

**ENTERPRISE RISK MANAGEMENT PRACTICE AND PERFORMANCE OF  
SELECTED COMMERCIAL STATE CORPORATIONS IN KENYA**

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## DECLARATION

I declare that this project is my original work and has not been submitted to any other university or college for examination.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

I confirm that this project has been done under my supervision.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

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## **DEDICATION**

This research project is dedicated to my wife Jane Nyawira and children Kelvin Gachanja and Karen Wangui for their support and encouragement. To my mother, Mrs. Elizabeth Wangui Gachanja for great inspiration. A special tribute and dedication in loving memory of Godfrey Gachanja Waichigo for impacting my life so positively.

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## ACRONYMS AND ABBREVIATIONS

<b>CAPM</b>	Capital Asset Pricing Model
<b>COSO</b>	Committee of Sponsoring Organizations of the Treadway Commission
<b>CRO</b>	Chief Risk Officer
<b>CSC</b>	Commercial State Corporations
<b>ERM</b>	Enterprise Risk Management
<b>ICPAK</b>	Institute of Certified Public Accountants of Kenya
<b>IFAC</b>	International Federation of Accountants
<b>IIA</b>	Institute of Internal Auditors
<b>IRMPF</b>	Risk Management Policy Framework
<b>ISO</b>	International Organization of Standards
<b>MPT</b>	Modern Portfolio Theory

## **OPERATIONAL DEFINITION OF TERMS**

**Action Tracking.** The interconnections of the various steps in the risk management help ensure that all planning levels are inter related and that all players are aware of the desired outcomes and plans for achieving them.

**Commercial State Corporations in Kenya.** According to the State Corporation Act Chapter (446) of the Laws of Kenya is a corporate body established by or under an act of parliament or, the president by order establishes a state corporation as a body corporate to perform the functions specified in the order.

**Compliance of both Internal and External Regulations.** An organization should comply with both internal and external regulations. These regulations include legal or regulatory sanctions, financial loss, or loss to reputation a company may suffer as a result of its failure to comply with all applicable laws, regulations, and codes of conduct and standards of good practice.

**Enterprise risk management (ERM)** in business includes the methods and processes used by organizations to manage risks and seize opportunities related to the achievement of their objectives. ERM provides a framework for risk management, which typically involves identifying particular events or circumstances relevant to the organization's objectives (risks and opportunities), assessing them in terms of likelihood and magnitude of impact, determining a response strategy, and monitoring progress. By identifying and proactively addressing risks and opportunities, business enterprises protect and create value for their stakeholders, including owners, employees, customers, regulators, and society overall.

**Identification of Risk Indicators.** The identification process involves monitoring current risk levels and control performance as well as identifying hotspots and trend of the risk over the recent past.

**Incident Management.** The risk incidents management practice takes into consideration the management and analysis of actual risk incidents to ensure that the incident is managed correctly by ensuring that the negative consequences from the incident are minimized and improvement are put in place to ensure the incidents does not recur.

**Risk** is the potential of losing something of value. Values (such as physical health, social status, emotional wellbeing or financial wealth) can be gained or lost when taking risk resulting from a given action, activity and/or inaction, foreseen or unforeseen. Risk can also be defined as the intentional interaction with uncertainty. Uncertainty is a potential, unpredictable, unmeasurable and uncontrollable outcome, risk is a consequence of action taken in spite of uncertainty.

**Risk and Control Self-Assessment** The identifying objectives of the business unit or activity being assessed is the first assessment of the risk and control existing in the firm.

**Risk management** is the identification, assessment, and prioritization of risks (defined in ISO 31000 as the effect of uncertainty on objectives) followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities. Risk management's objective is to assure uncertainty does not deviate the endeavour from the business goals

**Performance:** The accomplishment of a given task measured against present known standards of accuracy, completeness, cost, and speed. In a contract, performance is deemed the fulfilment of an obligation, in a manner that releases the performer from all liabilities under the contract

## ABSTRACT

The purpose of this study was to establish the impact of enterprise risk management practice on the performance of the 34 commercial state corporations in Kenya. The study was guided by the following objectives:- to determine whether risk control self-assessment affects the performance of commercial state corporations in Kenya; to establish how identification of risk indicators affects the performance of commercial state corporations in Kenya; to examine whether incident management affects the performance of commercial state corporations in Kenya; to determine how compliance of both internal and external regulations affect the performance of commercial state corporations in Kenya; and to determine how action tracking influences the performance of commercial state corporations in Kenya. Literature review focused on theoretical literature and enterprise risk management practices empirical review that was concluded with conceptual framework that guided the study. The study adopted a descriptive study design. The target population for this research was 136 staff obtained from the 34 CS corporations with responses from managers, internal audit managers, operations managers and accountants. Multiple regression analysis was applied to the data to examine the role of the various aspects of ERM practices on the performance of the commercial state corporations in Kenya. The findings of this study indicated that ERM practice was popular among commercial state corporations and which is practiced most is the identification of key risk indicators. Risk and control self-assessment practice of the corporations also was found to be a common practice that is undertaken by corporations. The coefficient of the independent variables (X1 – X5) was significant at 5% significance level thus all the five hypothesis were true indicating as significant effect on CS corporations performance. The coefficient of the determination under identification of risk indicators was the highest of the independent variables and this meant that a unit increase in the determination towards ERM increased the commercial state corporation's performance by 3.272 units. One of the conclusion drawn by the study is that most of the Commercial SCs in Kenya have ERM frameworks as well as implementation plans. They acknowledge the importance of implementing ERM from both regulatory compliance perspective (with CMA) and business value addition perspective. The study also found out that a significant number of the Commercial SCs are still at the planning stages where ERM is not a regulatory requirement. Their Performance may be threatened due to weak ERM system, complexity, unpredictability, evolving risks and globalization of trading activities. The study recommends that all the commercial SCs in Kenya not only should employ robust enterprise risk management practices but also fully implement their ERM frameworks. Both are likely to influence their financial performance in one way or another. In addition the study recommends that in order for commercial SCs to improve on their financial performance, they should focus on full involvement of all relevant stakeholders at all the ERM implementation stages. The government should on a frequent basis, evaluate the enterprise risk management practices and measures put in place by the commercial SCs in Kenya and reward those with excellent practices. This will encourage more firms to institute ERM practices as well as create more awareness on the need for the same in all organisations. Lastly the, study recommended that risk analysis should be upheld, enhanced and prioritized in the whole process of risk management. Further, corporate governance should be enhanced in order to support risk analysis. Elements such as risk forecasts should not be ignored and should be further enhanced.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

