being given prominence in the management of risk. Furthermore, it was found that the risk management practices are determined by the extent to which managers understand risk and risk management. For effective ERM an organization should establish proper communication so that it can built proper confidence in risk management and built risk appetite in the lower cadre of staff. From the findings it was recommended that for the management and regulators, knowledge of the unique types of risk facing each type of bank should lead to the development of special risk management techniques and monitoring procedures that are suitable for those risks, in addition to enhancing transparency.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

In recent decades, the changing environment has posed a threat to the value maximization process in organizations. Catastrophes and systemic shocks altered the way risk was managed in 1970s and 1980s, and risk management has emerged as a separate discipline in the corporate world since the 2000s. The concept of risk management is not so new because risk management techniques like: risk reduction through safety, quality control and hazard education; alternative risk financing; and insurance including self-insurance and captive insurance have been in existence for a long time (Doherty, 2006). Risks are now not perceived as threats (adverse financial effects) but as potential opportunities and the focus of risk management has changed from all risks to critical risks (KPMG LLC, 2001). Recognition of risk management as a separate managerial function entails many advantages and the inclusion of risk management as a strategy in the general management function helps to enhance a firm's value (Suranarayana, 2003). On the other hand, convergence of technology has given impetus to internal controls in the organization and the matters of security highlighting the importance of the operational risk management through which the internal audit should be alert to the whole process of implementation of the systems for managing the operational risk management in entities.

KPMG (2001) traces the change of risk management approach from an individualistic narrow silo type to portfolio type and the risk management is beginning to be perceived as a new means of strategic business management, linking business strategy to day-to-day risks. Doherty (2000) has described the integrated approach as – diagnostic, designed to support optimal investment,

based on transaction cost and inclusive coordinated but discriminating. The study of risk management practices indicates that risk management focuses to now shifting to a strategic one and risk involvement must be universal and thorough in the organization. Doherty (2006) argues that risk management suffers from the problem of duality in the sense that either the organization can remove the risk or its effect (accommodate). Berinato (2006) argues that risk management is crucial because balancing risk is becoming the only effective way to manage a corporation in a complex world. Researchers have shown that firms feel an aggregate measure should include all risks facing the enterprise, but acknowledging the fact that some risks like operational risk are difficult to quantify in a consistent way.

In 2005 the Central Bank of Kenya on 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 enterprise risk management framework. According to the circular on institutional risk management and policy framework (IRMPF), to support performance contracting and results based management initiatives in the banking sector there is a demand for a framework that provides a basis for management to effectively deal with uncertainties and associated risks. The establishment of risk management framework therefore enables management to focus in a comprehensive and holistic basis on all risks faced by the institution which could impact on the achievement of strategic objectives.

### **1.1.1 Enterprise Risk Management**

Enterprise risk management (ERM) is a new paradigm for managing business risks, which is strategic in nature and combines several array of components, put together through due process within an organization that work together to manage risk over time efficiently and effectively

(Moeller, 2007). The seminal idea in the creation of a new theory on risk management was promulgated by the Committee of Sponsoring Organization of the Treadway Commission (COSO) and the underlying principles of ERM are explained through the “COSO Cube” and the subsequent development of the COSO ERM Framework. COSO ERM Framework serves as a broadly accepted benchmark to help organizations enhance their risk management efforts (IIA, USA). This model is rapidly becoming a preferred model (Everson, 2006), that goes beyond internal controls to provide a system to address organizational risks in a comprehensive fashion, as opposed to dealing with individual types of risks through a silo-based risk management.

Traditionally, risk management has been compartmentalized and uncoordinated within a firm with corporate risk managers focusing on pure risks, whereas the treasury department used derivatives to reduce financial risks, such as interest rate, credit, market, and foreign exchange risk. However, ERM attempts to deal with additional risks such as operational or strategic risks. The goal of ERM is the coordinated management of all risks faced by a firm, whether it is risk related to corporate governance, auditing, supply chains, distribution systems, IT, or human resources. Unlike the traditional risk management, ERM is to gain a systematic understanding of the interdependencies and correlations among risks. A fundamental concept of ERM is the aggregating of risks into portfolios, then hedging the residual risk, which is more efficient and value maximizing than dealing with each risk independently. Applying concepts of portfolio theory, ERM can increase firm value because the risk of an aggregate portfolio should be less than that of a single product.

### **1.1.2 Financial Performance**

A firm's performance can be measured using either financial or non-financial measures. Financial measures as a form of business performance measurement still remains an important part of measuring performance of an entity, especially in the current economic climate. Most businesses target increased profits, liquidity and solvency as a measure of sound financial health of an organization. Liquidity measures the ability of a firm to meet financial obligations as they come due, without disrupting the normal, ongoing operations of the business. Solvency on the other hand measures the amount of borrowed capital used by the business relative the amount of owner's equity capital invested in the business. Profitability as a measure of financial performance indicates the extent to which a business generates a profit from the factors of production: labor, management and capital. Profitability analysis focuses on the relationship between revenues and expenses and on the level of profits relative to the size of investment in the business, (Mesquita and Lara, 2003). Other researchers have pointed out that financial measures do not convey the full picture of a company's performance, especially in today's competitive environment where companies are competing in terms of product, quality, delivery, reliability, after-sales service and customer satisfaction (Bozac, 2005). None of these services is measured by the traditional responsibility accounting system, despite the fact that they represent the major goals of world-class manufacturing companies.

Many companies are using both qualitative and quantitative non-financial indicators such as; quality, lead time, number of customer complaints and warranty claims, delivery time, non-product hours, and system down time. In the same manner Ho, (2008) pointed out that performance can be evaluated by efficiency and effectiveness of aim attainment. Furthermore,

Venkatraman et al, (1986) cited that performance can be assessed by financial performance namely, return on investment, growth of sales, profit, organization effectiveness, and business performance. Similarly, Delaney et al, (2006) assert that organization performance can be evaluated by quality service and products, satisfying customers, market performance, service innovations, and employee that organization performance can be appraised by the following “dimensions of performance: return of investment, margin on sales, capacity utilization, customer satisfaction and product quality”. In the same way, Green et al, (2007) identified that return on investment, sales and market growth, and profit are important factors that be measured by organization performance. According to these researchers, there are many factors in this study that be measured by performance such as market shares, financial performance, efficiency and effectiveness of an organization performance, and human resource management.

There is general agreement that bank profitability is a function of internal and external factors. Koch (1995) observed that the performance differences between banks indicate differences in management philosophy as well as differences in the market served. Profitability is a function of internal factors that are principally influenced by a bank's management decisions and policy objectives such as the level of liquidity, provisioning policy, capital adequacy, expense management and bank size, and the external factors related to industrial structural factors such as ownership, market concentration and stock market development and other macroeconomic factors (Athanasoglou *et al*, 2006).

### **1.1.3 The Banking Industry in Kenya**

According to the Central Bank of Kenya Official Homepage (2012), there are a total of 45 licensed commercial banks in the country and one mortgage finance company. Out of the 45

institutions, 32 are locally owned and 13 are foreign owned. The locally owned financial institutions comprise 3 banks with significant shareholding by government and state corporations, 28 commercial banks and 1 mortgage finance institution. However out of all the banks only 10 of them are listed in the Nairobi Stock Exchange having met the conditions of listing and applied for the same. The Central Bank of Kenya annual supervision report (2012) categorizes the financial institutions into three tiers; Large, Medium and Small in terms of net assets. Out of the 45 institutions, 13 were in the large peer group with aggregate net assets of over Ksh. 15 billion. The medium peer group comprise of 17 institutions with net assets ranging between Ksh. 5 billion and 15 billion, whereas the small peer group had 15 institutions with net assets of less than Ksh. 5 billion.

