

**FACTORS AFFECTING THE SUCCESSFUL IMPLEMENTATION  
OF ENTERPRISE RISK MANAGEMENT IN KENYAN  
REGULATORY AUTHORITIES**

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

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## **DEDICATION**

I dedicate this project to my parents Mr. and Mrs Ndambuki for their encouragement and support throughout the study period and in this project

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

COSO	Committee of Sponsoring Organizations
ERM	Enterprise risk Management
ISO	International Organization for Standardization
RM	Risk Management
KMO	Kaiser-Meyer-Olkin (KMO)

## **ABSTRACT**

There Currently 31 regulatory authorities in Kenya created under the current constitution. These organizations are mandated with regulation through licenses and permits to individuals and firms that wish to undertake certain services. Given the essential mandate that these organizations have, a robust enterprise risk management is an important element in carrying out their duties. This study sought to determine the factors affecting successful implementation of enterprise Risk Management in Kenyan regulatory authorities. The population of the study was the 31 regulatory authorities from which 24 responded giving a response rate of 77.4%. Primary data was used and was collected using questionnaires it was constructed on the basis of the objectives of the study. The research instrument was administered through pick and drop method. Data was analyzed using both descriptive and linear regression analysis. The study revealed that the five independent variables corporate governance, employee training, organizational culture, organizational resources and communication affected successful implementation of enterprise risk management positively and to a great extent. Organizational Resources affected implementation to a great extent. The findings of this studies concur with previous studies such as those of Makunyi (2013) and Ogengo (2010)

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Risk management can be defined as the practice of identifying loss exposures an organization faces and identifying the most suitable technique for dealing with such exposures (Saunders & Cornett, 2006). On their part, Cebenoyan et al. (2004) assert that risk management is a course of measuring or identifying risk and then coming up with strategies of managing risks.

Traditional risk management viewed risk as a single element, not linked to others where entity risk was categorized and dealt with separately (Wolf, 2008; Hoyt and Liebenberg, 2011). Traditional Risk Management was departmentalized, functional, divisional and uncoordinated. The focus was on pure risks like financial and insurable hazards. Risks were viewed as threats to the organization. It did not consider shareholder's wealth when risk management decisions were made (Meier, 2000).

Enterprise Risk Management has come out as a significant business principle that builds on the traditional trends of risk management. KPMG (2001), defined it is a disciplined and structured way of aligning knowledge, technology, people, processes and strategy with the aim of managing and evaluating the problems an organization faces as it tries to create value. Because it concerned with enterprise-wide, , departmental, divisional or cultural barriers are removed. ERM is a new trend that deals with risks associated not only with health and safety and financial but also with, reputational technological, and other areas of business. Nayak *et al*, (2010). ERM takes a risk based culture of decision making by

providing a holistic look at risks in the organization therefore enhancing effectual decision making. Berinato (2006) risk management is vital because complementary risk is becoming the only efficient way to manage a firm in a multifaceted world. Researchers have revealed that organizations feel an summative measure should comprise all risks facing the firm, but recognizing the fact that some risks like operational risk are hard to measure in a consistent way.

### **1.1.1 Enterprise Risk Management Implementation**

COSO (2004) ERM is defined as: “a method, effected by an organization’s management and employees, functional in setting of strategy and transversely in the organization, planned to classify possible events that may affect the firm. It controls risk to be within its risk appetite and offers reasonable reassurance concerning the accomplishment of an organizations objectives”. This shows ERM as a synchronized approach that seeks to be rooted in the organizations culture and operations objectives and strategies proactively. Uncertainties present both opportunities and risk with the ability to increase or erode value, ERM seeks to balance opportunity and risk and maximize the benefits accruing in the public environment.

ERM can also be defined as a tactical discipline of business that aids the accomplishment of an organization’s objectives by managing the collective impact of those risks and dealing with the whole aspect of its risks and managing the impact of such risks as a profile that is interrelated RIMS (2013).From this definition ERM is portrayed as a important development beyond earlier approaches to risk management in that it, entails all areas of a firm’s exposure to risk (reporting, operational, financial, compliance, reputational strategic, and governance risk. It manages and prioritizes those exposures as a consistent

portfolio of risk rather than as entity “silos”; many such risks have major impact on the efficiency, and entity reputation.

In the 21st century, there are numerous checkpoints that have motivated the call for enterprise risk management, which are referred to as drivers of ERM; they include increase in the following: Financial disclosures with further control requirement and strict reporting; Greater transparency; technology and security issues; preparedness for disasters and continuity of business; rating agencies focus; Regulatory compliance and Globalization in a endlessly aggressive environment Sharma(2012).

ISO implementation framework suggests that an organization should: describe suitable strategy and timing for implementing the framework, apply ERM framework and processes to the organizational processes, conform with regulatory and legal requirement, make sure that decision making, development and setting of objectives, is allied with risk management processes outcomes, embrace information and set up training sessions, Consult and communicate with stakeholders to make certain that its risk management framework remains suitable ISO 31000 (2009)

ERM can hence be described as a way to efficiently handle risk across the entity through the use of a universal risk management framework. The framework differs widely across firms but typically involves employees, set rules, and tools of work. This therefore means employees with clear responsibilities use established rules, and the appropriate level of technology to mitigate risk.

### **1.1.2 Factors Affecting ERM Implementation**

Implementation is defined as the procedure of putting a plan into effect. According to Ogengo (2015) ERM theoretically is easy to discuss and write about however the implementation part is the most challenging. Factors such as organizational culture, personnel training, size of the organization, resources and communication affect ERM implementation in both private and public entities.

The Public sector management is however unique in that it faces the inability to opt out of risks unlike the private sector and faces constant scrutiny and expectations from the public which it serves. The public sector framework differs from the private sector framework with regard to the need for public transparency and accountability which means that there are differences in how the risk management ideologies are applied (Standards New Zealand, 1999).

