

**THE INFLUENCE OF ENTERPRISE RISK MANAGEMENT ON  
FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA**

**BY**

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## DECLARATION

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

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This proposal has been submitted for examination with my approval as the university supervisor.

Signature.....Date.....

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Supervisor

## **DEDICATION**

In the memory of my mother, Florence Bukachi.

## **ACKNOWLEDGEMENT**

I would like to recognize the invaluable guidance and review from my Supervisor Mr. James Ng'ang'a throughout the project. Without his guidance, I would not have completed this project.

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## **ABBREVIATIONS AND ACRONYMS**

|       |   |
|-------|---|
| CBK   | Central Bank of Kenya   |
| COSO  | Committee of Sponsoring Organization of the Treadway Commission |
| ERM   | Enterprise risk management (ERM)                                |
| IRMPF | Institutional Risk Management and Policy Framework              |
| RCSA  | Risk and Control Self-Assessment                                |
| USA   | United States of America  |

## **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.

# 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 banking including self-banking and captive banking have been in existence for a long time (Doherty, 2015). 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, 2016).

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, 2013). 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 (2016) 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 (2015) 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 (2015) 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 (2014) 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 commercial 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, 2017). 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 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 (Everson, 2013). 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.

The enterprise risk management process is theorized in several literatures, with the same underlying concept. Risk management is depicted as cyclical and iterative in nature; it is a continuous process as opposed to a one-off assignment. The most common approach is depicted below, beginning at “Context and Governance” and ending at “Review and Improvement”, at which point the cycle restarts as a continuous improvement process.

### **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 & Lara, 2011). 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, 2015).

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 (2017) pointed out that performance can be evaluated by efficiency and effectiveness of aim attainment. Furthermore, Venkatraman et al (2010) 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 (2009) 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 (2012) 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 (2009) observed that the performance differences between commercial 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, 2014).

### **1.1.3 Enterprise Risk Management and Financial Performance**

Palermo (2011) discussed the relationship between ERM and performance and categorized the relationship into organizational elements: barriers, facilitators and levers. The barrier element is inclusive of the difference between a performance based approach and a risk based approach, whereby, the former would interpret exceeding target expectations as positive and the latter would view it as problematic since the performance would be unsustainable. The barrier discussion also entailed the time horizon differences between the ERM process and the performance management process, where one time frame exceeded the other, or, the two time horizons were set to be achievable at different instances. In many instances, the ERM process covers a longer term than the performance management process.

Facilitators, on the other hand, are elements that help bring about cohesion between ERM and performance. One of the elements discussed is “Strategy”, such that, if the risk metrics and performance measures are set in tandem with the organization objectives, the two will work to complement each other (Moeller, 2017). Another

facilitator element discussed was that of having an ERM champion within each business unit who generally drives the process within that area. Levers were used to describe performance management techniques that can deliver risk information. Levers identified in the study included Key Performance Indicators and Variance Analysis, each of which can be used in a trend analysis to work out key risk areas in the business. By considering the performance level based on key performance indicators, it can be gauged what causes variances in performance levels which effectively brings out the inherent risks in the processes (Pagach & Warr, 2011).

#### **1.1.4 Commercial Banks in Kenya**

According to the Central Bank of Kenya Official Homepage (2012), there are a total of 42 licensed commercial banks in the country and 100 banking agents. Out of the 42 institutions, 20 are locally owned and 22 are foreign owned. However out of all the commercial banks only 12 of them are listed in the Nairobi Stock Exchange having met the conditions of listing and applied for the same (CBK, 2018).

The Central Bank of Kenya annual supervision report (2017) categorizes the financial institutions into three tiers; Large, Medium and Small in terms of net assets. Out of the 42 institutions, 13 were in the large 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 12 institutions with net assets of less than Ksh. 5 billion. In the coming period, according to the CBK (2017) 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 commercial banks and mortgage firms to build a minimum core capital of Ksh 1 billion by December 2012 (GOK, 2018). This requirement, it is hoped, will transform small commercial banks into more stable organization. The implementation of this requirement poses a challenge to some of the existing commercial 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 commercial banks adopting agency banking and new electronic distribution channels (Kenya Bankers Association 2018).

## **1.2 Research Problem**

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 organization 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 & Hoyt, 2013). Thus in many organization 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, 2013).

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). This is organization valuation depends upon its ability to allocate efficiently, execute efficiency and effectiveness; 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 (Suranarayana, 2013).

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 commercial 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 commercial 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 (CBK, 2018).

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” 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 commercial 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. The study seeks to address the question; what is the influence of ERM practices on financial performance of commercial banks in Kenya?

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

The general objective of the study is to establish the influence of enterprise risk management on financial performance of commercial banks in Kenya.