In the coming period, according to the CBK (2013), diversification into other financial services is also expected as consumers increasingly seek “one stop financial supermarket.” These developments are expected to enhance banking products being offered and bring more Kenyans into the banking space. However, the main challenges facing the banking sector today include the Finance Act 2008, which took effect on 1 January 2009 that requires banks and mortgage firms to build a minimum core capital of Ksh 1 billion by December 2012. This requirement, it is hoped, will transform small banks into more stable organization. The implementation of this requirement poses a challenge to some of the existing banks and they may be forced to merge in order to comply with the act. Owing to deregulation, new technology and changing consumer behavior, the competition in the banking sector is getting fiercer. In the Kenyan banking sector the intensified competition has recently resulted in a number of banks adopting agency banking and new electronic distribution channels.

## **1.2 Problem Statement**

Enterprise risk management has received unprecedented international attention by firms in recent years especially after the recent financial crisis that proved that no business unit is immune to risk however much its asset or customer base is. In response to this growing expectation for effective risk management across the entire enterprise, many leading organizations are abandoning their traditional approach to manage risk by silos where risks are managed in isolation from one another and are adopting an enterprise risk management approach (Lienberge and Hoyt 2003). Thus in many organizations risk management has evolved into ERM where the enterprise risk is managed in aggregate, rather than independently. The crux of the organizational risk management exercise revolves around maintaining or even improving shareholders value, in an uncertain environment (Beasley et al. 2008). Value is created, preserved or eroded by management decisions ranging from strategy setting to day-to-day operations of the enterprise. Inherent in decisions is the recognition of risk and opportunity, requiring that management considers information about internal and external environments, deploys precious resources and recalibrates enterprise activities to changing circumstances ([www.erm.coso.org](http://www.erm.coso.org)). This organization valuation depends upon its ability to allocate efficiently, execute efficiently and effectively; and establish innovative capabilities.

The Kenyan banking industry has continued to grow both in terms of new local and foreign entrants, customer and deposit base, regionalization and increased scrutiny from the regulators specifically the Central Bank of Kenya. This new shift in the Kenyan banking industry can be attributed to the liberalization of the sector, increased adoption of information technology and improved business environment due to reforms being undertaken in the political, economic,



social and cultural fields. With these changes, the level of competition in the banking industry has reached an all level high and coupled with an enlightened customers and increased scrutiny from the regulators, local banks have had to shift their attention to differentiating factors such increasing their lending base and at the same time extending the credit facility to the low end customers that are generally considered risky. With the adoption information technology and new systems of operation the level of risk faced by these banks has reached a worrying level and there is need of adopting a company-wide enterprise risk management policies.

A number of studies have investigated on the concept of corporate risk management. Manab et al., (2010) researched on the drivers and the success of Enterprise Wide Risk Management (EWRM) implementation with corporate governance compliance and value creation in for profit companies in Malaysia. They found that the compliance of corporate governance by firms helped in reduction of the risk level in the firm and there was a negative correlation between corporate governance adherence and level of risk exposure to a firm. Hardy (2010) in her study ‘managing risks in government; introduction of Enterprise Risk management’ sought to know the challenges that face implementation of ERM in federal agencies in the USA and found that insufficient sponsorship of ERM at the executive level, positioning ERM as a strategic management practice and not as an additional task affects to a greater level the success of ERM implementation. Locally, Talel (2010); did a survey of risk management practices adopted by banking institutions in Kenya and found out that insufficient allocation of resources to the program has affected the success of the ERM implementation and most banking institutions still adopted the traditional silo risk management. Kamau (2010) did a survey on adoption of Risk Management by commercial banks and found out that majority of the banks had adopted the ERM practice and also the existence of risk management policy and guidelines had enhanced the workability of the

risk management programs. It is evident from the above studies that the concept of enterprise risk management has been covered, both locally and internationally. However, there has been no study conducted locally on the impact of ERM practices on the financial performance of commercial banks in Kenya. It is on the basis of this gap that the present study will wish to establish the impact that the adoption of ERM and its effect on the financial performance of commercial banks in Kenya.

### **1.3 Objectives of the Study**

The general objective of the study was to establish the effect of enterprise risk management on the performance of commercial banks operating in Kenya.

#### **1.3.1 Specific Objectives were;**

- i. To establish the risk management practices employed by commercial banks in Kenya;
- ii. To establish the impact of enterprise risk management practices on the firm's performance.

### **1.4 Value of the Study**

The understanding of the process of risk management in organizations will help policy makers—governments and other stakeholders – to design targeted policies and programs that will actively help in preventing the acceleration of such firms to defaulting in their obligations and therefore leading to bankruptcy. This kind of risk management practice can serve as a useful tool for quick evaluation of the corporate risk profile as well as be used to track the firms to check for their credit rating. Further, the adoption of such ERM will help policymakers to support, encourage,

and promote the establishment of similar banking institutions having had adequate information managing risks locally. Regulatory bodies such as CBK, Capital Markets Authority and Kenya Revenue Authority can use the study findings to improve on their framework for regulation.

The study findings will also benefit management and staff of the commercial banks who will gain insight into how their institutions can effectively manage their risk and prevent exposing themselves to greater risk. This study will offer an understanding on the importance of maintaining an effective operational and audit policies in order to check on the level of risk exposure. Several policies on the risk management practices will also be addressed. This is because commercial banks need to adapt to the changing needs of the current business set up and requirement of various classes of stakeholders. As a result, the firms under study in the country and other affiliated firms will derive great benefit from the study.

This study will also create a monograph which could be replicated in other sectors of the economy. Most importantly, this research will contribute to the literature on the risk management and corporate management. It is hoped that the findings will be valuable to the academicians, who may find useful research gaps that may stimulate interest in further research in future. Recommendations will be made on possible areas of future studies. This study is further justified since it will be of value to those interested in setting up commercial banks in the country since they will be able to understand what to do right to succeed and what if done wrong would bring the business down.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews literature relating to enterprise risk management and firm performance. The literature review has been organized in the following sections. First section covers theoretical framework of organizational risk management, traditional risk management practice and enterprise risk management. The second section covers the empirical studies on the subject area and the effect of ERM on firm's value.

#### **2.2 Theoretical framework of organizational risk management**

The capital market imperfections have been found to be the major reason for firms to seek to manage risks. While these imperfections might be necessary for optimal derivatives use, they are not sufficient conditions. Elliott, Huffman and Makar (2003), argue that, given these incentives, a firm's ultimate decision to manage risk depends on the level of its exposure. In addition, a firm's choice to use currency derivatives depends on the costs of managing foreign exchange-rate risk. Thus unless financial risks are seriously distorted by the government restrictions on intervention, it appears to be very difficult indeed to generate profits on the basis of exchange rate forecast (Dufey and Giddy, 1997).

##### **2.2.1 Agency theory**

Agency theory extends the analysis of the firm to include separation of ownership and control, and managerial motivation. In the field of corporate risk management agency issues have been shown to influence managerial attitudes toward risk taking and hedging (Smith and Stulz 1985). This theory explains a possible mismatch of interest between shareholders, management and debt

holders due to asymmetries in earning distribution, which can result in the firm taking too much risk or not engaging in positive net value projects. Consequently, agency theory implies that defined hedging policies can have important influence on firm value (Fite and Pflleiderer, 1995). Agency theory provides strong support for hedging as a response to mismatch between managerial incentives and shareholder interests.