The key importance of effective management of risk is to help organisations achieve their objectives, while complying with legal, regulatory, and societal expectations, and enables them to better respond and adapt to surprises and business disruptions. (IFAC, 2015).

The Institute of Risk Management (2005) defined risk as the combination of the probability of an event and its consequence. Consequences can range from positive to negative. All organisations have objectives at strategic, tactical and operational levels - anything that makes achieving these objectives uncertain is a risk. As our world becomes increasingly volatile and unpredictable, we must cope with greater uncertainty. In Kenya, various state corporations have institutionalized Enterprise Risk Management framework policies to assist in management of organizational-wide risks. This is based on a Treasury Circular No.3/2009 that mandated all public institutions to implement Risk Management Policy Framework (IRMPF).

Over a decade ago, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) issued Internal Control – Integrated Framework to help businesses and other entities assess and enhance their internal control systems. That framework has since been incorporated into policy, rule, and regulation, and used by thousands of enterprises to better control their activities in moving toward achievement of their established objectives. Recent years have seen heightened concern and focus on risk management, and it became increasingly clear that a need exists for a robust framework to effectively identify, assess, and manage risk. In 2001, COSO initiated a project, and engaged PricewaterhouseCoopers, to develop a framework that would be readily usable by managements to evaluate and improve their organizations' enterprise risk management. The period of the framework's development was marked by a series of high-profile business scandals and failures where investors, company personnel, and other stakeholders suffered tremendous loss. In the aftermath were calls for enhanced corporate governance and risk management, with new law, regulation, and listing

standards. The need for an enterprise risk management framework, providing key principles and concepts, a common language, and clear direction and guidance, became even more compelling. COSO believes this Enterprise Risk Management – Integrated Framework fills this need, and expects it will become widely accepted by companies and other organizations and indeed all stakeholders and interested parties. Among the outgrowths in the United States is the Sarbanes-Oxley Act of 2002, and similar legislation has been enacted or is being considered in other countries. This law extends the long-standing requirement for public companies to maintain systems of internal control, requiring management to certify and the independent auditor to attest to the effectiveness of those systems. Internal Control – Integrated Framework, which continues to stand the test of time, serves as the broadly accepted standard for satisfying those reporting requirements. This Enterprise Risk Management – Integrated Framework expands on internal control, providing a more robust and extensive focus on the broader subject of enterprise risk management. While it is not intended to and does not replace the internal control framework, but rather incorporates the internal control framework within it, companies may decide to look to this enterprise risk management framework both to satisfy their internal control needs and to move toward a fuller risk management process. Among the most critical challenges for managements is determining how much risk the entity is prepared to and does accept as it strives to create value. This report will better enable them to meet this challenge. (COSO, 2004).

Ombiro (2014) noted that risk management from a global point of view is a complex task for any organization and increasingly important in a world where economic events are linked. It is a two-step process. The first is to identify the source of the risk, which is to identify the leading variables causing the risk. The second is to devise methods to quantify the risk using mathematical models, in order to understand the risk profile of the instrument so as to ensure effective strategic implementation (Kealhofer, 2003). Risk management is a structured approach to managing uncertainties through risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources.

### **1.1.1 Enterprise Risk Management Practice**

Enterprise Risk Management Practice is defined as the process, affected by an entity's board of directors, management, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives (COSO, 2004).

There are a number of risks that financial firms deal with. These are credit risks, market risks, liquidity risks and operational risks (Nocco and Stulz, 2006). Credit risk is the potential that a borrower/counterparty fails to meet the obligations on agreed terms. There is always scope for the borrower to default from his commitments for one or the other reason resulting in crystallization of credit risk to the organization. These losses could take the form of outright default or alternatively, losses from changes in portfolio value arising from actual or perceived deterioration in credit quality that is short of default (Nocco and Stulz, 2006). The management of credit risk includes: measurement through credit rating/ scoring, quantification through estimate of expected loan losses, pricing on a scientific basis and controlling through effective loan review mechanism and portfolio management (Nocco and Stulz, 2006).

Liquidity risk is the potential for either loss to an institution arising from its inability to meet its obligations or to fund increases in assets as they fall due without incurring unacceptable cost or losses. Theoretically, deposits or contributions generally have a much shorter contractual maturity than loans and liquidity management needs to provide a cushion to cover anticipated deposit withdrawals. Liquidity is the ability to efficiently accommodate deposit and also reduction in liabilities and to fund the loan growth and possible funding of the off-balance sheet claims. The cash flows are placed in different time budgets based on future likely behaviour of assets, liabilities and off-balance sheet items (Al-Tamini and Al-Mazrooei, 2007). Tolerance levels on mismatches should be fixed for various maturities depending upon the asset liability profile, deposit mix, nature of cash flow and so on. A firm should track the impact of pre-payment of loans and premature closure of deposits to realistically estimate the cash flow profile (Nocco and Stulz, 2006).