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

- 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, IRA, 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 relevant literature about fraud management strategies as documented by resourceful reports by previous scholars and other researchers. It begins by discussing the theoretical foundation of the study, followed by empirical reviews. This chapter expounds on issues associated with ‘strategic’ risk management in the banking industry. It develops theoretical framework essential to justify the requirement for this study and explores various literatures that have been used to explain enterprise risk management concepts. These relate to the generic risk management process adopted by many companies worldwide, strategic risk management practices, as well as the link between strategic practices, risk management and strategic performance.

#### **2.2. Theoretical Foundation**

Theories are understandings that develop from extensive observation, experimentation, and creative reflection. “A theory can be described as a set of concepts and the relationships among them” (Ayres, 2008). Past theories can be a basis upon which further theories can be developed and conceptualized. This study intends to use the theories defined herein to further explain the underlying concepts for this research and link them to form a coherent process flow.

### **2.2.1. Decision Theory**

According to Ben-Haim (2001), decision theory is based on the utility function of payoffs which is a derivative of economics. The main suggestion of the theory is that decisions ought to be made by calculating the probability and the utility of the ranges of options to come up with strategies for effective decisions (Ben-Haim, 2014). Thereby, decision theory is that part of probability theory dealing with revealing the consequences of uncertain decisions which are affected by environmental factors.

The classical decision-making method is easy to understand and is applicable to the belief of reasonableness. The method is relatively well-known and managers are at ease with it. Conversely, Nichols (2005) and Li (2008) give a criticism of the classical decision making process, stating that is chronological and centered on the rationality/reasonableness assumptions. The model, as is, makes the assumption of certainty conditions which encompass the decision-making framework and passes through three activities including: intelligence, design and choice activities. In reality, these assumptions may not hold true.

The resemblance between risk management and decision theory, as discussed by Versluis (2015) is due to the presence of uncertainties. Risk management assesses uncertainties and prioritizes them, while decision theory acts as an uncertainty assessment tool. Risk management is thus a decision-making tool to manage uncertainty, whilst decision theory acts to recommend the right action to deal with uncertainty, as long as there is adequate data on the risk appetite of the decision maker.

Cost Benefit Analysis is one of the methodologies used for rational decision making, given a set of choices. “It is a technique that is used to determine options that provide the best approach for the adoption and practice in terms of benefits in labor, time and cost savings” (Rodreck, Ngulube, & Dube, 2013). This is applicable in a strategic risk assessment aspect, taking into consideration that setting strategic objectives requires a Cost Benefit Analysis to be done. Further, Cost Benefit Analysis, as applied to risk management, measures the contribution that a risk management control or action makes to the risk management process. It does this by considering the cost used to implement the control or action to obtain the net benefit by determining whether and by how much the technique benefits exceed the cost to implement it. Cost Benefit Analysis acts as an input to the decision-making process by calculating the net present value of a policy or project. Including risk and uncertainty into the process enhances the dependability of the expected net present value (Institut for Miljovurdering: Environmental Assessment Institute, 2006).

### **2.2.2. Prospect Theory**

Prospect Theory is a theory of decision making under conditions of risk. Decisions are based on judgements, which are based on assessments about the external state of the world (McDermott, 2013). Decision-making to set the correct objectives, which are bound by the risk appetite of the organization, would make use of the prospect theory to optimize the process. According to the initial theory proposition by Kahneman and Tversky (2015) Prospect Theory predicts the tendency to be risk averse in a sphere of gains and comparatively risk seeking in a sphere of losses. In the business scenario, if losses have been made, the tendency would be to take more risk by setting more aggressive objectives and higher targets, and vice versa. The theory

can thereby be used to aid decision-making in setting the strategic risk appetite of a company. By balancing out risk and reward, this theory can be used to set out the strategy relative to the appropriate risk management techniques in place. It can act as a prerequisite to strategy creation as a strategic risk management tool.

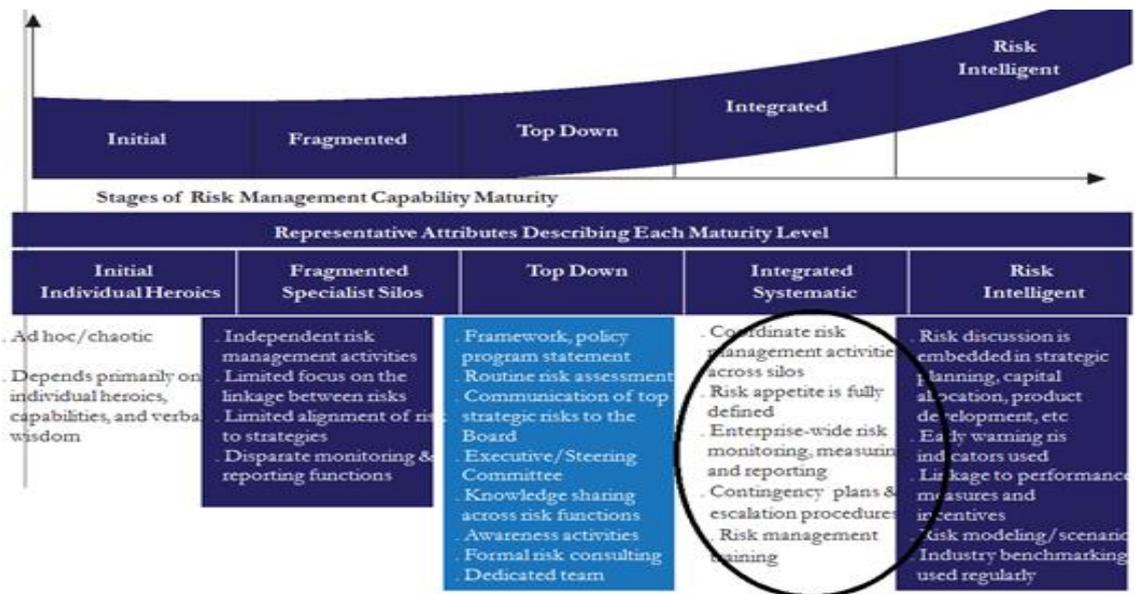
### **2.2.3 Risk Intelligence Maturity Model**