Conflicting interests in the agency relationship between managers and shareholders motivate the use of derivatives. Most senior managers have a highly undiversified financial position because they derive substantial (monetary and non-monetary) income from their employment by the firm. According to Stulz (1990), risk aversion cause managers to deviate from acting purely in the best interest of shareholders by expending resources to hedge diversifiable risk. The time horizon of managers and shareholders may also differ because management compensation is tied to short-term accounting measures. These conflicts of interest can be mitigated by corporate risk management if compensation schemes appropriately link managers' pay to the stock price of the firm. This suggests that the use of stock option plans in a corporation can be a determinant of corporate hedging. Executive stock options can effectively reduce a manager's risk aversion and thus lower the propensity for using derivatives to decrease idiosyncratic risk.

### **2.2.2 Stakeholder theory**

Stakeholder theory focuses explicitly on equilibrium of stakeholder interests as the main determinant of corporate policy. In certain industries, particularly high-tech and services, consumer trust in the company being able to continue offering its services in the future can substantially contribute to company value. However, the value of these implicit claims is highly sensitive to expected costs of financial distress and bankruptcy. Since corporate risk management practices lead to a decrease in these expected costs, a company values raise (Klimczak, 2005).

Therefore stakeholder theory provides a new insight into possible rationale for risk management. However, it has not yet been tested directly. Investigations of financial distress hypothesis provide only indirect evidence Judge (2006). If a firm enters financial distress then it will face costs of default on debt obligations, costs of filing for bankruptcy, and costs related to reorganization and liquidation. Given these costs, firms have incentives to reduce the probability of financial distress. Firms can reduce the likelihood of financial distress by hedging variability in earnings.

### **2.2.3 New Institutional Economics theory**

According to Williamson (1998), this theory predicts that risk management practices may be determined by institutions or accepted practice within a market or industry. Further, the theory links security with specific assets purchase, which implies that risk management can be important in contracts which bind two sides without allowing diversification, such as large financing contract or close cooperation within a supply chain.

Firms in regulated industries provide top management with few opportunities for discretion in corporate investment and financing decisions. Smith and Watts (1992) showed that regulation is a key determinant of a firm's corporate financial policy. Therefore, if regulated firms face tighter scrutiny and face lower contracting costs, then they are less likely to use derivatives to hedge firm risk. According to Froot, Scharfstein, and Stein (2003), if external sources of funds are more costly to a firm than internally generated funds, then the firm could benefit from using derivatives. In particular, firms can hedge cash flows to avoid a shortfall in funds that may require a costly visit to the capital markets and at the same time derivatives are positively related to measures of the firm's investment opportunity set proxies.

#### **2.2.4 Financial economics theory**

This theory suggests that corporate risk management is apt to increase firm value in the presence of capital market imperfections such as bankruptcy costs, a convex tax schedule, or underinvestment problems. According to Carter et al. (2006) risk management can increase shareholder value by harmonizing financing and investment policies. When raising external capital, firms may under invest. Derivatives can be used to increase shareholder value by coordinating the need for and availability of internal funds. Conflicts of interest between the shareholders and debt holders can also lead to underinvestment.

An underinvestment problem can occur when leverage is high and shareholders only have a small residual claim on a firm's assets, thus the benefits of safe but profitable investment projects accrue primarily to bondholders and may be rejected (Bessembinder,1991). A credible risk management can mitigate underinvestment costs by reducing the volatility of firm value. As the underinvestment problem is likely to be more severe for firms with significant growth and investment opportunities, various measures such as the market-to-book ratio, research and development to sales ratio, capital expenditure to sales, net assets from acquisitions to size are used for testing the underinvestment hypothesis.

### **2.3 Traditional Risk Management Practices**

Some finance scholars responded to Modigliani and Miller's (1958) "risk management irrelevance principle" by citing capital market imperfections and proposing theories that explain why risk management can increase firm value. In the traditional risk management (TRM) research, scholars propose that the existence of these imperfections allows risks to impose real costs on firms and that risk management can increase firm value by reducing total risk, typically measured as some type of volatility (Graham & Rogers, 2002). A number of studies help in

understanding the reasons that firms decide to hedge risk and provide a theoretical justification for the link between risk management and firm value. Allayannis and Weston (2001) directly investigate the relationship between risk management and firm value. Among their sample of large nonfinancial firms with foreign currency exposures, they find that firms using foreign currency derivatives had, on average, almost a 5% higher firm value than nonusers. More studies (Bartram, Brown, & Conrad, 2009; Carter, Rogers, & Simkins, 2006; Nelson, Moffitt, & Affleck-Graves, 2005) followed showing a positive relationship between risk management, specifically hedging using derivatives, and firm value.

Chowdhry and Howe (1999) argue that derivatives are used to mitigate short-term currency exposures, whereas operational hedges are better suited for handling long-run currency exposures. Later studies examine whether financial and operational hedging are substitutes or complements, and most find evidence of a complementary relationship. Another strand of the finance literature argues that firms should not engage in any effort to manage idiosyncratic risk. Markowitz's (1952) work on diversification and portfolio theory, developed the capital asset pricing model (CAPM). In this model, investors are compensated only for bearing systematic (non diversifiable) risk but not for bearing idiosyncratic (diversifiable) risk. In other words, a firm's cost of capital should depend only on the firm's systemic risk, not the total risk of the firm, because investors can eliminate the diversifiable risks of individual firms by holding a well-diversified portfolio. An implication of CAPM is that firms should not use risk management to reduce firm specific risks because investors can eliminate firm idiosyncratic risks through diversification.



However, several researchers countered with asset pricing models in which idiosyncratic risk does matter, for example, because investors may hold undiversified portfolios. Froot and Stein (1998) develop a capital allocation/structure model for financial institutions in which information-intensive assets cannot be frictionlessly hedged. He builds on this model to include customer aversion to insolvency risk, which is an important consideration for financial institutions because their customers typically have a greater concern about solvency risk than do investors. Overall, an implication is that in deciding whether to allocate capital for an investment, the decision should reflect the covariation of the investment's risk with the firm's existing portfolio of risks.

## **2.4 Enterprise Risk Management Practices**

According to Jorion (2001), the success of organizations depends upon the risk management practices and understanding properly the firm's sensitiveness to different types of risk. Lam (2001) further posits that risk management reduces earning volatility, maximizes value for shareholders and promotes job security and financial security in the organization. Thus it can be seen that organizations will be advantageous to establish risk management practices mitigate various risks facing the organization. The formal risk management practices entails the following steps namely; risk and control self assessment, identification of risk indicators, incident management, compliance of both internal and external regulations and action tracking.

### **2.4.1 Risk and Control Self Assessment**

Identify objectives of the business unit or activity being assessed 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 evaluation of the current organizational environment component captures the traditional idea of the “tone at the top,” but it includes much more since risk consciousness, risk appetite, risk philosophy, and board oversight is also included. The ERM considers three proxies for internal environment that includes having a risk mission statement, including risk in job responsibilities, and having the board involved in risk management efforts (Lewis et al., 2005). This emphasis and environment leads to an increased management focus. In 2011, the SEC’s director of the Office of Compliance Inspections and Examinations stated that the business and supporting functions (ethics, risk management office, and internal audit) are the first lines of defense and that senior management reinforcing the tone and culture is the next line of defense. COSO noted that management decisions create value and enhance performance. Beasley et al., (2008) point that the management need to consider the risk appetite, set objectives, identify risks, identify risk responses, consider risk alternatives, assess capital needs for the risks, etc. Both COSO and ISO support the idea of value being part of an ERM process. According to COSO, a company maximizes value when management sets strategy to balance growth and risks and when management correctly uses resources as it pursues objectives and manages the related risk. The central idea is that value is created, and, therefore, performance is enhanced.