This research shall therefore look into three important factors organizational culture, corporate governance structures and personnel training. Organizational culture is a classification of shared beliefs, assumptions, principles, which governs how employees behave in organizations. According to Keeler (2008) implementing successful ERM requires creating a risk management culture. (Kleffner, and McGannon 2003) suggested that the undertaking of ERM is unlikely to be successful if the perception of risk management does not become an embedded part of the corporate culture. It is hence important that the mind set of all individuals not only those in the risk department take part in the effecting of a company's ERM strategy and implementation. Manab, et al. (2010) established that shareholder value and corporate governance to be the main important driver in risk management implementation.

Employee training is of importance because they are the key element in implementation of any plans or strategies. It is only through high-quality training and growth of human resource that the other resources become feasible and strictly monitored, Pearce and Robinson (2009) employee training is important for implementation of ERM as it determines how well equipped they are to do effectively.

Organizational size is set to affect implementation in a positive way that the larger organization is will apt to fit into place in ERM this is because of their relative elevated complexity and the verity that have a wider range of risks and their organizational size which allows them to cater for the administrative cost that comes with ERM adoption. Kleffner et al, (2003) established that the larger the firms are the more it would probably take up ERM because of the need for a more comprehensive risk management strategy.

Effectual Communication is important for managers in the organizations so as to achieve the vital functions of management. Employees need to be drawn in, the considered plan implementation and thus an uninterrupted message successfully communicated will allow people into entirely participate in the firm activities, Management study guide (2016). Zaribaf and Hamid (2010) found out that for successful implementation of plans and strategies organizations should have both financial and human resource capabilities.

### **1.1.3 Kenyan Regulatory Authorities**

Kenyan regulatory bodies are formed by Acts of parliament and are registered under the respective ministries depending on the functions they perform. The first to be formed was the Central Bank of Kenya in 1966 more have been formed to a total of 31 authorities as listed in the Executive order 2/2013 on Organizations of the Government of the Republic



of Kenya. Their core mandate is to regulate through licenses and permits to individuals and firms that wish to undertake certain services.

## **1.2 Research Problem**

Enterprise risk management is gaining more popularity as organization begins to see the qualitative and quantitative benefits that it offers COSO (2004). Such as efficient use of resources and proper coordination of compliance and regulatory matters. Despite the numerous benefits that ERM offers many firms struggle with implementing ERM.

A report on the state of ERM by the Risk management society (2008) showed that organizations that have taken up ERM have a tangible benefit in their risk management capability. Some that had an ERM program in place did not achieve better risk maturity because they did not trail ERM guidelines in the RIMS model of Risk maturity. Data from the study indicates that formal infrastructures in well-adopted ERM programs represent the 68 best practice strategy for competent and effectual risk management programs.

Rosauer (2013) outlines three manageable ingredients in the “Three Bell Curves that he says guide the culture of any business; work, customer and employee. His theory is in agreement with the stakeholder’s theory, Friedman (2006) states that the organization ought to be considered as combination of stakeholders and the aim of the organization should be to control their interest, needs and viewpoints. And as such the stakeholders shall be the employees and customers. Successful ERM implementation is dependent on the employees of the organization because they are its drivers, therefore an organization culture that creates a buy in and conducive environment for employees improves their efficiency and productive on matters such as implementation.

The Kenyan government released *Mwongozo* in January 2015 a document that highlights the code of governance for state corporations. Chapter three of the document states that government entities should come up with risk management function and policy and ensure that policy that it is implemented and continuously reviewed. With this new guidance, there is need of public entities such as regulatory bodies to ensure successful implementation of enterprise risk management so as to ensure compliance and effectiveness in operations (State corporation advisory committee 2014).

Several studies have been conducted on the concept of enterprise risk management. Hardy (2010) in her study managing risks in government; introduction of ERM, sought to know the challenges that face implementation of ERM in federal agencies in the USA and found that inadequate support of ERM at the executive level, positioning ERM as a strategic management practice and not as an extra task affects to a greater level the success of ERM implementation.

Locally, Talel (2010); conducted a study on banking institutions on the risk management practices that they have adopted 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. Phillip (2015); did a study on factors affecting successful implementation of ERM I Kenyan parastatals. According to his findings there was a positive correlation between governance, organizational culture, organizational resources and communication.

Enterprise risk management for public sector institution should be assessed to determine whether it is well structured to ensure its successful implementation. No study has been

done yet on the implementation of ERM for regulatory bodies despite the key role they play there has therefore been gap that this study seeks to address. The research question was therefore: What factors affect successful implementation of Enterprise Risk Management at the Sacco's Regulatory Authority?

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

The objective of this study was to determine the factors that affect Enterprise Risk Management Implementation in Kenyan regulatory authorities

### **1.4 Importance of the Study**

The study will be of importance to Kenyan regulatory authorities in that it will offer an insight into critical factors for the achievement of ERM. It will enable them to improve or taken into consideration the factors looked at in this study

The nature of all regulatory is almost the same and factors that affect one are likely to affect the other. The study will hence enable other bodies that have adopted ERM have a picture of some of the factors that could be affecting their implementation. Kenya. Further enabling them to reap the full benefits of enterprise risk management.

The study adds to the existing literature on ERM by broadening the understanding of the theory of enterprise Risk management and the success factors for enterprise risk management. It should also act as a incentive for further research to improve and extend the present study especially in Kenya.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews literature relating to enterprise risk management and its implementation. Section 2.2 discusses the theoretical literature highlighting the existing enterprise risk management frameworks and discussed those that are relevant to the study. 2.3 discussed international and local studies that have been done on ERM, this section ought to bring out the research gap that exists. Section 2.4 covers the conceptual model and a summary of the chapter is provided in section 2.5.

#### **2.2 Theoretical Framework**

Theoretical literature provided a framework in which the theories relevant to the study were based on. The theories that were of relevance to the study were the systems theory, organizational culture theory, the stakeholder theory, and the communication theory. Each of them was believed to provide a framework on the factors affecting the successful implementation of enterprise risk management in Kenya's parastatals.

##### **2.2.1 Organizational Culture Theory**

Organization culture is a representation of the collective principles of organization members, their values and principles and is usually a product of factors such as employee type, technology, organization history and strategy (Needle 2004). The organization culture includes organization values, behaviors vision and mission, system, language and beliefs.

Rosauer (2013) organizational culture is an extremely intricate incalculable state that is a result of a combination of several ingredients. In the three bell curve. Rosauet outlines employee, customer and work as the three ingredients for a manageable culture.