The implementation of ERM framework within the financial industry is largely driven by legislation, anchored on various legal; Acts, statutes and guidelines, however, various banks are at different levels of implementing the framework.

Risk intelligence model is a scale used to assess the level of implementation of Enterprise Risk Management framework within an organization. It involves a series of five phases setting out the critical success factors to be considered, when mapping out the level of implementation of the ERM.

The five steps include initial stage, fragmented stage, top down stage, integrated stage and the risk intelligent stage. It's a reference scale for assessing an organization's risk management capabilities, along with the board's risk governance processes.

Figure 2.1: Risk Intelligence Maturity Model



### 2.3. Determinants of Financial Performance

There are several indicators of financial performance in the banking sector. However the most common determinants of financial performance are three: Return on Assets, Return on equity and profitability. Profitability is explained by financial income at a point in time. This is obtained from the income statements. Some commercial banks in Kenya are public, which means they trade at Nairobi Securities exchange. This makes it easy obtain their financial statements to ascertain their financial performance. However, those that are not public still publish their financial statements for the general public to ascertain their financial health (Doherty, 2015).

Return on Assets determine value generated from organizations resources and assets. This shows the value derived from both material and financial assets that are engaged in the firm. Banks have assets that generate income hence value for investors Return on investment includes retained earnings and dividends derives from profits. Banks have annual dividends payout to shareholders. When losses are made, there is no return on investments.

The primary goal of shareholder is to derive value for their investment. This is through return on investments (Venkatraman & Ramanujam, 2010). Palermo (2011) discussed the relationship between risk management and performance and categorized the relationship into organizational elements: barriers, facilitators and levers. The barrier element is inclusive of the difference between a performance based approach and a risk based approach, whereby, the former would interpret exceeding target expectations as positive and the latter would view it as problematic since the performance would be unsustainable. The barrier discussion also entailed the time horizon differences between the risk management process and the performance management process, where one time frame exceeded the other, or, the two time horizons were set to be achievable at different instances. In many instances, the risk management process covers a longer term than the performance management process.

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## **2.4. Empirical Literature**

Knight, Durham and Locke (2011), observed the impacts of monetary incentives, goal difficulty, and efficacy on tactical implementation, strategic risk and teams' performance by carrying out a computer simulation. Their results included, among others, that performance of the team was positively impacted by strategic risk, goal difficulty, tactical implementation and team efficacy.

Moreover, based on the strategic choice model (Child, 2017), organization strategies affect performance via their impact on strategic risk. Bromiley (2015) argued that the causes of organizational risk undertaking and its effect on performance are major issues in strategic management. The results of the model showed that low performance linked to lack of slack drive risk taking. Agency Theory (Eisenhardt, 2015; Jensen & Meckling, 2018) and Prospect Theory (Kahneman & Tversky, 2016) are used to expound on risk appetite conduct by management. The risk-return relationship and the appetite for risk determines how much risk firms and managers are willing to take. The higher the risk taken, the higher the expected returns will be. Risk-taking will need to be justified by higher return.

## **2.5 Summary of Gaps Identified**

This chapter highlights the literary sources that were reviewed. It begins by a brief discussion of the theories relevant to this study. The theories chosen are decision theory, and prospect theory. Decision Theory and Prospect Theory work to enforce decision making in the face of uncertainty, essentially in the risk space. Since the strategic performance process is one of continuous improvement it can easily be linked to the enterprise risk management process cycle, where the final stage is review

and improvement. This literature is used to enforce the link between the two processes and the requirement to gauge the level of interrelation required between them. Further, the way in which different strategies taken by firms incorporate a risk taking and a risk mitigation strategy shows how risk is implicitly embedded in strategic decision making and should be considered as a major factor affecting financial performance.