Indeed the success of organizations depends upon the risk management and understanding properly the firm's sensitiveness to different types of risk. Thus it can be seen that organizations will be advantageous to establish risk management practices mitigate various risks facing the organization. The formal risk management practices entails the following steps namely; risk identification, risk analysis and risk evaluation. According to Burnaby and Hass (2008) organizational risk management process entails seven steps namely; mandate from the top,

deciding on a control framework, determining and assessment of risk, identifying business unit objectives and performance measures, initiating monthly reporting and analyzing process and finally continuously monitoring the process

#### **2.4.2 Identification of Risk Indicators**

The identification process involves monitoring current risk levels and control performance as well as identifying hotspots and trend of the risk over the recent past. 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) posit the definition of the business objectives is a crucial initial step towards mitigation of risk because if an organization does not know where to go it is difficult to identify what risks may arise. In fact, an unclear business objective is a strategic risk in itself, and should be remedied at this stage. By reviewing the strategy and plans, and through interviews and a management session on targets and objectives, the business objectives are assessed for clarity. Further noted by Kersnar (2009) the risk identification process should try as much as possible to remove ambiguity, discord, disagreements and other vagueness as possible.

An organization should try to identify the risks related to its objectives and this will be related to the use of a comprehensive risk inventory. For example, COSO states that companies might use risk-event categories as a first step towards risk management. The second indicator is whether the company utilizes assessments or surveys to map identified risks. According to COSO and the American Institute of Certified Public Accountants (AICPA), there are numerous ways companies can identify risks and all in all, companies must first identify their risks before they can react to them.

According to Gupta (2012) for example, he points that in the Indian companies, risk is analyzed in terms of its financial impact followed by consequences. However, operational modeling is not a popular technique for risk identification since line managers, CFOs and internal auditors mostly use past experience analysis and process analysis. The sophisticated tools of identifying risks like scenario analysis and strengths, weaknesses, opportunities and threats (SWOT) analysis are not frequently used in case of companies where the risk identification responsibility is that of board of directors/executive management team (Deloitte, Report, 2008). In a call for risk management research that focuses on the coordination and strategic allocation of risk, Stulz (1996) proposes that academic theory expand beyond considering that the goal of risk management is “variance minimization.” In other words, the goal of risk management should not be to reduce total risk but to allocate risks to play on a firm’s strengths. A basic concept of ERM is that a firm should reduce exposure to risk in areas where it has no comparative information advantage and exploit risks in areas where it has an advantage, meaning that total risk can possibly increase under ERM risk allocation.

### **2.4.3 Incident Management**

The risk 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.

Companies should respond and react to their assessments because they have more and better knowledge. Response techniques included risk avoidance, risk reduction, risk sharing, and risk acceptance. Blanco and Reagan (2006), posit that there are two major indicators of risk response. The first indicator addresses having a process to integrate the effects of the risks; the second indicator examines risk-mitigation strategies and as companies begin to assess and quantify risk, analyze the root cause, integrate risks, and develop mitigation strategies, this process should have an impact on management's ability to oversee risks.

#### **2.4.4 Compliance of both internal and external regulations**

An organization should comply with both internal and external regulations. These regulations include legal or regulatory sanctions, financial loss, or loss to reputation a company may suffer as a result of its failure to comply with all applicable laws, regulations, and codes of conduct and standards of good practice. The assessment of effectiveness of the control mechanism in place 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)

In this stage organizations must evaluate various alternatives for reaching their vision for the future. The organizations address resource constraints, consider alternative methods of risk

management, and outline specific steps to follow. Creativity and a willingness to work through the details of various plans are needed to successfully complete this segment. The management actions that result in the same profit may not equal in either their resource costs or associated risk levels. For this reason, the practice is acutely focused on evaluating situations for their impact on the resource base, implications for costs and returns, and more importantly for the levels of risk (Nishat *et al.*, 2007). Specific steps in the risk analysis level of the include the determination of risk sources; identify management alternatives, estimate likelihoods and rank management alternatives. Determining risk sources enable an organization to determine when risks will come and where they come from and to prioritize where strategic risk management practices efforts will pay off most. No one has the time and money to address even risk. Navigator helps identify the risks that you face and determine which ones need to be prioritized for best management.

This step involves a brainstorming session (Berinato, 2006) and will entail analysis of the institutional strengths, weaknesses, opportunities and threats in order to come out with effective analysis for the strategic risks. In an effort for an organization to evaluate the effect of the risks on asset values and economic performance analysis of potential benefits from different risk mitigation efforts and need for risk transfer and financing arrangements will have to be determined (Berinato, 2006). According to Gupta (2009), in order for the brainstorming session to be successful in analyzing the risks, the members should review significant business information prior to the brainstorming so that she/he can ask penetrating questions. Both risks and characteristics should be identified from the widest possible range of issues, including at least strategy, operations, culture, systems, competence and brand. Although, impossible to fully achieve, the issues should be exhausted. In addition, to effectively manage the various exposures that an organization might face, an organization should put in place corporate accounting

systems to identify and measure the relevant exposures as well as internal control processes adopted to check whether exposures are kept within bounds and whether processes remain in line (Shimell, 2002).

#### **2.4.5 Action Tracking**

The interconnections of the various steps in the risk management help ensure that all planning levels are interrelated and that all players are aware of the desired outcomes and plans for achieving them. When all of a business's resources can be aligned toward its identified goals, success, while not guaranteed, is much more likely. In a competitive situation, a winning strategic risk management strategy is one that results in sustainable positive outcomes over the long run with acceptable levels of risk. In this way risk management is focused on resources and goals that better position the business for the future (Robinson and Robinson, 2004).

Gupta (2009) notes that formal risk management process resemble control element whereby corporate management is supposed to monitor performance outcomes against intended goal to ensure that corporate activities remain on track and correspond to the set course is that some digression from the beaten track also can hold the key for generating innovation ideas and adaptive responses to changing environmental conditions. Once an organization notices some diversions from the norm, then appropriate mechanism should be put in place to realign the results with what the organization intends to achieve (Shimell, 2002). Hence several control techniques such as balance score and financial measures will be adopted during this period. Corporate decision on whether these exposures are acceptable in view of prevailing organization responses should be assessed and agreed by the strategy team and then ways of overcoming the same risks will have to develop. Risk assessments in project management see a need to balance planning with adaptive solutions that arise as the projects are implemented. Once these factors

are identified, the vulnerability to the various risks can be analyzed and the potential economic effects determined (Berinato, 2006).

It is within this segment that the action plans are implemented by actually taking the planned risks. The focus here is on the day-to-day duties of management. Watching how the plans unfold and adjusting to the inevitable bumps along the way are necessary. It has been said that when implementing a strategic planning process, the user is off-course from the original plan most of the time (Wagne and Bode, 2007). Reaching the destination then depends entirely on making course corrections as needed to ensure the business moves in the desired direction. These activities are the focal point of the operational level. According to Towill and Disney (2005) strategic plans are often left in a drawer and never fully carried out usually due to a lack of diligence in developing all levels of the plan—the vision for the future, consideration of alternative methods for reaching that future, selection of the preferred method and the implementation, and the monitoring and readjustment necessary to see the plan through to completion. This stage reduces that risk. Finally, the process does not end rather it continues into the future as the business matures, is transferred to the next generation, or evolves to offer a new array of products.