Market risk is the risk that the value of on and off-balance sheet positions of a financial institution will be adversely affected by movements in market rates or prices such as interest rates, foreign exchange rates, equity prices, credit spreads and/or commodity prices resulting in a loss to earnings and capital (Nocco and Stulz, 2006). Interest Rate Risk is the potential negative impact on the Net Interest Income and it refers to the vulnerability of an institution's financial condition to the movement in interest rates. Changes in interest rate affect earnings, value of assets, liability off-balance sheet items and cash flow (Sensarma and Jayadev, 2009). Hence, the objective of interest rate risk management is to maintain earnings, improve the capability, ability to absorb potential loss and to ensure the adequacy of the compensation received for the risk taken and affect risk return trade-off. Management of interest rate risk aims at capturing the risks arising from the maturity and re-pricing mismatches and is measured from both the earnings and economic value perspective (Sensarma and Jayadev, 2009).

Foreign exchange risk is the risk that a firm may suffer loss as a result of adverse exchange rate movement during a period in which it has an open position, either spot or forward or both in same foreign currency. Even in case where spot or forward positions in individual currencies are balanced the maturity pattern of forward transactions may produce mismatches (Al-Tamimi, 2002). There is also a settlement risk arising out of default of the counter party and out of time lag in settlement of one currency in one centre and the settlement of another currency in another time zone (Al-Tamimi, 2002).

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and system or from external events (Nocco and Stulz, 2006). According to Dorfman (2007), once risks have been identified and assessed, all techniques to manage the risk fall into one or more of these four major categories: risk avoidance, risk abatement, risk allocation, and risk retention. Risk avoidance involves not performing an activity that could carry risk (eliminate, withdraw from or not become involved in the activity). Avoidance may seem the answer to all risks but avoiding risks also means losing out on the potential gain that accepting the risk may have allowed. Risk abatement is the process of combining loss prevention or loss control to minimize a risk. It is also called risk reduction or risk optimization. Risk allocation is the sharing of the risk burden with other parties for example asset allocation to various asset classes that is equity,

bonds, real estate, private equity, hedge funds, and so on. Risk retention is a good strategy but it is impossible to transfer the risk. There are however a number of risks that are specific to retirement benefits scheme, which the commercial state corporations are supposed to consider in their ERM activities. These are sponsor insolvency risk (risk of the employer becoming insolvent or being unable to meet obligations to the scheme), counter-party default risk (risk of loss from the failures of a counterparty for example Service provider to meet its obligations), market risk (risk of losses due to movements in asset prices or interest rates), operational risk (risk of losses resulting from inadequate internal processes, people and systems), liquidity risk (risk that the scheme will not be able to meet its payment obligations as they fall due without excessive cost), legal and regulatory risk (the likelihood of adverse consequences arising from the failure to comply with all relevant laws and regulations), strategic risk (risks to the continued viability of the scheme as a result of change in the operating environment), contagion and related party risk (risk to a scheme's operations as a result of close association with another entity), and actuarial risk (risk that assumptions made in predicting liabilities, for example life expectancy, prove to be incorrect resulting in higher than planned for liabilities) (Mutuku, 2011).

In general, companies hardly publish any comprehensive information about their existing risk management system or plans. Hence, the empirical literature is faced with the challenge of gathering information about whether or not an ERM system has been adopted and to what degree. Information about the current corporate risk management system can either be collected by using surveys or by scanning public sources. Surveys are typically used to study the level or stage of the ERM implementation. Beasley, Clune, and Hermanson (2005), for instance, conduct a survey and introduce a classification of five stages to analyse the determinants of ERM. Further studies make use of external databases such as Standard & Poor's (S&P) ERM rating (McShane, Nair, and Rustambekov, 2011) and the Osiris database (Razali, Yazid, and Tahir, 2011; Tahir and Razali, 2011) or develop their own index for the firm's ERM (Gordon, Loeb, and Tseng, 2009).

### **1.1.2 Organizational Performance**

The Performance of an institution can be measured using either financial or non-financial measures. The former remains an important part of measuring performance of an entity, especially in the current economic climate. The performance of SCs is portrayed by the levels of asset base, revenue growth, and the level of customer satisfaction (Adhiambo and Memba, 2012). Most SCs target increased profits, liquidity and solvency as a measure of their sound financial health. Liquidity measures the ability to meet financial obligations as they come due, without disrupting the normal, ongoing operations of SCs while solvency measures the amount of borrowed capital used by the institution relative the amount of owner's equity capital invested in the business. Profitability as a measure of financial performance indicates the extent to which an institution is generating profits from the factors of production. Mesquita and Lara (2003) argue that profitability analysis focuses on the relationship between revenues and expenses and on the level of profits relative to the size of investment in the institution.

Venkatraman et al. (1986) cited that the Financial Performance of an institution can be assessed using the return on investment, growth of sales, profit, organization effectiveness, and business performance. Delaney et al. (2006) assert that organization financial performance can be evaluated using return of investment, margin on sales and capacity utilization. According to Green et al. (2007), in addition to return on investment, sales, market growth and profit stand out as very important factors that be used by organizations to assess their financial performance.

As a key partner, the Government is always interested in ensuring that SCs fulfil their policy mandate in a financially sustainable manner and according to an explicit set of operational objectives and financial performance targets. According to Rudolph (2009), the financial performance of SCs and development outcomes go hand-in-hand because financially successful projects contribute to economic growth, which in turn naturally results in improved development outcomes. Most of the SCs generally prefer larger investments over smaller ones, and report better financial returns and better development impacts for larger projects. Moreover, an International Monetary Fund report (IMF, 2008) calculates the financial rates of return (to investors) and economic rates of return

(to society, including external and qualitative benefits) and argues that economic returns to society as a whole exceed financial returns on investment in 91% of cases

### **1.1.3 Commercial State Corporations in Kenya**

State Corporations are deeply implicated in most fiscal problems of African governments because of their inefficiency, losses, budgetary burdens, and provision of poor products and services. Occasionally, they achieve some non-commercial objectives, which are used to justify their poor economic performance (Louw, 2009). In Kenya, State Corporations consume large portions of scarce national resources and do not always use them effectively or efficiently. With over 160 State Corporations, more than 50% receive direct exchequer funding for either all their expenditure or are subsidized to a very large extent with funding that averages 30% of Development and Recurrent national budget (State Corporations Advisory Committee [SCAC], 2009). The same had been voiced by the Taskforce on Parastatal Reforms in their October 2013 report.