There is a gap on research studies considering the impact of enterprise risk management on the financial performance of commercial banks in Kenyan. The conceptual gaps that exist include risk management being studied with respect to dependent variables other than financial performance. Palermo (2011) had a similar conceptual framework to this research study, however, a contextual gap existed since the study was based on a large UK energy company. Studies on the Kenyan Banking Industry are limited to financial performance and other diverse variables. Risk Management barriers exist, and although, from the research studies used for the purpose of review, there were none that used Enterprise Risk Management as a negative indicator of performance or other dependent variable, it is generally perceived as such and this perception is what the study seeks to address.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

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

#### **3.2 Research Design**

This study will employ 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 will be used to determine the interrelationship between the variables under consideration among the different commercial banks in the study and this will permit 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 will be composed of all commercial banks operating in Kenya. Currently, there are 42 commercial banks operating in Kenya that will constitute the requisite population (Appendix II). The reason as to why the researcher chose banks 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 banks 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 is limited, then the study is a census survey.

### **3.4 Data Collection**

Primary data will be collected by means of a structured questionnaire. 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 questioner provides disaggregated data that can be used to examine the practices of firms on an individual basis rather than on an aggregated basis (Graham & Harvey, 2011). The questionnaires will be hand delivered to the respondents' offices with a request to fill in the questionnaire in one week time where upon it will be collected. The target respondents will be the Chief Risk Officers or individuals concerned with arrangement mitigation of risks in the commercial banks. The survey instrument will involve both closed and open-ended questions. The open-ended questionnaire seeks to encourage respondents to share as much information as possible in an unconstrained manner while the closed-ended questionnaire will involve 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 will be analyzed using descriptive statistics (measures of central tendency and measures of variations) and regression analysis. Multiple regression analysis will be 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

X1 = Risk and Control Self-Assessment (Measured using RCSA documents)

X2 = Key Risk Indicators (Measured using factor analysis report)

X3 = Incident Management (Measured using Incident Report)

X4 = Compliance of both Internal and External Regulations (Compliance documents)

X5 = Action Tracking (Measured using action report contained in the incident report)

### **3.7 Test of Significance**

Before data collection, a pilot test will be conducted to test if the instrument is significant. The pilot test will entail a phase in which the research instruments will be circulated to some staff of some of the commercial banks in order to test the significance.

### **3.8 Ethical Considerations**

In guaranteeing consistency with the ethical and moral contemplations, and to guarantee the support by all respondents engaged in this research study, the following moral concerns will be considered all through the study: the researcher shall ensure that the names and personal details of the respondents are not unveiled; the respondents are additionally assured of privacy and anonymity; and the survey does not endeavor to see the ERM question as a static system of progress, but as a dynamic structure for strategic management that would be helpful in building up the field of ERM in different organizations.

# CHAPTER FOUR

## DATA ANALYSIS AND PRESENTATION OF RESEARCH FINDINGS

### 4.1 Introduction

This chapter presents the data analysis and research findings as computed in SPSS. Primary data was collected through the use of a questionnaire. 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 Response rate

A total of 42 questionnaires were administered to the commercial banks in Kenya. Coincidentally all commercial banks in Kenya have their headquarters in Nairobi. This made it easy for the researchers to administer the questionnaires within the shortest time possible. However only 40 questionnaires were duly filled and returned giving a response rate of 95%. The table below shows the response rate.

**Table 4.1: Response Rate**

|                      | Questionnaire | Response Rate |
|----------------------|---------------|---------------|
| Issued Questionnaire | 42            | 100%          |
| Filled questionnaire | 40            | 95%           |
| Uncollected          | 2             | 5%            |
| Total                | 42            | 100%          |

Source: Researcher 2019

### 4.3 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 4.2: Age of Banks Operations in Kenya**

|               | Frequency | Percent | Cumulative Percent |
|---------------|-----------|---------|--------------------|
| 2-5 Years     | 1         | 2.5%    | 2.5%               |
| 6-10 Years    | 3         | 7.5%    | 10%                |
| Over 10 Years | 36        | 90%     | 100%               |
| Total         | 40        | 100%    |                    |

The results in Table 4.2 on the age of the banks shows that majority of the banks had operated for more than 10 years (90%) while only 2.5% of the respondents had operated for less than 5 years. This results mean 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.