## **2.5 Empirical Studies**

Applying concepts of portfolio theory, ERM can increase firm value because the risk of an aggregate portfolio should be less than the sum of the individual risks if the risks are not 100% correlated, especially if natural hedges exist. Liebenberg and Hoyt (2003) investigated the determinants of ERM adoption, using the appointment of a credit risk office CRO as a proxy for ERM implementation. Their main finding is that more leveraged firms are more likely to appoint



a CRO. In a similar study, Pagach and Warr (2011) find that firms with more leverage, higher earnings volatility, poorer stock performance, and a CEO whose compensation increases with stock volatility are more likely to have a CRO. Using survey data, Beasley, Clune, and Hermanson (2005) find ERM implementation in their sample of firms to be positively related to factors such as the presence of a CRO, firm size, and whether the firm is in the insurance or banking industry.

Two studies indirectly investigate the relationship between ERM implementation and firm value. Hoyt and Liebenberg (2011) find a positive relationship between firm value and the appointment of a CRO. In an event study of the market reaction to the appointment of senior executives to oversee a firm's ERM process, Beasley et al. (2008) find firm-specific benefits of ERM for nonfinancial firms, but not for financial firms. Gordon et al. (2009) develop their own ERM index and find that the relationship between ERM and firm performance is conditional on the match between ERM implementation and firm-specific factors. Beasley et al. (2008) indicate that a limitation of using the CRO variable is that it does not capture the extent of ERM program implementation. In the next section, we describe the measure used in this study, which we believe comprehensively captures the complexity of ERM and reflects the extent of its implementation.

Tonello (2009) undertook a study on risk management in financial institutions and findings were that the role of chief risk officers (CROs) had expanded dramatically, with more than half of them frequently involved in firm-level strategic decisions. In a study of the sensitivity to risk of large domestic banks in the USA, Linbo Fan (2004) found that profit efficiency is sensitive to credit risk but not to insolvency risk or to the mix of loan products. Hahm (2004) argues that it is

necessary to improve banking supervision and banks' risk management to ensure successful financial liberalization.

Fatemi and Fooladi (2006), after investigating the current practices of credit risk management in the largest US-based financial institutions, reported that identifying counterparty default risk is the single most important purpose served by the credit risk models utilized. On their part, Al-Tamimi and Al-Mazrooei (2007) provide a comparative study of banks' risk management in locally incorporated banks and foreign banks in the United Arab of Emirates (UAE). The results show that the three most important types of risks facing UAE commercial banks are foreign exchange risk, followed by credit risk and operating risk. However, an earlier study by Al-Tamimi (2002) reports that the main risk facing UAE commercial banks is credit risk. For risk identification (RI), he reports that inspection by branch managers and financial statement analysis were the main methods used; while Al-Tamimi and Al-Mazrooei (2007) report that inspection by the bank risk manager, audits or physical inspections, financial statement analysis and risk survey are the main methods used. These results indicate that banks are becoming more sophisticated in managing their risk.

Al-Tamimi (2008) studied the relationship between the readiness to implement the Basel II Accord and the resources needed to implement it in UAE banks. The results revealed that these banks are aware of the benefits, impact and challenges associated with the implementation of the Basel II Accord. However, the research did not find any positive relationship between the UAE banks' readiness to implement Basel II and the impact of that implementation. Nor was the relationship between readiness and anticipated cost of implementation confirmed. No significant

difference was found in the level of preparation for the Basel II Accord between the UAE national and foreign banks.

Iqbal and Mirakhor (2011) argue that a comprehensive framework of risk management is equally applicable to a conventional or Islamic bank. The findings of Hassan (2009) lend further support to this argument. Khan and Bhatti (2008) observed that Islamic banks face another crucial challenge to improving their risk management strategies and corporate governance because of their adherence to Islamic Sharia'a (law). This should have an impact on the risk management of Islamic banks in terms of certain applications, emphasis and inclusion or exclusion.

Chazi and Syed (2010), in their study, claim that capital adequacy and risk for the banks can be effortlessly recognized using leverage and gross revenue ratios while also claiming that Islamic banks demonstrate better leverage and gross revenue ratios. Financial ratios are good taxonomy and predictor variables of firm's recital. The objectively calculated misclassification costs and the probability of failure can effortlessly be acknowledged, two years prior to any real collapse, through the use of MDA for categorization and assessment of customers hence cutting down bank's non-performing loans and its credit risk exposure considerably (Chijoriga, 2011)

Smith and Stulz (1985) demonstrated that when a risk-averse manager owns a large number of the firm's shares, his expected utility of wealth is significantly affected by the variance of the firm's expected profits. The manager will direct the firm to hedge when he believes that it is less costly for the firm to hedge the share price risk than it is for him to hedge the risk on his own account. Consequently, Smith and Stulz further predict a positive relation between managerial

wealth invested in the firm and the use of derivatives. They measured the managerial wealth from shares by the log of the market value of common shares beneficially owned (excluding options) by officers and directors as a group. They also show that exogenous bankruptcy costs create incentives for bondholders to support optimal hedging. By reducing the variance of a firm's cash flows (or accounting profits); hedging decreases the probability, and thus the expected costs, of financial distress. Breeden and Viswanathan (1996) and DeMarzo and Duffie (1995) developed models in which managerial reputation provides incentives for managers to use derivatives.

## **2.6 Chapter Summary**

The importance of a firm employing the enterprise resource management system and the various ERM practices has been expounded in detail both in the literature as well as from the empirical studies done on the subject area. 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 is about identifying, analyzing and implementing procedures to minimize or eliminate unnecessary risks to the core business. It is also about ensuring some level of financial predictability to future earnings.

A review of prior literature reveals that there exists a significant relation between a firm's performance and its risk management practices. 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.

However, it is evident from the literature that none of the studies has been able enough to develop a model that will assist managers 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 exist between adoption of various ERM practices and firm performance.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter sets to explain the research design, the population of interest, the basis of sample selection, the type of secondary data used, the sources of data, the techniques of analysis used and the data analysis. A multivariate model is estimated using the SPSS.

#### **3.2 Research Design**

This study employed correlation research design. According to Albright et al (2011) a correlation research is a procedure in which subjects' score on two variables are simply measured, without manipulation of any variable, to determine whether there is a relationship. A cross sectional study was used to determine the interrelationship between the variables under consideration among the different commercial banks in the study and this permitted the researcher to make statistical inference on the broader population and generalize the findings to real life situations and thereby increase the external validity of the study.

#### **3.3 Population of the Study**

The population of interest in this research was composed of all commercial banks operating in Kenya. Currently, there are 43 commercial banks operating in Kenya that constituted the requisite population (Appendix I). The reason as to why these firms are chosen is primarily due to the risk exposure they are faced and the reliability of the financial statements in that they are subject to the mandatory audit by internationally recognized audit firms and also under stringent regulation by the CBK. Most of the firms have their headquarters in Nairobi and its environs and

this will be convenient in terms of time and accessibility to the researcher. Since the number of the respondents was limited, then the study was a census survey.

### **3.4 Data Collection**

Primary data was collected by means of a structured questionnaire (Appendix I). A questionnaire is appropriate in this study because new explanation of the observed practices may be found and assumptions underlying any of the practices can be examined in more detail. Further a questionnaire provides disaggregated data that can be used to examine the practices of firms on an individual basis rather than on an aggregated basis Graham and Harvey, (2001). The questionnaires were hand delivered to the respondents' offices with a request to fill in the questionnaire in one week time where upon it was going to be collected.