Edgar Schein (1988) describes culture as a model of assumptions invented and created by an entity as a way of coping with external adoption problems and internal integration that is considered valid for having worked well. The new culture is taught to employees as the way in which they are supposed to carry themselves and handle organizational problems.

Culture live on three levels Schein (1988), in his model the three levels are artifacts, values and underlying assumptions. The first level artifacts are usually hard to measure, the second level is values this deal with the norms, morals, goals, standards, ideals and principles this level can be measured by the use of questionnaires. The third level is underlying assumptions this are characteristics that normally remain unexplained when employees when asked by organization culture values. The theory shows that there is no single organizational culture type, they vary from one organization to the other and no one resembles the other.

Organization culture theory is a trend of basic assumptions shared and learned by a group of as they try to handle problems of internal integration that have been tested sufficiently to be valid and should be taught to new employees as the way to perceive problems.. Aldine & Caldwell (1991) efficient outcomes are a result of organization culture directly or indirectly. Positive outcomes can only be achieved by a vulture of commitment, efficiency oneness and effectiveness. The study thus seeks to study organization culture as a factor of ERM implementation.

### **2.2.2 Stakeholders Theory**

According to Freeman (1984) a stakeholder is a group or individual with the ability to affect the objectives of the organization or is affected by them. The concept is on how an organization should be conceptualization. An organization should be considered as a group of stakeholders and it should solely exist to manage their viewpoints, needs and interests Friedman (2006). The consideration of shareholder perspective and their activities is of importance and should be taken into company's management Freeman (2004). He says "The guideline of stakeholder recourse may cause stakeholders to bring action against company directors if they fail to perform their required duties. This principles and thoughts are known as theory of normative stakeholders.

Descriptive stakeholder theory is concerned on how stakeholders and managers behave their roles and actions and how they view them. Instrumental stakeholder theory is on how managers are supposed to act for their interest and how to flavor them. Some literatures stakeholder interest is conceived as organization interest which is mainly to maximization profit or shareholder value maximization. Hence if managers treat stakeholder interest as organization interest the organization becomes successful in the long run Donald and Preston (1995)

Russo and Perini (2010) made three categorization approaches for stakeholder concept. Efforts undertaken by an entity to meet stakeholder demand are usually for the betterment of the society as much as there for avoiding stakeholder pressure. Stakeholder theory should therefore be considered as a management model due to the fact that enterprise stakeholder relationships are getting more intricate by day.

## **2.3 Literature**

This section discusses international and local literature that has been done on enterprise risk management. Section 2.5.1 discusses international literature and section 2.5.2 discusses local research done on the topic.

### **2.3.1 International Literature**

Organizations require proper tools and conceptual frameworks for ERM implementation Seamer, et al (2000). Adequate tools indicate Chief Risk Officer appointment. Appointment of a chief risk officer, support from management board director type organization size and auditors have impact on how organizations implement enterprise risk management.

The implementation process should be supervised and guided by a senior executive this is because of the complexity and impact it has on the entity Pagach and Warr (2011). Majority of the studies have shown that existence of a Chief Risk office signals proper implementation Golshan and Rashid (2012). Existence of a chief risk officer does not differentiate the level of ERM Grace et al (2013)

According to COSO, ERM framework requires top management support due to the nature of its implementation. Commitment, communication and executive management support positively affected execution of the implementation process. According to Maouni and Wanjau (2014), top management support, organizational resources and attitude towards risk are the key factors that impact effectiveness of management of risk.

Organizational structure affects implementation of ERM Daud (2010). He defines organizational structure as the active participation of the internal patterns of the organization in communication and authority. His findings concur with those of Ranong

and Phuennga (2009), the understanding of dynamics, risk governance functionality and structures need a holistic conceptualization of structural configurations. Organizational culture is the most important independent variable in ERM implementation followed by risk governance structures.

According to Amoozegar (2013) culture is the most important factor for enterprise risk management implementation. It encourages people to work more and efficiently. His findings agree with those of Cendrowski and Mair (2009). Akpan and Abass (2014) changing the culture of an organization to be risk management conducive is the only way to improve ERM performance

### **2.3.2 Review of Local Research on the chosen Topic**

Locally Waweru and Kisaka, (2011) there is an important relationship between an organization's level of ERM and the value of the organization. Ngundo (2014) examined factors that affect effectiveness RM in public housing construction projects in Kenya. A case study of Kibera slums upgrading project. He established that there was low level top management support for the project implementation.

Nyagah (2014) examined the effects of ERM on financial performance of pension fund firms. She established that ERM practices influence the financial performance of pension funds to a large extent. Funds with effective ERM were found to report higher profits.