Report of The Presidential Taskforce on Parastatal Reforms(2013), noted that, in order to remove ambiguity in definition and facilitate differentiated regulatory regime for Government Owned Entities a State Corporation shall be an entity howsoever incorporated that is solely or majority owned by the government or its agents for commercial purposes. A commercial function for the purpose of this policy is a function the dynamics of which are governed by a competitive profit driven market and that can be performed commercially but also serves a strategic socio-economic purpose as from time to time defined by the president. State Corporations therefore shall include: (a) Commercial State Corporations; and (b) Commercial Corporations with strategic functions that are to be defined through the national development planning process. These entities shall be incorporated and managed under the Companies Act Chapter 486.

Report of The Presidential Taskforce on Parastatal Reforms(2013), reclassified Government Owned Entities and came up with 34 Purely Commercial State Corporations shown in Appendix II.

## 1.2 Statement of the Problem

Amulyoto (2014) noted that ministries play a key role in the economy by creating an enabling environment and providing basic facilities that spur economic growth and national development. The ministries are entrusted with vast resources to enable them deliver their specific mandates that together contribute to the Kenya Vision 2030, a blue print for national development. However, in pursuit of their mandates, they encounter risks that lead to poor performance as reported in the Kenya Economic Survey 2000 - 2013 hence the need for the Institutional Risk Management Policy Framework (IRMPF). The IRMPF was launched by the national government vide Treasury Circular No 3/2009 however five years down the line, the effectiveness of the IRMPF implementation has not been felt.

Amulyoto (2014), in her research sought to identify the challenges encountered in the implementation of the IRMPF in these ministries. All the ministries confirmed having several challenges across the board. Management buy in and leadership skills, scheduling and sequencing of activities, value creation by corporate parenthood, change management and dilemma of strategic choice were a common experience to all the ministries. The study concludes that the key players did not properly understand the IRMPF implementation. Strategies and models to guide the implementation were also lacking. It also lacked a feedback mechanism to inform on the challenges for appropriate corrective actions. The study recommends a re-engineering of the IRMPF roll out by the National Treasury by sensitizing the top management and ensuring that the programme is guided and monitored. Other studies should establish the quality of documents and reports produced.

The study was only narrowed to government ministries and did not go further to establish the role played by enterprise risk management practice in other government bodies that include commercial state corporations. A review on the study of State Corporations in Kenya (Abuya, 2008) revealed that although board committees were in place they did not understand their roles and the employees had not been sensitized on the risk management philosophy. Amulyoto (2014), in her research sought to identify the challenges encountered in the implementation of the IRMPF in these ministries. Nyagah (2009)

conducted a study on the challenges of IRMP implementation, Nzomo (2013) conducted a research on the impact of risk management system on an organization's efficiency, Leah (2013) conducted a study on the impact of IRMP implementation on the role of management and board. There is no other known study that has been done on the role of enterprise risk management practice in commercial state corporations in Kenya; this study therefore sought to fill the existing research gap.

### **1.3 Research Objectives**

The general objective of the study was to establish the impact of enterprise risk management practice on the performance of selected commercial state corporations in Kenya

#### **1.3.1 Specific Objectives**

The specific objectives of this study were:-

- i. To establish the impact of risk control self-assessment on the performance of commercial state corporations in Kenya.
- ii. To establish the impact of risk indicators on the performance of commercial state corporations in Kenya.
- iii. To examine the impact of incident management on the performance of commercial state corporations in Kenya.
- iv. To determine the impacts of both internal and external regulations on the performance of commercial state corporations in Kenya.
- v. To determine impact of action tracking on the performance of commercial state corporations in Kenya.

### **1.4 Hypotheses**

The study adopted the following null hypothesis:-

Ho<sub>1</sub>: Risk control self-assessment has an impact on the performance of commercial state corporations in Kenya

Ho<sub>2</sub>: Key risk indicators has an impact on the performance of commercial state corporations in Kenya

Ho<sub>3</sub>: Incident management has an impact on the performance of commercial state corporations in Kenya

Ho<sub>4</sub>: Compliance of both internal and external regulations has an impact on the performance of commercial state corporations in Kenya

Ho<sub>5</sub>: Action tracking has an impact on the performance of commercial state corporations in Kenya

### **1.5 Significance of the Study**

The theorist group will find this study useful by having a basis for undertaking deeper studies on gaps identified because the reviews have shown that there is insignificant coverage on this subject. Commercial State Corporations, the National Treasury and Policy makers will also find the study relevant and useful by having access to this literature and information which can be applied to improve existing policies or to address stalled policy formulation processes. The wider public will also benefit by avoiding pitfalls highlighted in this study and make risk management programmes more effective and efficient.

The practitioners who include Risk and Compliance Officers, Internal Auditors and Accountants will benefit by accessing the solutions suggested from this study. This report will save them time and money that would have been incurred in performing a similar study because the study has captured valuable information from key participants that would not be easy under ordinary circumstances.

The policy makers and professional bodies such as COSO, The Institute of Internal Auditors (IIA) and The Institute of Certified Public Accountants of Kenya (ICPAK) will benefit from this study when reviewing professional practising standards for risk management.