The target respondents were the finance managers or individuals concerned with arrangement mitigation of risks in the banks. The survey instrument involved both closed and open-ended questions. The open-ended questionnaire sought to encourage respondents to share as much information as possible in an unconstrained manner while the closed-ended questionnaire involved "questions" that could be answered by simply checking a box from a pre-determined set of responses presented in a five-point Likert scale.

### **3.6 Data Analysis**

The data collected was analyzed using descriptive statistics (measures of central tendency and measures of variations) and regression analysis. Multiple regression analysis was applied to the data to examine the effect of the various aspects of ERM practices on financial performance of the commercial banks in Kenya. The dependent variable in the study will be return in assets. The independent variables for the study will be the various ERM practices namely; Risk and Control

Self Assessment, Key Risk Indicators, Incident Management, Compliance of both Internal and External Regulations and Action Tracking.

The regression equation will assume the following form:

$$ROA = f(x_1, x_2, x_3, x_4, x_5);$$

More specifically, the regression will be of the form;

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5$$

Where Y = Return on Assets

$\beta_0$  = Constant

$x_1$  = Risk and Control Self Assessment

$x_2$  = Key Risk Indicators

$x_3$  = Incident Management

$x_4$  = Compliance of both Internal and External Regulations

$x_5$  = Action Tracking



## CHAPTER FOUR

### DATA ANALYSIS, FINDINGS AND DISCUSSION

#### 4.1: Introduction

The research objective was to establish the impact of ERM practices on the financial performance of commercial banks in Kenya. This chapter presents the analysis and findings with regard to the objective and discussion of the same. The findings are presented in percentages and frequency distributions, mean and standard deviations. Finally a correlation and regression analysis is performed on the results.

#### 4.2 General Information

This section sought to establish the period of operations that the banks had been in operation, the ERM practices in the banks and also whether the practices adopted had any effect on the performance of the banks.

Table 4.1: Age of Banks Operations in Kenya

	Frequency	Percent	Cumulative percent
2-5 years	1	3%	3%
6-10 years	3	9%	12%
Over 10 years	29	88%	100%
Total	43	100%	

The results in Table 4.1 on the age of the banks shows that majority of the banks had operated for more than 10 years (88%) while only 3% of the respondents had operated for less than 5 years. This result means that most 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. In addition, with the majority of the firms having been in operation long enough, some of them will have expanded their operation regionally and also formed alliances

with other multinational agencies which will have given it the impetus to initiate ERM in their businesses. 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 ERM by an organization will affect positively its performance.

### 4.3 Descriptive Analysis

The descriptive analysis below shows the mean, and standard deviation of the different variables of interest in the study. It also presents the overall mean that will be used in determining the overall regression of the relationship between the adoption of ERM practices and the performance of the banks. The respondents were requested to indicate the extent at which they have adopted different ERM practices in their organization in a five point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) and the results are represented below.

Table 4.2 (a): ERM Practices Adopted by Commercial Banks

	Mean	Std. Deviation
<b>Risk and Control Self Assessment</b>		
Line managers and the board of directors are responsible for the risk identification	4.0357	1.13797
The organization has established a comprehensive business risk inventory of the risks that it expects the managers to manage	4.4286	.50395
Local/overseas experience examination and brainstorming are common techniques prominently used by the line managers.	3.5357	1.13797
Tools of identifying risks e.g scenario analysis SWOT analysis are frequently used where the risk identification responsibility is that of board of directors/executive management team.	4.2500	.75154
Guidance on risk identification is offered by the organization both directly (internal consulting services) or indirectly (documents, such as "tool kits")	4.5000	.69389

There exist a linkage between the organizational mission and risk management process	4.1786	.77237
The business unit utilize facilitated self-assessment and/or survey techniques to map risks	4.1071	.78595
<b>Overall Mean</b>	<b>4.4179</b>	<b>0.8362</b>
<b>Key Risk Indicators</b>		
The bank assesses the well-being of the business's financial resources to determine its vulnerabilities and develop plans to minimize their impact	4.6071	.62889
The practice may help identify areas of underutilized capacity, perhaps offering the option to capitalize on developing opportunities	4.3571	.55872
The analysis of the bank's financial health is multifaceted and includes such areas as liquidity, solvency, repayment capacity, profitability, and financial efficiency measures	4.6071	.49735
The banks response techniques include risk avoidance, risk reduction, risk sharing, and risk acceptance	4.5000	.57735
<b>Overall Mean</b>	<b>4.5178</b>	<b>0.5656</b>
<b>Incident Management</b>		
The bank address resource constraints, consider alternative methods of risk management, and outline specific steps to follow in management of the risk	4.3214	.61183
The bank quantifies its key risk to the best extent possible	4.5357	.50787
The bank has a process to integrate the effects of the major risk types (strategic, operational, financial, hazard, and legal)	4.4643	.69293
Risk management implementation team work with each reporting department to link the organization's strategy to that area's objectives and residual risks in the bank	4.3571	.78004
The banks business units develop and determine risk mitigation strategies	3.8214	.98333
Both risks and characteristics is identified from the widest possible range of issues, including at least strategy, operations, culture, systems, competence and brand.	4.0000	.72008
<b>Overall Mean</b>	<b>4.25</b>	<b>0.716</b>

The findings of Table 4.2 (a) above show that the ERM practice that is popular among the banks and which is practiced most is the key risk indicators (M=4.5178, SD= 0.5656). In assessing the banks financial health, the process includes assessment of such areas as the banks liquidity level, solvency, repayment capacity, profitability, and financial efficiency measures (M=4.6071, SD=0.49735) and also the assesses of the well-being of the business's financial resources to determine its vulnerabilities and develop plans to minimize their impact (M=4.6071, SD=.62889) was found to be a common practice within the banking sector. The assessment of the bank's key risk indicators is found to be a major practice because of the need to keep the banks financially sound. In this case therefore, it is expected that banks will seek to have higher solvency level such that they will be able to pay customer deposit on demand, and also have a higher financial efficiency measures such as low operating cost per employee and not comparing the absolute measure of operating cost over the years. The risk indicators of a bank will also depend on the level of regulation from the central bank. The lower overall standard deviation for the need to the commercial banks to determine their risk indicators is an indication that the response of the banks was more uniform and therefore reinforcing the need to assess once risk indicators as a major ERM practice among the commercial banks.

This finding will be similar to that of Hahm (2004) who argues that it is necessary to improve banking supervision and banks' risk management to ensure successful financial liberalization on the basis of the banks interest rate and exchange rate exposure. In his study of the Korean banks before the 1997 Asia Pacific economic crisis, he found that the performance of commercial banks was significantly associated with their pre-crisis risk exposure and risk management practices adopted by the banks. The findings whereby all of the respondents banks in Kenya were found to understand the importance of risk management in their organizations contradicts

that found by Hussaini and Al-Ajmi (2012) who found that only 40 percent of respondents banks in Kuwaiti stated that the importance of risk management is widely understood throughout their company, suggesting that more needs to be done to embed a strong culture of risk management in financial institutions.