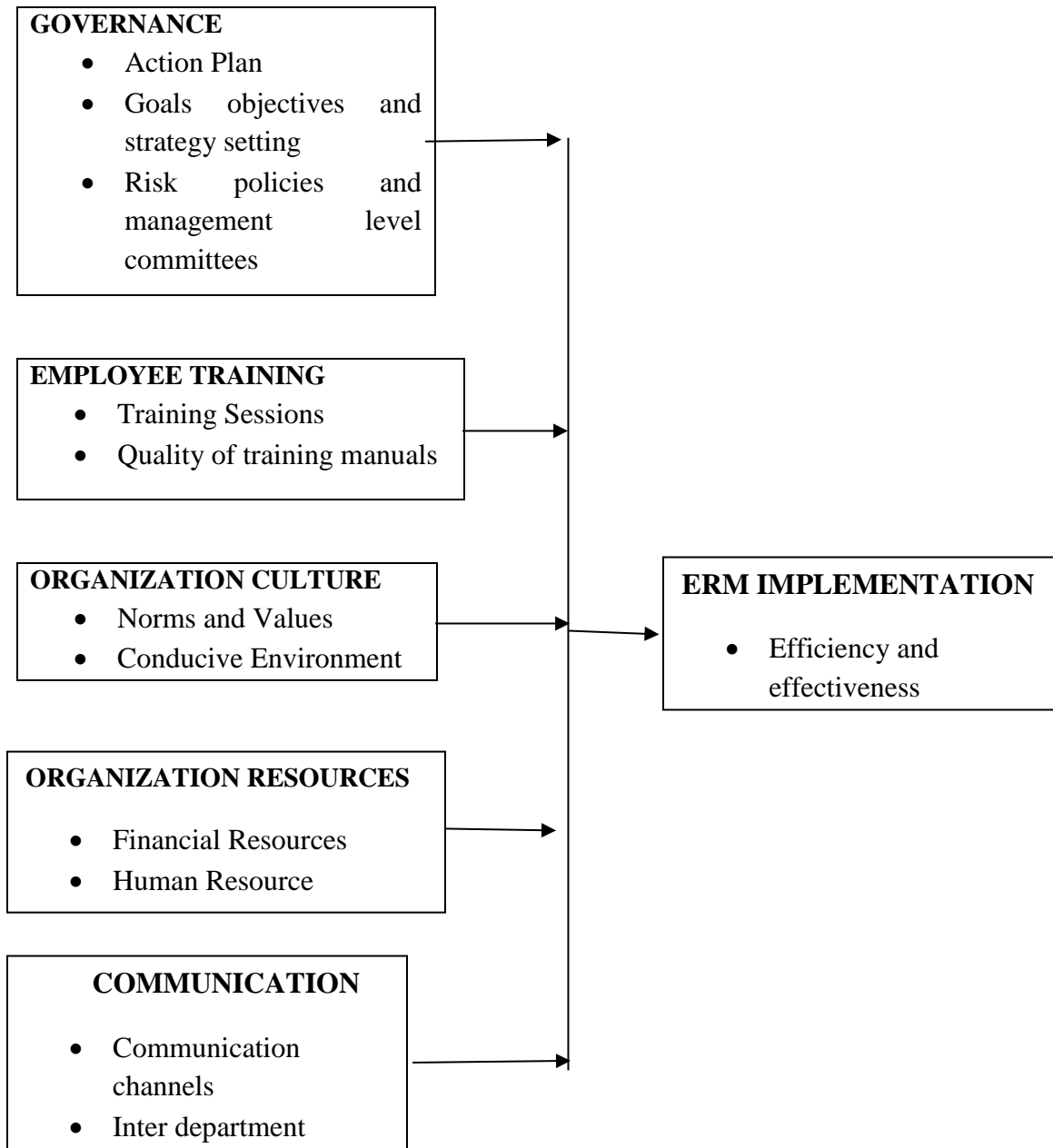
### **2.4 Conceptual Framework**

Mugenda (2008) conceptual framework is a brief explanation of relationship under study accompanied by a visual presentation of the major variables of the study. A conceptual framework shows the relationship between the variables. In this study, the dependent



variable was the level of ERM implementation while the independent variables were governance structures, organizational culture, organizational resources and communication.

**Figure 2.1 Conceptual Framework**



## **2.5 Summary**

This chapter reviewed existing literature and theoretical frameworks. Two theories have been advanced that explain the implementation of ERM practices in organizations. The theories are organizational culture theory and stakeholder theory. The empirical review has outlined a various international and local studies that have undertaken on the effect of ERM on performance. It will be noted that different authors have different conclusion on the actual factors that could influence the effective implementation of ERM and are therefore inconclusive.

The organization culture, employee training and corporate governance are key to effective enterprise risk management in regulatory bodies

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the research methodology of the study. Section 3.2 explains the research design while section 3.3 explains the sample and population. Section 3.4 and 3.5 entails data collection procedures and data analysis respectively.

#### **3.2 Research Design**

The researcher used descriptive research design. Descriptive study is apprehensive with finding out who, where, what, and how much a phenomenon, which is a concern of the study (Babbie, 1998). According to Kothari (2004), a descriptive design involves development, organizing, compilation and analysis of data so as to offer information being sought.

According to Mugenda and Mugenda (2003), descriptive design is the process of compiling data so as to test hypothesis or to respond to questions of the current subject under study. Its benefit is that, it is used widely to describe conduct, attitude, characteristic and values. The research design was found fit to ascertain factors affecting successful implementation of ERM in Kenyan regulatory authorities.

#### **3.3 Population**

Population of this study were the Kenyan Regulatory authorities listed in the Executive order 2013. Heads of Risk departments or internal audit were issued with the questionnaires because they are the ones entitled with ensuring suitable risk management, efficient internal controls and governance processes.

### 3.4 Data and Data Collection Procedure

In this study the researcher used primary data. The primary data was collected using questionnaires through the pick and drop method to the officers in the selected departments. The questionnaire was divided into three parts. The first section was the employee's biographical information and the second the dependent variable, the level of ERM implementation, the third covered the various independent variables been studied. Close structured and open ended questions are administered on all sections of the questionnaire, which sought to collect both quantitative and qualitative data.

### 3.5 Data analysis.

Statistical package for Social Sciences (SPSS Version 22) program was used to analyze the data. Data analysis technique used both quantitative analysis and regression analysis. The aim of the study was to establish if organizational culture, corporate governance and employee training affect the successful implementation of ERM in Kenyan regulatory bodies.

#### 3.5.1 Conceptual Model

The conceptual model used in the study is ERM implementation as a function of organizational culture, corporate governance, employee training, organizational resources and communication

$$ERM_{IT}=f(OC, CG, ET, OR, CO).....(1)$$

Where

ERM<sub>IT</sub>= Enterprise Risk Management Implementation

OC= Organizational Culture

CG= Corporate Governance

ET= Employee Training

OR=Organizational resources

CO= Communication

Collective programming and teamwork is used to determine the level of organizational culture in the entity. Corporate governance is measured by initiatives by board of directors, recommendation of internal auditors and leadership of chief executives. Training in risk management is measured through in house training tailored for Kenyan Regulatory Authorities, workshops and conferences attended and whether there was an improvement in ERM awareness and implementation after the trainings. Communication is measured by usefulness of communication channels and avenues for employee opinions. Resources are measured by availability of adequate financial and human resource Beasley et al (2005). ERM implementation level was used to measure the dependent variable.