#### 4.4 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.

#### 4.5 ERM Practices Adopted by Commercial Banks

The study sought to establish the ERM practices adopted by commercial banks in Kenya. The practices identified are: risk control and self-assessments, key risk indicators, incident management, compliance with both internal and external regulations and action tracking. The results are presented in tables 4.3, 4.4, 4.5, 4.6 and 4.7

**Table 4.3: Risk and Control Self-Assessment**

| <b>Descriptive Statistics</b>  |          |                |                |             |                       |
|--|----------|----------------|----------------|-------------|-----------------------|
| <b>RISK AND CONTROL SELF-ASSESSMENT</b>  | <b>N</b> | <b>Minimum</b> | <b>Maximum</b> | <b>Mean</b> | <b>Std. Deviation</b> |
| Line managers and the board of directors are responsible for the risk identification   | 40       | 2              | 5              | 4.17        | .813                  |
| The organization has established a comprehensive business risk inventory of the risks that it expects the managers to manage | 40       | 2              | 5              | 3.95        | 1.037                 |
| Local/overseas experience examination and brainstorming are common techniques prominently used by the line managers.         | 40       | 2              | 5              | 4.32        | .764                  |

|   |    |   |   |               |              |
|---|----|---|---|---------------|--------------|
| 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. | 40 | 3 | 5 | 4.27          | .784         |
| Guidance on risk identification is offered by the organization both directly (internal consulting services) or indirectly (documents, such as "tool kits")                                | 40 | 1 | 5 | 4.15          | .893         |
| There exist a linkage between the organizational mission and risk management process  | 40 | 3 | 5 | 4.23          | .768         |
| The business unit utilize facilitated self-assessment and/or survey techniques to map risks   | 40 | 2 | 5 | 4.33          | .730         |
| Valid N (listwise)  | 40 |   |   |               |              |
| <b>Overall Mean</b>   |    |   |   | <b>4.2029</b> | <b>0.827</b> |

Source: Research Data (2019)

**Table 4.4: Key Risk Indicators**

| <b>Descriptive Statistics</b>   |          |                |                |             |                       |
|---|----------|----------------|----------------|-------------|-----------------------|
| <b>KEY RISK INDICATORS</b>  | <b>N</b> | <b>Minimum</b> | <b>Maximum</b> | <b>Mean</b> | <b>Std. Deviation</b> |
| The bank assesses the well-being of the business's financial resources to determine its vulnerabilities and develop plans to minimize their impact                              | 40       | 3              | 5              | 4.32        | .694                  |
| The practice may help identify areas of underutilized capacity, perhaps offering the option to capitalize on developing opportunities   | 40       | 3              | 5              | 4.30        | .687                  |
| The analysis of the bank's financial health is multifaceted and includes such areas as liquidity, solvency, repayment capacity profitability, and financial efficiency measures | 40       | 2              | 5              | 4.22        | .862                  |

|   |    |   |   |               |               |
|---|----|---|---|---------------|---------------|
| The banks response techniques include risk avoidance, risk reduction, risk sharing, and risk acceptance | 40 | 2 | 5 | 4.13          | .822          |
| Valid N (listwise)  | 40 |   |   |               |               |
| <b>Overall Mean</b>   |    |   |   | <b>4.2425</b> | <b>0.7673</b> |

Source: Research Data (2019)

**Table 4.5: Incident Management**

| <b>Descriptive Statistics</b>   |          |                |                |              |                       |
|---|----------|----------------|----------------|--------------|-----------------------|
| <b>INCIDENT MANAGEMENT</b>  | <b>N</b> | <b>Minimum</b> | <b>Maximum</b> | <b>Mean</b>  | <b>Std. Deviation</b> |
| The bank address resource constraints, consider alternative methods of risk management, and outline specific steps to follow in management of the risk                  | 40       | 1              | 5              | 3.92         | 1.141                 |
| The bank quantifies its key risk to the best extent possible  | 40       | 2              | 5              | 4.23         | .800                  |
| The bank has a process to integrate the effects of the major risk types (strategic, operational, financial, hazard, and legal)  | 40       | 2              | 5              | 4.27         | .716                  |
| 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    | 40       | 2              | 5              | 4.32         | .797                  |
| The banks business units develop and determine risk mitigation strategies   | 40       | 3              | 5              | 4.27         | .716                  |
| Both risks and characteristics is identified from the widest possible range of issues, including at least strategy, operations, culture, systems, competence and brand. | 40       | 2              | 5              | 4.10         | .928                  |
| Valid N (listwise)  | 40       |                |                |              |                       |
| <b>Overall Mean</b>   |          |                |                | <b>4.185</b> | <b>0.8497</b>         |

Source: Research Data (2019)

The findings of Table 4.3, 4.4, 4.5, 4.6 and 4.7 show that the ERM practice that is popular among the banks and which is practiced most is the compliance with both

internal and external regulations (M= 4.3467, SD=0.7337) followed by key risk indicators (M=4.2425, SD= 0.7673). Under the key risk indicators, assessing well-being of the business's financial resources to determine its vulnerabilities and develop plans to minimize their impact (M=4.32, SD=.694) and identifying areas of underutilized capacity, by offering the option to capitalize on developing opportunities (M=4.30, SD=0.787) were found to be a common practices 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 ( $M=4.2029$ ,  $SD=0.827$ ). Under risk and control self-assessment, experience examination and brainstorming are common techniques prominently used by the line managers ( $M=D=4.31$ ,  $SD=0.780$ ). The business unit utilize facilitated self-assessment and/or survey techniques to map risks ( $M=D=4.31$ ,  $SD=0.749$ )