### **1.6 Scope of the Study**

The main objective of this study was to examine the factors affecting risk management practice in selected commercial state corporations in Kenya. The study focused on the Report of The Presidential Taskforce on Parastatal Reforms (2013), reclassified Government Owned Entities and came up with 34 Purely Commercial State Corporations.

## **1.7 Limitations of the Study**

Even though the research was meant to measure ERM practices and it is purely for academic purpose, some respondents thought it was a deliberate act of benchmarking due competition from the private sector. To manage this shortcoming, the researcher ensured there was confidentiality of the study by explaining the purpose of the study to respondents. Furthermore, ERM in Kenya is new phenomenon in most organization, Kenyan specific data was a challenge for the study, but the researcher endeavoured to bring what other researcher in Africa have contributed to ERM in organisations.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents the literature review. The chapter first discusses the theoretical literature where the theories on ERM are discussed. The next section focuses on a review of enterprise risk management practices and ERM framework followed by an empirical review of literature. The last section summarises the chapter and presents the gap in literature.

#### **2.2 Theoretical Literature**

The study relating ERM and organization performance cannot not be exhausted without considering the underpinning theories and models of risk management. Numerous theories have been proposed regarding risk management in organizations with the aim of providing guidance in identifying the key tenets of risk management in institutions globally. In this study, the underpinning theories reviewed include; Modigliani and Miller, Modern Portfolio Theory and Capital Assets Pricing Model. The examination of the theories below respectively are concluded on how each theory relates to this study.

##### **2.2.1 Modigliani-Miller Proposition**

There is a broad literature on risk management decisions for firms in general, beginning with Modigliani and Miller (1958): Their famous theorem states that in a world of perfect and complete markets, financial decisions are irrelevant as they do not alter the value of the shareholder's stake in the firm. The only way to increase shareholder's wealth is to increase value of the firm's assets. Neither the capital structure nor the risk management decisions have an impact on shareholder's wealth.

Some important deviations from the perfect capital markets in the Modigliani and Miller setting have been identified, giving motivations for firms to care about risk management, such as taxes, bankruptcy costs, agency costs and others (Gossy, 2008). When these reasons for risk management are incorporated into the firm's objective function, one finds

the following basic result: When all risks are perfectly tradeable the firm maximizes shareholder value by hedging completely (Gossy, 2008; Mozumdar, 2001).

Modigliani and Miller (1958) state that under the restrictive neoclassical assumptions, corporate financial decisions do not influence the value of the firm. These decisions simply redistribute the income stream among different investors. As long as investors can act in the capital markets at the same terms and conditions as the firm itself, the only way to impact firm value is by influencing the expected level of firm cash flows (Gossy, 2008).

Since ERM is part of an overall financing policy, the MM findings directly have important implications for the ERM strategy of the firm. Under the MM proposition, any investor's wealth position is unaffected by corporate risk management activities on the part of the firm (Gossy, 2008). Following this argument, a MM disciple would argue against doing any risk management at all since it is a purely financial transaction (Gossy, 2008). The immense importance of the MM proposition for corporate risk management, however, becomes apparent when it is used a starting point for identifying conditions under which corporate risk management makes economic sense. Such a positive theory of corporate risk management can be derived by relaxing the neoclassical assumptions of the MM proposition.

### **2.2.2 Modern Portfolio Theory**

Modern Portfolio Theory (MPT) is a theory of investment which tries to maximize return and minimize risk by carefully choosing different assets (Markowitz, 1952). MPT is a mathematical formulation of the concept of diversification in investing, with the aim of selecting a collection of investment assets that has collectively lower risk than any individual asset. This is possible, in theory, because different types of assets often change in value in opposite ways. For example, when the prices in the stock market fall, the prices in the bond market often increase, and vice versa. A collection of both types of assets can therefore have lower overall risk than either individually (Mandelbrot, and Hudson, 2004). The Primary principle upon which Modern Portfolio Theory is based (MPT) is the random walk hypothesis which states that the movement of asset prices follows an Unpredictable path: the path as a trend that is based on the long-run nominal

growth of corporate earnings per share, but fluctuations around the trend are random (Chandra, Siddharth and Shadel, 2007).

Since Modern Portfolio Theory (MPT) is based on the random walk hypothesis which states that the movement of asset prices follows an Unpredictable path in terms of the risk incidents management practice takes into consideration the management and analysis of actual risk incidents to ensure that the incident is managed correctly by ensuring that the negative consequences from the incident are minimized and improvements are put in place to ensure the incident does not recur. In addition, the theory also gives the identification process involves monitoring current risk levels and control performance as well as identifying hotspots and trends of the risk over the recent past.

### **2.2.3 Capital Asset Pricing Model**

The concept of risk is closely related to the insights of portfolio theory. The most important paradigm of risk is part of a set of results known in the financial economics literature as the Capital Asset Pricing Model (CAPM) developed by Sharpe (1964) and Lintner (1965) and later refined by Black (1972). It represents an extension and simplification of the model by Markowitz (1952). The Markowitz model was the first theorizing a relationship between risk and return. In his model, there are as many efficient portfolios as there are investor risk preferences. All efficient portfolios must lie on the mean-variance investment frontiers where investors can get a higher return only by accepting a higher level of risk (Gossy, 2008). The CAPM extends this theory to a situation of equilibrium. The CAPM argues that all investors will hold the same efficient portfolio (the market portfolio) regardless of their individual risk preferences. Thereby, the CAPM is capable of determining the market price for risk and an appropriate risk measure for a single asset (Gossy, 2008).