The risk and control self assessment practice of a firm also was found to be a common practice that is undertaken by most banks (M=4.5, SD=4.4179). The banks management offers guidance on risk and control self assessment both directly (internal consulting services) or indirectly through such documents as tool kits (M=4.5, SD= 0.6939). The process of risk and control self assessment involves the organization establishing a comprehensive business risk inventory of the risks that it expects the managers to manage and also ensuring that line managers and the board of directors are responsible for the risk and control self assessment process (M=04.0357, SD=1.139). The standard deviation in the case of risk and control self assessment (SD=0.8364) was however found to be much higher than the other three practices and this means that there was much higher variation in the responses among the banks

Table 4.2 (b): ERM Practices adopted by Commercial Banks

<b>Compliance of both Internal and External Regulations</b>		
The bank has a corporate-wide common language for communicating risk-type exposures, control activities, and monitoring efforts	4.3929	.68526
There is a regular briefs to the board and executive committee on risk management issues	4.5000	.63828
The bank has communicated a risk management mission statement, value proposition, and benefits statement to senior managers	4.2857	.65868
The bank has incorporated responsibility for risk management into the position description of all managers	4.1786	.72283

The board of directors is actively involved in the risk management process	4.3214	.66964
Perceived benefit of ERM to measure risk-adjusted performance among business units	3.9643	.63725
Perceived benefit of ERM to increase ability to meet strategic goals	4.0357	.57620
Perceived benefit of ERM to reduce earnings volatility	3.8929	.62889
Perceived benefit of ERM to increase profitability	4.0357	.74447
<b>Overall Mean</b>	<b>4.1785</b>	<b>0.6624</b>
<b>Action Tracking</b>		
The management has put in place measures to evaluate the success of risk management strategies in the bank.	4.3571	.62148
Corporate management monitors performance outcomes against intended strategic goal to ensure that corporate activities remain on track and correspond to the set course	4.0714	.60422
The balance score card and the ratios analysis are some of the techniques used for evaluation in the bank.	4.3214	.72283
The bank communicates the evaluation results openly to all the departments concerned	4.0000	.90267
Some of the communication methods employed by the bank are not effective.	2.9643	1.20130
<b>Overall Mean</b>	<b>3.9428</b>	<b>0.8105</b>

Table 4.2 (b) above shows the results on the compliance of both internal and external regulations; as well as action tracking practices from the respondents. The banks ERM need to encompass the practice of communicating all risk facing the organization to the relevant departments and evaluating the risks facing the bank. From the results, the most common practice among the banks is action tracking and incident management. From the findings, incorporation of information and communication of the banks risk susceptibility (M=4.393, SD=0.661) came out as the most common practiced by the commercial banks. The bank should have frequent briefings to the members of staff on the risk exposure and what measures are being

made to contain the same ( $M=4.5$ ,  $SD=0.6383$ ). The standard deviation of the information and communication practice ( $SD=0.661$ ) was lower than in other practices

What the findings show is that an organization's ERM practices should be a holistic one such that the effect of the environment on the performance of the firm is also a risk and need to be evaluated. As KPMG (2001) noted, ERM need to change from being a silo type to portfolio type whereby risk management need to be a means of strategic business management and that links business strategy to day-to-day risks. Further, the findings is consistent to that posited by Doherty (2000) who observed that ERM need to adopt an integrated approach whereby it should be tailored to support optimal investment, based on transaction cost and inclusive coordinated but discriminating. The risk management practices should focus to being strategic one and risk involvement must be universal and thorough in the organization.

There is need for the management of a firm to appreciate that risk management exercise revolves around the importance of the entity to the stakeholders, in an uncertain environment in which the uncertainty can be both perceived as risk or opportunity since it can either enhance or diminish value. The firm's value will be created, preserved or eroded by management decisions ranging from strategy setting to day-to-day operations of the enterprise. In the management decision, it is imperative that the management considers information about internal and external environments, deploys precious resources and recalibrates enterprise activities to changing circumstances ([www.erm.coso.org](http://www.erm.coso.org)).

**Table 4.3: Effects of ERM Practices on the Banks' Financial Performance**

	Mean	Std. Deviation
Return on investments	3.8929	.78595
Market growth	3.5714	.83571
Cost reduction	4.1071	.87514
Sale growth	3.5714	.95950
liquidity	4.3214	.72283
<b>Overall Mean</b>	<b>3.8928</b>	<b>0.8358</b>

The findings in table 4.3 above show that most of the banks consider adoption of ERM as influencing the performance of the firm has measured by market growth, cost reduction and sales growth (M=3.8928, SD = 0.8358). The respondents pointed that an effective ERM affects mostly the cost level of the firm in that it will lead to its reduction (M=4.1071, SD=0.87514) and also its liquidity level. With a standard deviation averaging 0.8 for most of the results, it indicates that there was a moderate variability among the respondents as to the extent of effect of ERM on the performance of the firm.

#### 4.4 Relationship between adoption of ERM and firms performance through Inferential Statistics

##### 4.4.1 Regression Analysis

The effect of ERM practices on the performance of the banks is investigated for all 33 banks surveyed. From Table 4.4 below, the established multiple linear regression equation becomes:

$$Y = 25.045 + 2.457X_1 + 1.925X_2 + 3.272X_3 + 2.929X_4 + 3.481X_5$$



**Table 4.1: ERM Practices and Performance**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	25.045	14.654		1.373	0.174		
X <sub>1</sub>	2.457	2.498	0.007	0.067	0.947	0.902	.893
X <sub>2</sub>	3.272	0.583	0.071	0.690	0.492	0.934	1.071
X <sub>3</sub>	1.925	1.654	0.086	0.789	0.433	0.833	0.972
X <sub>4</sub>	2.929	1.413	0.093	2.861	0.392	0.854	1.171
X <sub>5</sub>	3.481	1.118	0.441	1.194	0.000	0.896	1.116

The coefficient of the independent variables ( $X_1 - X_6$ ) is significant at 5% significance level except the coefficient of  $X_4$  because the test statistics (t-values) are less than the critical  $P$ -value of 1.697 at the 5% significance level. The coefficient of the determination of the organization financial health practice is the highest of the independent variables and this means that a unit increase in the determination of the organization financial health increase the banks performance by 3.272 units. Of all the independent variables, determination of the organization financial health was found to be that practice that affects the most the banks performance.

The variance inflation factor (VIF) quantifies the severity of multicollinearity in an ordinary least squares regression analysis. It provides an index that measures how much the variance of an estimated regression coefficient is increased because of collinearity. The variance inflation factor

of the model variables is small which means that there is a small collinearity between the independent variables and the SD of around 1.0 for the independent variables indicates that the standard error of the variables will decrease by a unit if one of the variables is excluded.

#### 4.6 F- Test for the Full Model

To ascertain the extent of the difference in the adoption of ERM practices and banks performance, ANOVA Test was applied. ANOVA is carried out for each ERM practices (independent variable) versus the banks performance (dependant variable) at  $F_{0.05}$ .

**Table 4.5: ANOVA**

Model	Sum of Squares (SS)	df	Mean Square (MS)	F	p-value
Regression(ESS)	1047.142	33	.0614	5.905	0.004
Residual(RSS)	217.501	6	0.562		
Total(TSS)	1264.643	39	0.6234	5.905	0.004

It is observed from Table 4.11 that the calculated F-value (5.905) is more than the table value (F value =2.61 at 5% significance level). In addition the p-value  $\leq 0.05$  and this means that there is a significant effect of ERM practices on the banks performance.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents a summary of the key findings of the study as well as the conclusions, limitations of the study, and recommendations for further research.