Still under risk and control self-assessments, The banking (business) unit utilize facilitated self-assessment and/or survey techniques to map risks ( $M=4.33$ ,  $SD=0.730$ ). Local/overseas experience examination and brainstorming are common techniques prominently used by the line managers ( $M=4.32$ ,  $SD=0.764$ ). Tools of identifying risks are frequently used where the risk identification responsibility is that of board of executive management team ( $M=4.27$ ,  $SD=0.784$ ). It was also rated that there exist a linkage between the organizational mission and risk management process ( $M=4.23$ ,  $SD=0.768$ )

The other indicator is that line managers and the board of directors are responsible for the risk identification ( $M=4.17$ ,  $SD=0.813$ ). 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=3.95, SD=1.037). The standard deviation in the case action tracking (SD=0.9626) 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 4.6: Compliance with Both Internal and External Regulations**

| <b>Descriptive Statistics</b>   |          |                |                |             |                       |
|---|----------|----------------|----------------|-------------|-----------------------|
| <b>COMPLIANCE WITH BOTH INTERNAL AND EXTERNAL REGULATIONS</b>   | <b>N</b> | <b>Minimum</b> | <b>Maximum</b> | <b>Mean</b> | <b>Std. Deviation</b> |
| The bank has a corporate-wide common language for communicating risk-type exposures, control activities, and monitoring efforts | 40       | 1              | 5              | 4.12        | .883                  |
| There is a regular briefs to the board and executive committee on risk management issues  | 40       | 3              | 5              | 4.43        | .675                  |
| The bank has communicated a risk management mission statement, value proposition, and benefits statement to senior managers     | 40       | 3              | 5              | 4.40        | .632                  |
| The bank has incorporated responsibility for risk management into the position description of all managers                      | 40       | 2              | 5              | 4.13        | .883                  |
| The board of directors is actively involved in the risk management process  | 40       | 2              | 5              | 4.27        | .716                  |
| Perceived benefit of ERM to measure risk-adjusted performance among business units  | 40       | 3              | 5              | 4.45        | .677                  |
| Perceived benefit of ERM to increase ability to meet strategic goals  | 40       | 2              | 5              | 4.32        | .859                  |
| Perceived benefit of ERM to reduce earnings volatility  | 40       | 3              | 5              | 4.45        | .639                  |

|  |    |   |   |               |               |
|--|----|---|---|---------------|---------------|
| Perceived benefit of ERM to increase profitability | 40 | 3 | 5 | 4.55          | .639          |
| Valid N (listwise)                                 | 40 |   |   |               |               |
| <b>Overall Mean</b>                                |    |   |   | <b>4.3467</b> | <b>0.7337</b> |

Source: Research Data (2019)

**Table 4.7: Action Tracking**

| <b>Descriptive Statistics</b>   |    |         |         |              |                |
|---|----|---------|---------|--------------|----------------|
| <b>ACTION TRACKING</b>  | N  | Minimum | Maximum | Mean         | Std. Deviation |
| The management has put in place measures to evaluate the success of risk management strategies in the bank.   | 40 | 2       | 5       | 4.07         | .997           |
| Corporate management monitors performance outcomes against intended strategic goal to ensure that corporate activities remain on track and correspond to the set course | 40 | 1       | 5       | 4.07         | .917           |
| The balance score card and the ratios analysis are some of the techniques used for evaluation in the bank   | 40 | 2       | 5       | 4.15         | .802           |
| The bank communicates the evaluation results openly to all the departments concerned  | 40 | 2       | 5       | 4.30         | .758           |
| Some of the communication methods employed by the bank are not effective.   | 40 | 1       | 5       | 3.45         | 1.339          |
| Valid N (listwise)  | 40 |         |         |              |                |
| <b>Overall Mean</b>   |    |         |         | <b>4.008</b> | <b>0.9626</b>  |

Source: Research Data (2019)

Tables 4.6 and 4.7 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 compliance with both internal and external regulations followed by key risk indicators. From the findings in table 4.6, Perceived benefit of ERM to increase profitability (M=4.55, SD=0.639) came out as the most common practiced by the commercial banks under the table on compliance with both internal and external regulation. This was followed by; perceived benefit of ERM to reduce earnings volatility (M=4.45, SD=0.639), then the perceived benefit of ERM to measure risk-adjusted performance among business units (M=4.45, SD=0.677) and there being regular briefings to the board and executive committee on risk management issues (M=4.43, SD=0.675) and finally regular communication of risk management practices, mission statement, value proposition, and benefits statement to senior managers.