There have been numerous anomalies of the CAPM that have been discovered by finance researchers. This has initiated a discussion of the usefulness of the CAPM for the field of strategic management starting with the contribution by Bettis (1983). He detects a conundrum regarding the role of risk in strategic management context and states the main points of controversy between finance and strategy (Vicente-Lorente, 2001). In particular, he seriously questions the implications of the CAPM on strategic management

but especially corporate risk management. He identifies an implied recommendation in the CAPM to corporate management not to be concerned at all about firm-specific risks. Bettis (1983) argued that business risks are associated with firm specific resources and competencies and are strongly related to the firm-environment interface. This theory implies that for ERM, firms should institute efficient portfolios that offer maximum returns and minimum risks.

## **2.4 Empirical Review**

Applying concepts of portfolio theory, ERM can increase firm value because the risk of an aggregate portfolio should be less than the sum of the individual risks if the risks are not 100% correlated, especially if natural hedges exist. Liebenberg and Hoyt (2003) investigated the determinants of ERM adoption, using the appointment of a credit risk office CRO as a proxy for ERM implementation. Their main finding is that more leveraged firms are more likely to appoint a CRO. In a similar study, Pagach and Warr (2011) find that firms with more leverage, higher earnings volatility, poorer stock performance, and a CEO whose compensation increases with stock volatility are more likely to have a CRO. Using survey data, Beasley, Clune, and Hermanson (2005) find ERM implementation in their sample of firms to be positively related to factors such as the presence of a CRO, firm size, and whether the firm is in the insurance or banking industry.

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

used in this study, which we believe comprehensively captures the complexity of ERM and reflects the extent of its implementation.

Tonello (2009) undertook a study on risk management in financial institutions and findings were that the role of chief risk officers (CROs) had expanded dramatically, with more than half of them frequently involved in firm - level strategic decisions. In a study of the sensitivity to risk of large domestic banks in the USA, Linbo Fan (2004) found that profit efficiency is sensitive to credit risk but not to insolvency risk or to the mix of loan products. Hahm (2004) argues that it is necessary to improve banking supervision and organizations' risk management to ensure successful financial liberalization. Fatemi and Fooladi (2006), after investigating the current practices of credit risk management in the largest US-based financial institutions, reported that identifying counterparty default risk is the single most important purpose served by the credit risk models utilized.

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

Al-Tamimi (2008) studied the relationship between the readiness to implement the Basel II Accord and the resources needed to implement it in UAE banks. The results revealed that these banks are aware of the benefits, impact and challenges associated with the implementation of the Basel II Accord. However, the research did not find any positive relationship between the UAE banks' readiness to implement Basel II and the impact of that implementation. Nor was the relationship between readiness and

anticipated cost of implementation confirmed. No significant difference was found in the level of preparation for the Basel II Accord between the UAE national and foreign banks.

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

Chazi and Syed (2010), in their study, claim that capital adequacy and risk for the banks can be effortlessly recognized using leverage and gross revenue ratios while also claiming that Islamic banks demonstrate better leverage and gross revenue ratios.

Financial ratios are good taxonomy and predictor variables of firm's recital. The objectively calculated misclassification costs and the probability of failure can effortlessly be acknowledged, two years prior to any real collapse, through the use of MDA for categorization and assessment of customers hence cutting down bank's on non-performing loans and its credit risk exposure considerably (Chijoriga, 2011).

Smith and Stulz (1985) demonstrated that when a risk-averse manager owns a large number of the firm's shares, his expected utility of wealth is significantly affected by the variance of the firm's expected profits. The manager will direct the firm to hedge when he believes that it is less costly for the firm to hedge the share price risk than it is for him to hedge the risk on his own account. Consequently, Smith and Stulz further predict a positive relation between managerial wealth invested in the firm and the use of derivatives. They measured the managerial wealth from shares by the log of the market value of common shares beneficially owned (excluding options) by officers and directors as a group. They also show that exogenous bankruptcy costs create incentives for bondholders to support optimal hedging. By reducing the variance of a firm's cash flows (or accounting profits); hedging decreases the probability, and thus the expected costs, of financial distress.

Breeden and Viswanathan (1996) and DeMarzo and Duffie (1995) developed models in which managerial reputation provides incentives for managers to use derivatives.

#### **2.4.1 Enterprise Risk Management Practices (ERMP)**

Institutional Risk Policy Management Framework (IRMPF) refers to a common language and guidance for clear direction on enterprise risk management with comprehensive structures and instructions to inform and guide all policy implementers. It provides; the definition of risk, the role of governance on risk management, the purpose for the policy and objectives, policy statement, policy scope, the structures and the roll out model to be applied. It also includes the responsibilities for each player, risk reviews dates, communication and reporting structures, significant risks and their definitions and the roll out plan (McNaull, 2004).

Amulyoto (2014), noted that according to COSO framework, risk management seeks to; align risk appetite to business strategy, enhance risk response decisions, reduce operational surprises and losses, identify and manage multiple cross-enterprise risks, seize opportunities, reduce incidences of fraud and corruption .It also establishes accountability and enforces compliance with laws and regulations.

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

#### **2.4.2 Risk and Control Self-Assessment**

Lewis (2005) observed that identifying objectives of the business unit or activity being assessed is the first assessment of the risk and control existing in the firm. At this

step, the risks treatment of the firm is identified across all sections as well as the available treatments in place, level of gross and residual risk is assessed. The evaluation of the current organizational environment component captures the traditional idea of the —tone at the top, but it includes much more since risk consciousness, risk appetite, risk philosophy, and board oversight is also included. The ERM considers three proxies for internal environment that includes having a risk mission statement, including risk in job responsibilities, and having the board involved in risk management efforts (Lewis et al., 2005). This emphasis and environment leads to an increased management focus. In 2011, the SEC's director of the Office of Compliance Inspections and Examinations stated that the business and supporting functions (ethics, risk management office, and internal audit) are the first lines of defence and that senior management reinforcing the tone and culture is the next line of defence. COSO noted that management decisions create value and enhance performance.