**3.5.2 Analytical Model**

The following model was used to perform the regression analysis.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon \dots \dots \dots (2)$$

Where:

Y = Represents the dependent variable, successful implementation of ERM

$\alpha$  = Constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  = Partial regression coefficient

$X_1$  = Organizational Culture

$X_2$  = Corporate Governance

$X_3$  = Employee training

$X_4$  = Organizational Resources

$X_5$  = Communications

$\varepsilon$  = error term or stochastic term

ANOVA and F-test show the fitness of the model used in the study. The coefficients show how each of the variables influences implementation. The results of significance were interpreted at 5% level of significance. Both p-values and t-tests were interpreted.

### **3.6 Diagnostic Test**

This section discusses normality, multicollinearity, linearity,  $R^2$  and adjusted  $R^2$  as diagnostic tests for the data collected.

#### **3.6.1 Normality Test**

The Shapiro-Wilk test, is a normality test that shows whether a random sample comes from a normal distribution. Data is normally distributed is the null hypothesis for this test. This studies chosen alpha level is 0.05, if the p-value will be less than 0.05, then the null hypothesis is rejected. If the p-value is more than 0.05, then the null hypothesis that data is normally distributed is not rejected Pearson and Harley (1976). Stastical packages were used to obtain the  $W$  value.

### **3.6.2 Multicollinearity Test**

Multicollinearity is a phenomenon in which two predictor variables in a multiple regression model are extremely correlated, meaning that one can be linearly predicted from the others with a considerable degree of accuracy(Wikipedia). Variance inflation factor was used to test for multicollinearity in the study where:  $VIF = 1/T$ . If  $VIF > 10$  there is a suggestion for multicollinearity to be present; with  $VIF > 100$  there is certainly multicollinearity in the sample.

### **3.6.3 Linearity Test**

Linearity test are used to determine whether the relationship between independent and dependent variables is linear or not [www.spsstests.com](http://www.spsstests.com) (2015). If deviation from linearity is less than 0.05 it is indicating that there is a linear relationship between the variables. Statistical package for Social Sciences (SPSS Version 22) was used to obtain the deviation from linearity value.

### **3.6.4 R<sup>2</sup> and Adjusted R<sup>2</sup>**

R<sup>2</sup> was used to explain the variations between the variable, it is a statistical measure of how the data is to the fitted regression line. Values of r squared lie between 0-100%, the higher the R-squared, the better the model fits the data. Statistical package for Social Sciences (SPSS Version 22) program was used to obtain the value of R squared.

The adjusted R-squared is a version of R-squared that has been adjusted for the number of variables in the model. It compares the explanatory power of regression models that contain various number of predictors Frost (2013). The adjusted R-squared increases if the new

term improves the model more than would be expected by chance. It decreases when a predictor improves the model by less than expected by chance.



## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND FINDINGS

#### 4.1 Introduction

This chapter discusses the study findings. Section 4.2 discusses summary statistics. Section 4.3 and 4.4 discuss the estimated model and diagnostic test. The discussion of the findings and summary of study is provided in section 4.5 and 4.6 respectively.

##### 4.1.1 Response Rate

This study targeted 31 regulatory authorities in Kenya. The number of respondents were 24 giving a response percentage of 77.4%. Mugenda (1999) a response rate over 70% is excellent; hence the response rate for this study is adequate for analysis.

##### 4.1.2 Reliability Analysis

**Table 4.1 Cronbach' Alpha**

Cronbach's Alpha	No. of items
.692	24

Source: Research (2016)

An alpha value of 0.692 indicates a high level of internal consistency for our scale with this data set. Mugenda and Mugenda (2003) reliability value exceeding 0.5 can be interpreted as the data been highly reliable

### 4.1.3 Factor analysis

**Table 4.2 Kmo and Bartlett's test**

KMO and Bartlett's Test		
Kaiser Meyer Olkin Measure of Sampling Adequacy		.625
Bartlett's Test of Sphericity	Approx. Chi Square	19.893
	Df	10
	Sig f	0.30

Source: Research (2016)

The KMO determines if the responses given with the sample are sufficient or not. A value more than 0.5 is a satisfactory factor analysis to proceed (Kaiser, 1974). The KMO VALUE OF The data was 0.625 which is sufficient enough.

### 4.2 Summary Statistics

**Table 4.3 Level of Education**

Level	Frequency	Percentage
Phd	1	4%
Masters	8	36%
Degree	9	40.9%
Other	4	18.1%

Source: Research (2016)

4% of the respondents had a doctorate and 36% had a master's degree. 40.9% of the population had a bachelor's degree while 18.1% had other qualifications.

**Table 4.4 How long have you worked in the organization**

Duration	Frequency	Percentage
0-5	2	8.3%
6-10	11	45.8%
11-15	8	33.3%
Above 15 years	3	12.5%

Source: Research (2016)

A large percentage had worked in the organization for 6-10 years. This could be largely attributed to that most regulatory have not been in existence for a long period of time. 33.3% had worked for 11-15 years. Those who had worked for above 15years were 12.5%.

**Table 4.5 Level of Implementation in the organization**

Level	Description	Percentage
1	The organization has no ERM framework and no plans to introduce one	4.2%
2	No ERM framework in place but there is plan to introduce one	8.3%
3	ERM framework is partially developed but there is no clear timetable for implementation	16.7%
4	ERM framework is well formulated, with a clear implementation plan but it has not started	37.5%
5	ERM framework is well formulated and implementation is in progress	20.8%
6	ERM framework is well formulated across the organization and fully Implemented	12.5%

Source: Research (2016)

The study findings showed that 37.5% of the regulatory authorities had a well formulated ERM framework with a clear implementation plan but it had not started. 20.8% had a well formulated framework and implementation was in progress. 12.5% had a fully formulated and implemented ERM framework. 4.2% had no ERM framework and had no plans to introduce one.