Under action tracking, it was highly rated that the bank communicates the evaluation results openly to all the departments concerned (M=4.30, SD=0.758) followed by the fact that the balance score card and the ratios analysis are some of the techniques used for evaluation in the bank (M=4.15, SD=0.802). There was also an indication that corporate management monitors performance outcomes against intended strategic goal to ensure that corporate activities remain on track and correspond to the set course (M=4.07, SD=0.917) and that the management has put in place measures to evaluate the success of risk management strategies in the bank. (M=4.07, SD=0.997). Finally the analysis also revealed that some of the communication methods employed by the bank are not effective (M=3.45, SD=1.339)

The analysis further established that the standard deviation of the practice of compliance with both internal and external regulations (SD=0.7337) was lower than in other practices. This indicates small deviations from the mean response.

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

| <b>Descriptive Statistics</b> |          |                |                |             |                       |
|-------------------------------|----------|----------------|----------------|-------------|-----------------------|
| <b>FINANCIAL PERFORMANCE</b>  | <b>N</b> | <b>Minimum</b> | <b>Maximum</b> | <b>Mean</b> | <b>Std. Deviation</b> |
| Return on investments         | 40       | 2              | 5              | 3.85        | 1.051                 |
| Market growth                 | 40       | 1              | 5              | 3.30        | 1.244                 |
| Cost reduction                | 40       | 2              | 5              | 4.45        | .783                  |

|                     |    |   |   |              |              |
|---------------------|----|---|---|--------------|--------------|
| Sale growth         | 40 | 1 | 5 | 3.68         | 1.185        |
| Liquidity           | 40 | 1 | 5 | 4.25         | .927         |
| Valid N (listwise)  | 40 |   |   |              |              |
| <b>Overall Mean</b> |    |   |   | <b>3.906</b> | <b>1.039</b> |

Source: Research Data (2019)

The findings in table 4.8 above show that most of the banks consider adoption of ERM as influencing the performance of the firm has measured by cost reduction (M=4.45, SD = 0.783) and liquidity (M=4.25, SD=0.927). The respondents pointed that an effective ERM affects mostly the cost level of the firm in that it will lead to its reduction and also increase its liquidity level. With a mean response of 3.906 and a standard deviation averaging 1.039 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.

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

### **4.5.1 Regression Analysis**

The effect of ERM practices on the performance of the banks is investigated for all 40 banks surveyed. From Table 4.9 below, the established multiple linear regression equation becomes:

$$Y = 3.722 + 0.040X_1 + 0.065X_2 + 0.019X_3 + 0.188X_4 + 0.113X_5$$

**Table 4.9: ERM Practices and Financial Performance**

|  |  | Coefficients <sup>a</sup>   |            |                           |       |      |                         |       |
|--|--|-----------------------------|------------|---------------------------|-------|------|-------------------------|-------|
|  |  | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig  | Collinearity Statistics |       |
|  |  | B                           | Std. Error | Beta                      |       |      | Tolerance               | VIF   |
|  | (Constant)   | 3.722                       | 2.150      |                           | 1.731 | .009 |                         |       |
|  | Risk and Control Self-Assessment                     | -.071                       | .349       | .040                      | -.204 | .008 | .745                    | 1.342 |
|  | Key Risk Indicators                                  | -.098                       | .264       | .065                      | -.372 | .007 | .923                    | 1.083 |
|  | Incident Management                                  | -.025                       | .231       | .019                      | -.108 | .009 | .945                    | 1.058 |
|  | Compliance of Both Internal and External Regulations | .368                        | .360       | .188                      | 1.023 | .031 | .835                    | 1.198 |
|  | Action Tracking                                      | -.149                       | .221       | .131                      | -.673 | .050 | .748                    | 1.338 |

a. Dependent Variable: Financial Performance

Source: Research Data (2019)

The coefficient of the independent variables ( $X_1 - X_5$ ) is significant at 5% significance level because the test statistics (t-values) are less than the critical  $P$ -value of 0.05 at the 5% significance level. The coefficient of compliance with both internal and external regulations practice is the highest of the independent variables and this means that a unit increase in the compliance with both internal and external regulations increase the banks performance by 0.188 units. This was followed by action tracking with a coefficient value of 0.131, which implies that a unit increase in action tracking improves financial performance by 0.131 units. The ERM practice with the least coefficient was incident management with a coefficient value of 0.019. This implies that a unit increase in incident management improves financial performance by 0.019

units. Of all the independent variables, compliance with both internal and external regulations 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 ( $<1$ ) which means that there is no collinearity between the independent variables indicating that the standard error of the variables will decrease by a unit if one of the variables is excluded. All the VIF values lie between 1 and 10 indicating lack of multicollinearity. Lack of multicollinearity is desirable.