Beasley et al., (2008) point that the management need to consider the risk appetite, set objectives, identify risks, identify risk responses, consider risk alternatives, assess capital needs for the risks, and so on. Both COSO and ISO support the idea of value being part of an ERM process. According to COSO, a company maximizes value when management sets strategy to balance growth and risks and when management correctly uses resources as it pursues objectives and manages the related risk. The central idea is that value is created, and, therefore, performance is enhanced. Indeed the success of organizations depends upon the risk management and understanding properly the firm's sensitiveness to different types of risk. Thus, it can be seen that organizations will be advantageous to establish risk management practices mitigate various risks facing the organization. The formal risk management practices entails the following steps namely; risk identification, risk analysis and risk evaluation. According to Burnaby and

Hass (2008) organizational risk management process entails seven steps namely; mandate from the top, deciding on a control framework, determining and assessment of risk, identifying business unit objectives and performance measures, initiating monthly reporting and analysing process and finally continuously monitoring the process.



### **2.4.3 Identification of Risk Indicators**

The identification process involves monitoring current risk levels and control performance as well as identifying hotspots and trend of the risk over the recent past. The aim is to establish what level of risks will be considered catastrophic, as part of normal business without taking any further action to improve or better still to identify the risk that require immediate corrective action.

Simmons (2000) posit the definition of the business objectives is a crucial initial step towards mitigation of risk because if an organization does not know where to go it is difficult to identify what risks may arise. In fact, an unclear business objective is a strategic risk in itself, and should be remedied at this stage. By reviewing the strategy and plans, and through interviews and a management session on targets and objectives, the business objectives are assessed for clarity. Further noted by Kersnar (2009) the risk identification process should try as much as possible to remove ambiguity, discord, disagreements and other vagueness as possible.

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

According to Gupta (2012) for example, he points that in the Indian companies, risk is analysed in terms of its financial impact followed by consequences.

However, operational modelling is not a popular technique for risk identification since line managers, CFOs and internal auditors mostly use past experience analysis and process analysis. The sophisticated tools of identifying risks like scenario analysis and strengths, weaknesses, opportunities and threats (SWOT) analysis are not frequently used in case of companies where the risk identification responsibility is that of board of directors/executive management team (Deloitte, Report, 2008). In a call

for risk management research that focuses on the coordination and strategic allocation of risk, Stulz (1996) proposes that academic theory expand beyond considering that the goal of risk management is variance minimization. In other words, the goal of risk management should not be to reduce total risk but to allocate risks to play on a firm's strengths. A basic concept of ERM is that a firm should reduce exposure to risk in areas where it has no comparative information advantage and exploit risks in areas where it has an advantage, meaning that total risk can possibly increase under ERM risk allocation.

#### **2.4.4 Incident Management**

The risk incidents management practice takes into consideration the management and analysis of actual risk incidents to ensure that the incident is managed correctly by ensuring that the negative consequences from the incident are minimized and improvement are put in place to ensure the incidents does not recur. According to Hallikas (2004), the aim of incident management is to enhance organization transparency, determine improvements to avoid the same incident recurring, provides objectives data of various risk types, identification of risk problem areas and acts as a staff problem recording system.

Further, Jhangiani (2007), note that incident management ensures that the organization learn from past mistakes, ensure one business unit learns from another, monitoring of high frequency, low consequence items as well as identifying which controls are not working and that can be fixed. Companies should respond and react to their assessments because they have more and better knowledge. Response techniques included risk avoidance, risk reduction, risk sharing, and risk acceptance. Blanco and Reagan (2006), posit that there are two major indicators of risk response. The first indicator addresses having a process to integrate the effects of the risks; the second indicator examines risk-mitigation strategies and as companies begin to assess and quantify risk, analyse the root cause, integrate risks, and develop mitigation strategies, this process should have an impact on management's ability to oversee risks.

#### **2.4.5 Compliance of both Internal and External Regulations**

An organization should comply with both internal and external regulations. These regulations include legal or regulatory sanctions, financial loss, or loss to reputation a company may suffer as a result of its failure to comply with all applicable laws, regulations, and codes of conduct and standards of good practice. The assessment of effectiveness of the control mechanism in place should answer such questions as does control exist, is it well designed, does it link to legislation, does it link with other risk management process for example RCSA (Ojala and Hallikas, 2006).

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

This step involves a brainstorming session (Berinato, 2006) and will entail analysis of the institutional strengths, weaknesses, opportunities and threats in order to come out with effective analysis for the strategic risks. In an effort for an organization to evaluate the effect of the risks on asset values and economic performance analysis of potential benefits from different risk mitigation efforts and need for risk transfer and financing arrangements will have to be determined (Berinato, 2006). According to Gupta (2009), in order for the brainstorming session to be successful in analyzing

the risks, the members should review significant business information prior to the brainstorming so that she/he can ask penetrating questions. Both risks and characteristics should be identified from the widest possible range of issues, including at least strategy, operations, culture, systems, competence and brand. Although, impossible to fully achieve, the issues should be exhausted. In addition, to effectively manage the various exposures that an organization might face, an organization should put in place corporate accountingsystems to identify and measure the relevant exposures as well as internal control processes adopted to check whether exposures are kept within bounds and whether processes remain in line (Shimell, 2002).

#### **2.4.6 Action Tracking**

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

Gupta (2009) notes that formal risk management process resemble control element whereby corporate management is supposed to monitor performance outcomes against intended goal to ensure that corporate activities remain on track and correspond to the set course is that some digression from the beaten track also can hold the key for generating innovation ideas and adaptive responses to changing environmental conditions. Once an organization notices some diversions from the norm, then appropriate mechanism should be put in place to realign the results with what the organization intends to achieve (Shimell, 2002). Hence several control techniques such as balance score and financial measures will be adopted during this period.