**Table 4.6 Corporate Governance**

	1	2	3	4	5	mea	Std Dev
The ERM action plan is part of the wider organizational strategic plan.	19	5	0	0	0	1.21	0.415
The management regularly holds meetings with risk management heads to review progress of implementation.	14	8	0	0	0	1.58	0.881
The management board has approved risk policies	21	3	0	0	0	1.13	0.338
The management board has formed board and management level committees	18	6	0		0	1.25	0.442
The ERM implementation plan takes place within the set time frames	4	15	1	3	1	2.29	0.999
The ERM implementation activities are carried out according to the ERM action plan.	16	7	1	0	0		0.576

Source: Research (2016)

The study was conducted to Determine whether corporate governance affects the successful implementation of ERM. The above statements where used to determine how corporate governance affects implementation. ERM action plan is part of the wider organizational strategic plan as shown by a mean of 1.21. The management holds regular meetings and has approved risk policies influence ERM implementation as shown by a

mean of 1.58 and 1.13 respectively. A mean of 2.25 and standard deviation of 1.032 showed a high level of agreement that management board has formed board and management level committees. ERM implementation takes place within set time frames and ERM activities are carried out according to the action plan had a mean of 1.38 and 0.576 respectively. These findings concur with, Zhao, Hwang and Low, (2013) that governance may affect implementation

**Table 4.7 Employee Training**

Description	1	2	3	4	5	Mean	Standard Deviation
The high quality of the training manual influence ERM implementation	19	4	1	0	0	1.25	0.532
The success of the organization depends on how well employees are trained	22	2	0	0	0	1.08	0.282
The purpose of training is to improve knowledge, skills and attitudes	19	5	0	0	0	1.21	0.415
Risk manager should set up training sessions through the directorate manager for members of staff	1	6	1	13	3	3.46	1.141
The risk manager should set up training sessions through the risk management team for consultants	17	6	0	1	0	1.33	0.482

Source: Research (2016)

The study sought to determine whether employee training affected ERM implementation. Their was a high level of agreement that the quality of the training manual and how employees are trained affected implementation. Majority of the organizations disagreed that the risk manager should set up training sessions through the directorate manager for

members of staff. Infrastructure foundation such as competent employees and proper employee training improves implementation Rompho (2014).

**Table 4.8 Organization Culture**

Description	1	2	3	4	5	Mean	Std.Dev
The management has not implemented ERM policies in line with the organization culture	0	2	0	17	5	4.00	0.780
The organization culture supports new ERM initiatives and ideas from employees	21	3	0	0	0	1.13	0.338
The norm and values of the organization influences ERM implementation	16	5	1	2	0	1.54	0.932
The organization creates a conducive environment for ERM implementation	18	6	0	0	0	1.29	0.550
The organization has managed to inculcate a risk culture, awareness, ownership in the organization through trainings and sensitizations	10	12	0	2	0	1.75	0.847

Source: Research (2016)

Most organizations have inculcated a risk culture awareness and ownership as showed by a mean of 1.75. The organizations have created a conducive environment and the norms of values influence ERM implementation as shown by a mean of 1.29 and 1.54 respectively. ERM policies are not line with organization culture as indicated by a mean of 4.02. This concurs with Keeler (2008) that a risk culture is key in implementing a successful ERM system.

**Table 4.9 Organizational Resources**

Description	1	2	3	4	5	mean	Standard Deviation
Adequate financial resources have been put for ERM activities	1	2	0	8	13	4.25	1.113
There is enough human resource to carry out ERM implementation	0	11	0	10	4	3.33	1.204
More resources are required to make ERM implementation a success	15	8	1	0	0	1.42	0.584
Organizational resources play a major role in the implementation of ERM	20	4	0	0	0	1.21	0.415

Source: Research (2016)

Organizations were in agreement that there were no enough financial and human resources to carry out ERM as indicated by a mean of 4.25 and 3.33 respectively. More resources are required to make ERM implementation a success as shown by a mean if 1.42. The respondents agreed that organization resources played a major role as indicated by a mean of 1.21. This finding concur with Rieger (2005) that organizational resources are core in implementation of an Enterprise Risk management framework.

**Table 4.10 Communication**

Description	1	2	3	4	5	Mean	Standard Deviation
Departments share information on ERM	5	13	0	6	0	2.38	1.135
There are clear communication channels for management and ERM implementation staff	3	20	1	0	0	1.92	0.408
Regular meetings for employees to voice their ideas on the implementation process	19	4	1	0	0	1.25	0.532
Communication between management and staff greatly enhances probability of successful ERM implementation	18	9	0	0	0	1.21	0.415

Source: Research (2016)

There was high level of agreement that communication between management and staff affected implementation as was indicated by a mean of 1.21. Departments share information as shown by a 2.38 mean. Regular meetings were held for employees to voice their ideas as shown by a mean of 1.25.

#### 4.3 Estimated model

Correlation analysis was carried out to determine the relationship between the independent and dependent variables.

##### 4.3.1 Results of Model of Goodness of Fit

**Table 4.11 Model Summary**

Model	R	R squared	Adjusted R Squared	Std. Error of Estimate
1	.745	.755	.732	.969

Source: Research (2016)



Adjusted R squared was used as a coefficient of determination to explain the variation in the dependent variable due to changes in the independent variables. At 95% confidence interval the value of adjusted R squared from the findings was 0.732 this indicated that 73.2% of the changes in the dependent variable was explained by a change independent variables; corporate governance, employee training, organizational culture, organizational resources and communication. The relationship between the study variables was measured using the coefficient of correlation R, the value obtained from the study was 0.745. This shows there a strong positive relationship between the variables.

#### 4.3.2 Results of Anova

**Table 4.12 Anova**

	Sum of squares	Df	Mean Square	F	Sig F
Regression	21.095	5	4.219	4.492	0.02
Residual	16.905	18	.939		
Total		23			

Source: Research (2016)

The results in Table 4.10 show that the F-statistic of 4.492 was significant at 5% level because P-Value was 0.02. This shows that the model was fit to explain the relationship between enterprise risk management and five independent variables.

### 4.3.3 Estimated Model

**Table 4.13 Coefficients**

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Constant	8.608	1.531		5.624	.000
Corporate Governance	807	.605	262	.1334	.009
Employee Training	654	.627	171	1.042	.311
Organizational Culture	.036	.749	009	048	.962
Organizational Resources	1.696	.481	645	3.528	.002
Communication	.244	.623	080	393	.699

Source: Research (2016)

ERM implementation level would be 8.608 if corporate governance, employee training, organizational culture, organizational resources and communication were at a constant zero. Holding all other factors constant, a unit increase in corporate governance would lead to a decrease in Enterprise Risk Management implementation by 807. ERM implementation level would increase by 0.654 with a unit increase in employee training; a unit increase in Organizational culture would increase implementation of ERM by 0.036. A unit increase in organizational resources and communication would increase ERM level by 1.696 and 0.244 respectively.