#### **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 (dependent variable) at F0.05.

**Table 4.10: ANOVA**

| ANOVA <sup>a</sup>   |            |                |    |             |      |                   |
|--|------------|----------------|----|-------------|------|-------------------|
| Model  |            | Sum of Squares | df | Mean Square | F    | Sig.              |
|  | Regression | .445           | 5  | .089        | .273 | .009 <sup>b</sup> |
|  | Residual   | 11.074         | 34 | .326        |      |                   |
|  | Total      | 11.519         | 39 |             |      |                   |
| a. Dependent Variable: Financial Performance   |            |                |    |             |      |                   |
| b. Predictors: (Constant), Action Tracking, Key Risk Indicators, Incident Management, Compliance with both Internal and External Regulations, Risk and Control Self-Assessment |            |                |    |             |      |                   |

Source: Research Data (2019)

It is observed from Table 4.10 that the calculated F-value (0.273) is less than the table value (F value =2.81 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 RECOMMENDATION**

#### **5.1 Introduction**

This chapter presents the summary, conclusion and recommendations of the study based on the finding established in chapter four above. The chapter begins by a summary of the key findings of the study followed by 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 all commercial operating in Kenya. From the targeted population of 42 firms, the researcher successfully got data from 40 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 compliance with both internal and external regulations 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 no 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 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.

### **5.4.1 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. If possible ERM study should be carried out on SACCOs as well.

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## APPENDICES

### APPENDIX 1: QUESTIONNAIRE

This Questionnaire is confidential and aims to serve the purpose of obtaining data for the following research project: “The effect of Enterprise Risk Management on the Financial Performance of Commercial Banks in Kenya.”

#### Section A: Background Information

1) Position.....

2) Duration of work at the bank.....

3) Department/Business Unit .....

3) How often do you interact with the Risk Department?

Once in 6 months or a year [ ]

Once a quarter [ ]

Once a month [ ]

At least once a week [ ]

Never [ ]

#### SECTION B: RISK DEPARTMENT INFORMATION

4) What is the title of the senior-most risk employee within the Bank?.....

5) How many ‘sub-departments’ is the Risk Department currently divided into?

One [ ] Two [ ] Three [ ] Above three [ ] None [ ]

6) What, according to you, are the main tasks of the Risk Department? Explain.

#### SECTION C: ENTERPRISE RISK INFORMATION

7) On a scale of 1-5 rate the following operational risks where 1=Highly Unlikely, 2=Unlikely, 3=Neutral, 4=likely, Highly Likely. Out of the following operational risks, which one do you (or does your department) prevalently face on a day-to-day basis?

| <b>Operational Risks</b>                         | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| Delays & Complaints                              |   |   |   |   |   |
| Inadequate Resources (time, personnel, etc.)     |   |   |   |   |   |
| System Downtime                                  |   |   |   |   |   |
| Over-reliance on other department/service/person |   |   |   |   |   |
| Fraud  |   |   |   |   |   |
| Errors (Human, Processing, System, etc.)         |   |   |   |   |   |
| Other.....                                       |   |   |   |   |   |

8) Do you have some degree of control of the risks you have identified?

Yes [ ]

No [ ]

9) On a scale of 1-5 rate the following operational risks statements, where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, Strongly Agree.

|   | <b>Risk Management Factor</b>   | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | The bank has a set standard risk appetite or tolerance level for various risks            |   |   |   |   |   |
| 2 | We do Risk Assessments at our department, for example RCSA (Risk Control Self-Assessment) |   |   |   |   |   |
| 3 | The Risk Management process reduced the prevalent risk at the bank                        |   |   |   |   |   |
| 4 | The Bank encourages identification and reporting of risk issues                           |   |   |   |   |   |
| 5 | The bank some degree of control of various risks  |   |   |   |   |   |

#### **SECTION D: FINANCIAL PERFORMANCE**

10) On a Scale of 1-5, rate the level of improvement on each of the following statements of financial performance as a result of risk management, where, 1=highly unlikely, 2=unlikely, 3=Neutral, 4=Likely, Highly Likely.

|   | <b>Financial Performance Aspect</b> | 1 | 2 | 3 | 4 | 5 |
|---|-------------------------------------|---|---|---|---|---|
| 1 | Profitability                       |   |   |   |   |   |
| 2 | Return on Assets (ROA)              |   |   |   |   |   |
| 3 | Return on Investments (ROI)         |   |   |   |   |   |

11) Are the objectives/goals of the Bank well quantified and clearly measurable (e.g., volume, market-share, growth rate, profitability)?

Yes [ ]                      No [ ]

12) Does the bank \systematically measure actual performance versus goals?

Yes [ ]                      No [ ]

13) Do your current Key Performance Indicators (KPI's) have a risk element to them?

Yes [ ]                      No [ ]

14) Do you believe risk management has helped you achieve your performance targets in any way?

Yes [ ]                      No [ ]

15) In your honest opinion, has risk management helped the organization perform better, or does it act as a hindrance, or is it simply a regulatory requirement

Yes [ ]                      No [ ]

## APPENDIX II: REGISTERED COMMERCIAL BANKS IN KENYA

|                                      |
|--------------------------------------|
| 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              |