#### **5.2 Summary**

The primary data in this analysis was collected from the targeted firms. The population of study was commercial operating in Kenya. From the targeted population of 43 firms, the researcher successfully got data from 33 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 develop appropriate risk mitigation measures. The ERM practices that were analyzed included: risk and control assessment; assessment of key risk indicators, incident management, and compliance of both internal and external regulations as well as action tracking. It was found that the determination of the bank's key risk indicators was the most important ERM practice by the Kenyan commercial banks surveyed. The bank assesses the well-being of the business's financial resources 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. The study also shows that implementation of ERM require various structural measures to align risk management, strategic planning, information system and organizational culture together in order to realize the better outcome.

The implementation of ERM practices by a firm affects various performance measures of the firm, both financial and non-financial parameters. It is because of the holistic approach of the risk management process that their effect cuts across the operations of the bank. The influence of ERM practices on the performance of the firm was found through, the regression equation, to be positively correlated with the performance of the firm. There was also little collinearity between the independent variables found in the study.

### **5.3 Conclusion**

As organizational environments become increasingly turbulent and complex, the management of risks has become a critical function for managers of banks. Traditionally, firms have managed risk in silos but the same approach is no longer tenable in such a competitive environment. Integrated risk philosophy has replaced the silo system and requires an extensive training on risk management. Implementing ERM solutions require substantial investment in infrastructure of which IT solutions are costlier ones and the process must be enable companies to link risk management with overall organizational objectives. In addition, the organizations risk communication must be improvised in corporations to take advantage of and build confidence in risk management. The communications of organization's risks must be efficient enough to ensure that the risk appetite is built even at the lower management level.

## **5.4 Recommendation**

The study recommends the following:-

### **5.4.1 Recommendation for Policy and Practice**

The results of the study have implications for banks' management, investors and regulators. For depositors they should know that they are facing higher risks when they deal with the commercial banks, and they would therefore expect to receive a higher rate of returns just like for the borrowers, they will be expected to pay a higher profit (interest) rate to the banks because these banks share the asset risk with them. As for the management and regulators, knowledge of the unique types of risk facing each type of bank should lead to the development of special risk management techniques and monitoring procedures that are suitable for those risks, in addition to enhancing transparency.

### **5.4.2 Recommendation for Further Research**

The study restricted itself with commercial banks in Kenya without making a distinction between conventional commercial banks and Islamic banks. It is suggested that a study be carried out to establish the risk management practices difference between conventional banks and the Islamic banks

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## APPENDIX II

### QUESTIONNAIRE

The questionnaire seeks to collect information on ERM practices on the financial performance of commercial banks in Kenya.

#### PART A: GENERAL INFORMATION

1) Name of the organization (optional).....

2) For how long has your organization been operating?

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

2-5 years                      [     ]                      Over 10 years                      [     ]

3) Does your organization have a structured and well documented risk management approach?

Yes            (    )            No            (    )

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

Yes            (    )            No            (    )

#### PART B: ENTERPRISE RISK MANAGEMENT PRACTICES

5) Please tick appropriately the extent to which your organization has been practicing the following supply chain management practices and effect it has had on the firms competitiveness (use the scale below to tick the most appropriate response).

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

	ERM Practice	5	4	3	2	1
	<b>Risk and Control Self Assessment</b>					
1	Line managers are the most prominent people responsible for the risk identification followed by the board of directors/executive management team					
2	The organization has established a comprehensive business risk inventory of the risks that it expects the managers to manage					
3	Local/overseas experience examination and brainstorming are common techniques prominently used by the line managers.					

4	Tools of identifying risks like scenario analysis and strengths, weaknesses, opportunities and threats (SWOT) analysis are frequently used where the risk identification responsibility is that of board of directors/executive management team.						
5	Guidance on risk identification is offered by the organization both directly (internal consulting services) or indirectly (documents, such as "tool kits")						
6	There exist a linkage between the organizational mission and risk management process						
7	The business unit utilize facilitated self-assessment and/or survey techniques to map risks						
	<b>Identification of Risk Indicators</b>						
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 help identify areas of underutilized capacity, perhaps offering the option to capitalize on developing opportunities						
3	The analysis of the banks financial health is multifaceted and includes such areas as liquidity, solvency, repayment capacity, profitability, and financial efficiency measures						
4	The banks response techniques include risk avoidance, risk reduction, risk sharing, and risk acceptance						
	<b>Incident Management</b>						
1	The bank address resource constraints, consider alternative methods of risk management, and outline specific steps to follow in management of the risk						
2	The bank quantifies its key risk to the best extent possible						
3	The bank has a process to integrate the effects of the major risk types (strategic, operational, financial, hazard, and legal)						
4	There exist a risk management implementation team that work with each reporting department to link the organization's strategy to that area's objectives and residual risks in the bank						
5	The banks business units develop and determine risk mitigation strategies						
6	Both risks and characteristics is identified from the widest possible range of issues, including at least strategy, operations, culture, systems, competence and brand.						
	<b>Compliance of both internal and external regulations</b>						

1	The bank has a corporate-wide common language for communicating risk-type exposures, control activities, and monitoring efforts					
2	There is a regular briefs to the board and executive committee on risk management issues					
3	The bank has communicated a risk management mission statement, value proposition, and benefits statement to senior managers					
4	The bank has incorporated responsibility for risk management into the position description of all managers					
5	The board of directors is actively involved in the risk management process					
6	Perceived benefit of ERM to measure risk-adjusted performance among business units					
7	Perceived benefit of ERM to increase ability to meet strategic goals					
8	Perceived benefit of ERM to reduce earnings volatility					
9	Perceived benefit of ERM to increase profitability					
	<b>Action Tracking</b>					
1	The management has put in place measures to evaluate the success of risk management strategies in the bank.					
2	Corporate management monitors performance outcomes against intended strategic goal to ensure that corporate activities remain on track and correspond to the set course					
3	The balance score card and the ratios analysis are some of the techniques used for evaluation in the bank.					
4	The bank communicates the evaluation results openly to all the departments concerned					
5	Some of the communication methods employed by the bank are not effective.					

6) The statements below describe the effects of ERM practices on organizational financial performance. Please indicate the extent to which your organization financial performance has been influenced by the ERM practices adopted:

**Key:**

- 5) **Very great extent**    4) **Great extent**            3) **Moderate extent**  
 2) **Low extent**            1) **Very low extent**

		5	4	3	2	1
1	Return on Investment					
2	Market share growth					
3	Total cost reduction					
4	Sale growth					
5	Financial liquidity					

**THANK YOU FOR YOUR TIME**

## APPENDIX II: LIST OF COMMERCIAL BANKS

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank
6. CFC Stanbic Bank
7. Chase Bank (Kenya)
8. Citibank
9. Commercial Bank of Africa
10. Consolidated Bank of Kenya
11. Cooperative Bank of Kenya
12. Credit Bank
13. Development Bank of Kenya
14. Diamond Trust Bank
15. Dubai Bank Kenya
16. Ecobank
17. Equatorial Commercial Bank
18. Equity Bank
19. Family Bank
20. Fidelity Commercial Bank Limited
21. Fina Bank
22. First Community Bank
23. Giro Commercial Bank
24. Guardian Bank
25. Gulf African Bank
26. Habib Bank

27. Habib Bank AG Zurich
28. I&M Bank
29. Imperial Bank Kenya
30. Jamii Bora Bank
31. Kenya Commercial Bank
32. K-Rep Bank
33. Middle East Bank Kenya
34. National Bank of Kenya
35. NIC Bank
36. Oriental Commercial Bank
37. Paramount Universal Bank
38. Prime Bank (Kenya)
39. Standard Chartered Kenya
40. Trans National Bank Kenya
41. United Bank for Africa <sup>[2]</sup>
42. Victoria Commercial Bank

**Source: Central Bank of Kenya (2013)**