#### 4.4 Diagnostic Test

Shapiro Wilk test was used to test for normality, where the null hypothesis for this test is that the data are normally distributed. The chosen alpha level is 0.05, the p-value was than 0.02, the null hypothesis that the data is normally distributed was rejected.

Variance inflation factor was used to test for multicollinearity in the study where:  $VIF = 1/T$  and  $T = 1 - R^2$ . If  $VIF > 10$  there is an indication for multicollinearity to be present; with  $VIF > 100$  there is certainly multicollinearity in the sample.

**Table 4.14 Variance Inflation Factor**

Variable	Tolerance	VIF
Corporate Governance	.643	1.556
Employee Training	.913	1.096
Organizational Culture	.645	1.551
Organizational Resources	.601	1.664
Communication	.739	1.353

Source: Research (2016)

The Variance inflation factor for all the variables was less than 10 hence all the variables were used in the study

#### 4.5 Discussion

A coefficient of correlation of 0.745 showed there is a strong relationship between Enterprise Risk Management implementation and corporate governance, employee training, organizational culture, organizational resources, and communication . The

findings showed that a unit increase of each of the independent variable caused an increase in the dependent variable ERM implementation by a certain level.

Pearce and Robinson (2009) found out that employee training is important as it determines how effectively they carry out the implementation process. His findings are consistent with those of this study that employee training has a positive relationship with ERM implementation. ERM implementation level would increase by 0.654 with a unit increase in employee training

Grabowski and Robert's (1999), ERM needs a combination of various cultures that make an organization system to be a cohesive whole where the assumptions and values of all employees can be constructed around the need of forming a reliability culture. a unit increase in Organizational culture would increase implementation of ERM by 0.036

Zaribaf and Hamid (2010) findings showed that organizational resources such as financial and human resources to be key in implementation of strategies and plans of an organization. Findings of this study show that organizational resources positively affect ERM implementation. A unit increase in organizational resources would increase ERM level by 1.696

According to management study guide (2016) for plan implementation to be well executed there had to be proper and smooth communication in an organization. This study found that a unit increase in communication caused an increase in communication by 0.244. A unit increase in communication would increase ERM level by 0.244.

#### **4.6 Summary**

Findings of this study showed that the adjusted r squared of the model was 0.755 this means that 75.5% of the change in ERM implementation can be explained by corporate governance, employee training, organizational culture, organizational resources and communication. A coefficient correlation of 0.745 shows there is a strong positive relationship between the independent variables and the dependent variable ERM implementation.

This study shows that there is a positive relationship between corporate governance, organization culture, organization resources, employee training and communication and implementation of Enterprise Risk Management. The study showed that a unit increase in corporate governance would lead to increase in ERM. A unit increase in employee training would lead to increase in implementation of Enterprise Risk Management, unit increase in organizational resources would cause an increase in ERM implementation level, a unit increase in communication would lead to increase in implementation of Enterprise Risk Management implementation level.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter discusses the summary of the findings, conclusions and recommendation for further study. The study summary is discussed in section 5.2. The conclusions and limitations of the study in 5.3 and 5.4 respectively and lastly the recommendations for further study in 5.5.

#### 5.2 Summary of the Study

The study examined factors affecting successful implementation of Enterprise Risk Management in Kenyan regulatory authorities: A case of Kenyan Regulatory authorities. The study targeted 31 regulatory authorities risk heads but only got a response from 24 which was satisfactory to be a representative of all authorities. A large percentage of the risk heads had trained a bachelor's degree this showed that they were competent enough to undertake ERM. Implementation. Majority of them had worked in the organizations for between 6-10 years. Most organizations were at ERM implementation level 4 that is the ERM framework was well formulated with a clear implementation plan but it had not yet started.

The independent variables and the dependent variable ERM implementation had a strong positive relationship as shown by the coefficient of correlation at 0.732 The model was a good explainer of the changes in the dependent variable as 73.2% of the changes in the dependent variable could be explained by independent variables: corporate governance, employee training, organizational culture, organizational resources and communication.

Of the five independent variables organization resources was found to affect ERM implementation most. Most organizations lacked enough financial and human resources to carry out the implementation.

Corporate governance also affected ERM implementation positively. The study found that most management board committees had approved risk policies and formed board and management level committees. High quality employee training manuals affected how ERM was implemented. However, majority agreed that trainings should not be setup through the directorate but should be contacted by risk management consultants.

Organization culture least affected how ERM was implemented but most authorities had a culture that supported new ERM initiatives from employees. Communication affected ERM implementation levels positively and majority of the authorities agreed that communication between management and ERM staff greatly increased the probability of ERM implementation success.

### **5.3 Conclusions**

From the findings, the study concludes that the model is significant as shown by a p-value less than 0.05. and strong coefficient of correlation. The independent variables had a strong coefficient which clearly explained their effect on ERM implementation. Organizational resources were found to be affect implementation the most.

The study therefore concludes that corporate governance, employee training, organizational culture, organizational resources and communication influence the successful implementation of Enterprise Risk management in Kenyan Regulatory

authorities have significant effect on implementation as indicated by strong coefficient correlation.

#### **5.4 Limitations of The Study**

The study was carried out on regulatory authorities this limits applicability of findings to Kenyan regulatory authorities only. The other government organizations may or may not find the results been applicable.

The study used primary data although it was able to achieve the objective the data could be biased depending on the chosen respondent. The study was limited in time therefore all regulatory authorities did not respond however a response rate of 77.4% was impressive.

#### **5.5 Recommendations for Policy**

From the findings the study recommends that government authorities should strive to move from level 4 of ERM implementation to level 6 where ERM frameworks are fully formulated and implemented so as to able to achieve the fully benefits of Enterprise Risk Management. Managements should ensure that ERM activities take place within the set time frames.

More financial and human resources should be in put in place to ensure quick and effective implementation. Employee training sessions should be setup through risk consultants and not directorate managers. Communication between management and staff should be improved to increase the probability of effective implementation.

#### **5.6 Recommendations for Further Study**

This study shows that corporate governance, employee training, organization culture, organization resource and communication affect successful ERM implementation



positively. Further studies could study each factor solely or all the factors but in a different set of organizations. Further research could be conducted on how legislation and policy affect successful enterprise risk management implementation.

Studies can also be conducted on other government institutions such as ministries, parastatals and state offices. More studies in the private sector will also be able to give the general state of ERM in the country.

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## APPENDIX I: QUESTIONNAIRE

RESEARCH TOPIC: FACTORS AFFECTING SUCCESSFUL IMPLEMENTATION OF ENTERPRISE RISK MANAGEMENT IN KENYAN REGULATORY BODIES

### SECTION A; BACKGROUND INFORMATION

1.Highest Level of education attained?      PhD     Masters     Bachelor's Degree   
Other

4. How long have you worked in this organization? 0-5 Years  6-10 Years  11-15 Years  Over 15 Years

### SECTION B: ERM IMPLEMENTATION

Level	Description	
1	The organization has no ERM framework and no plans to introduce one	
2	No ERM framework in place but there is plan to introduce one	
3	ERM framework is partially developed but there is no clear timetable for implementation	
4	ERM framework is well formulated, with a clear implementation plan but it has not started	
5	ERM framework is well formulated and implementation is in progress	
6	ERM framework is well formulated across the organization and fully implemented	

### SECTION C: FACTORS AFFECTING ERM IMPLEMENTATION

#### 1.CORPORATE GOVERNANCE

What is your level of agreement with the following statements that relate to effect of corporate governance on implementation of Enterprise Risk Management in the organization?

(1-Strongly agree, 2- Agree, 3-Neutral,4- Disagree, 5 Strongly Disagree)

Description	1	2	3	4	5
The ERM action plan is part of the wider organizational strategic plan.					
The management regularly holds meetings with risk management heads to review progress of implementation.					
The management board has approved risk policies					
The management board has formed board and management level committees					
The ERM implementation plan takes place within the set time frames					
The ERM implementation activities are carried out according to the ERM action plan.					

## 2.EMPLOYEE TRAINING

What is your level of agreement with the following statements that relate to effects of training on implementation of Enterprise Risk Management in the organization? (1 Strongly agree, 2- Agree, 3-Neutral,4- Disagree, 5 -Strongly Disagree)

Description	1	2	3	4	5
The high quality of the training manual influence ERM implementation					
The success of the organization depends on how well employees are trained					
The purpose of training is to improve knowledge, skills and attitudes					
Risk manager should set up training sessions through the directorate manager for members of staff					
The risk manager should set up training sessions through the risk management team for consultants					



## 1. ORGANIZATION CULTURE

What is your level of agreement with the following statements that relate to organization culture affect implementation of Enterprise Risk Management in the organization?

(1-Strongly agree, 2- Agree, 3-Neutral,4- Disagree, 5 -Strongly Disagree)

Description	1	2	3	4	5
The management has not implemented ERM policies in line with the organization culture					
The organization culture supports new ERM initiatives and ideas from employees					
The norm and values of the organization influences ERM implementation					
The organization creates a conducive environment for ERM implementation					
The organization has managed to inculcate a risk culture, awareness, ownership in the organization through trainings and sensitizations					

## 2. RESOURCES

What is your level of agreement with the following statements that relate to organization resources affecting implementation of Enterprise Risk Management in the organization?

(1-Strongly agree, 2- Agree, 3-Neutral,4- Disagree, 5 -Strongly Disagree)

Description	1	2	3	4	5
Adequate financial resources have been put for ERM activities					
There is enough human resource to carry out ERM implementation					
More resources are required to make ERM implementation a success					
Organizational resources play a major role in the implementation of ERM					

### 3. COMMUNICATION

What is your level of agreement with the following statements that relate to communication affecting implementation of Enterprise Risk Management in the organization? (1-Strongly agree, 2- Agree, 3-Neutral,4- Disagree, 5 -Strongly Disagree)

Description	1	2	3	4	5
Departments share information on ERM					
There are clear communication channels for management and ERM implementation staff					
Regular meetings for employees to voice their ideas on the implementation process					
Communication between management and staff greatly enhances probability of successful ERM implementation					

THANKYOU.

## **APPENDIX II: LIST OF REGULATORY AUTHORITIES**

1. AGRICULTURE AND FOOD AUTHORITY
2. CAPITAL MARKETS AUTHORITY
3. CENTRAL BANK OF KENYA
4. COMMUNICATION AUTHORITY OF KENYA
5. COMPETITION AUTHORITY OF KENYA
6. COTTON DEVELOPMENT AUTHORITY
7. ENGINEERS BOARD OF KENYA
8. ENERGY REGULATION COMMISSION
9. ESTATE AGENTS REGISTRATION BOARD
10. HORTICULTURE CROPS DEVELOPMENT AUTHORITY
11. INSURANCE REGULATORY AUTHORITY
12. KENYA CIVIL AVIATION AUTHORITY
13. KENYA FILM CLASSIFICATION BOARD
14. KENYA MARITIME AUTHORITY
15. KENYA PORTS AUTHORITY
16. KENYA REVENUE AUTHORITY
17. KENYA RURAL AUTHORITY
18. KENYA SUGAR BOARD
19. MEDICAL PRACTITIONERS AND DENTIST BOARD
20. NATIONAL BIOSAFETY AUTHORITY
21. NATIONAL CONSTRUCTION AUTHORITY
22. NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY
23. NATIONAL INDUSTRIAL TRAINING AUTHORITY

24. NATIONAL TRANSPORT AND SAFETY AUTHORITY
25. PHARMACY AND POISONS BOARD
26. PUBLIC PROCUREMENT OVERSIGHT AUTHORITY
27. TOURISM REGULATORY AUTHORITY
28. RETIREMENT BENEFITS AUTHORITY
29. SACCOS REGULATORY AUTHORITY
30. WATER RESOURCES MANAGEMENT AUTHORITY
31. WATER SERVICES REGULATORY AUTHORITY