Corporate decision on whether these exposures are acceptable in view of prevailing organization responses should be assessed and agreed by the strategy team and then ways of overcoming the same risks will have to develop. Risk assessments in project management see a need to balance planning with adaptive solutions that arise as the projects are implemented. Once these factors are identified, the vulnerability to the various risks can be analysed and the potential economic effects determined (Berinato, 2006).

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

#### **2.4.1 Empirical Gap**

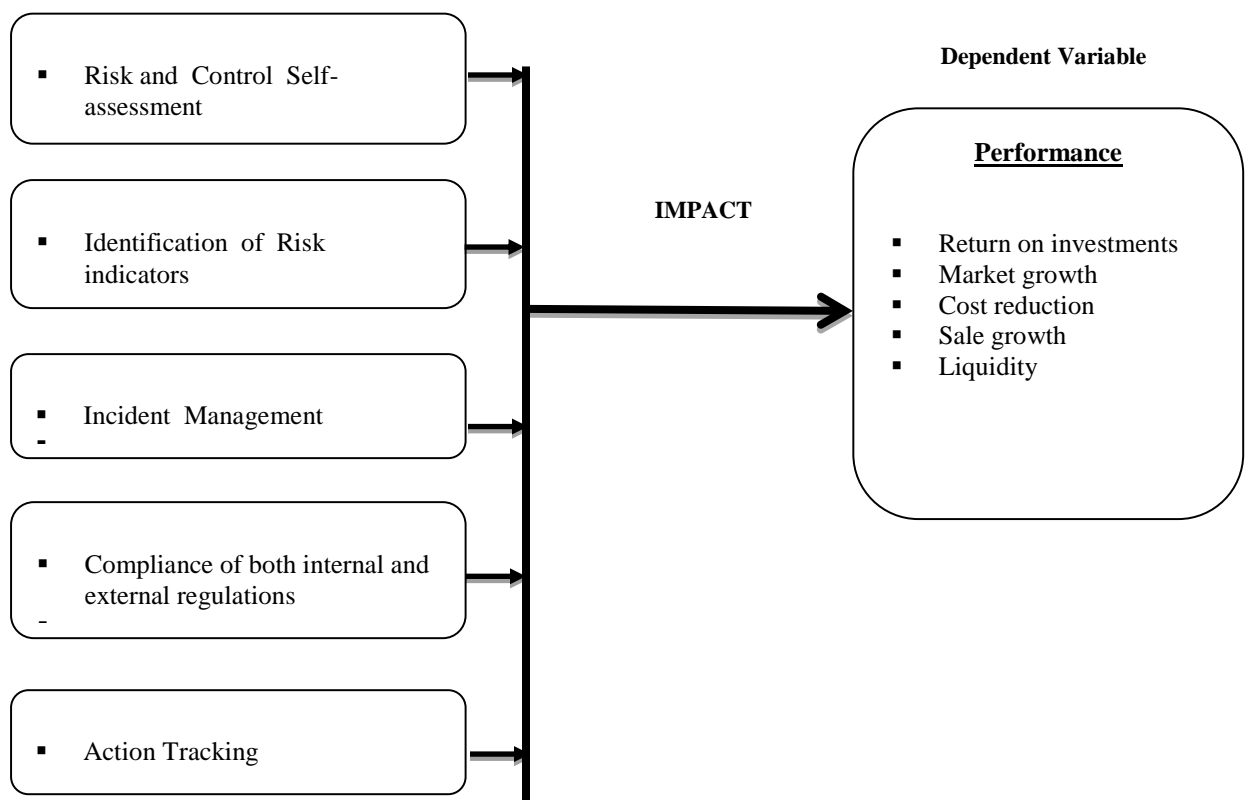
Most of the highlighted studies in the literature review do not explicitly address the effect of ERM practices on the Financial Performance of Commercial State Corporations in Kenya, they are rather more inclined to the private sector and multinational corporations. A scarcity of literature in the area of study exists, particularly in the developing states like Kenya. The few that have been conducted in the third world nations have eluded criticism in the criteria, title, scope; methodology used hence the research gaps in terms of literature.

**Table 2.1: Empirical Gap Summary**

Author	Year	Title	Findings	Gaps
Pagach Peter and Warr Mosly	2011	Risk Management Leverage in Companies	Firms with more leverage, higher earnings volatility, poorer stock performance, and a CEO whose compensation increases with stock volatility are more likely to have a CRO.	The study didn't look into impact of risk control self-assessment in companies
Beasley Clune, and Hermanson Cyril	2005	ERM Implementation Cycle in Organizations	ERM implementation in their sample of firms to be positively related to factors such as the presence of a CRO, firm size, and whether the firm is in the insurance or banking industry	The finding did not touch impact of risk indicators on the performance of organizations
Hoyt Maxell and Liebenberg Zlcklin	2011	Relationships between the appointment of CRO and Risk Management	There is a positive relationship between firm value and the appointment of a CRO.	Measures to identify impact of incident management on the performance of CRO not concluded
Tonello Mathew	2009	Risk Management In Financial Institutions	The findings were that the role of chief risk officers (CROs) had expanded dramatically, with more than half of them frequently involved in firm - level strategic decisions	Mechanism to address the impacts of both internal and external regulations was not given
Al-Tamimi Hamad	2008	Relationship Between The Readiness To Implement The Basel II	Accord and the resources needed to implement it in UAE banks. The results revealed that these banks are aware of the benefits, impact and challenges associated with the implementation of the Basel II	Inclusion of impact of action tracking on the performance was limited
Chazi Paul and Syed Lucy	2010	Capital Adequacy and Risk Management in Banks	Capital adequacy and risk for the banks can be effortlessly recognized using leverage and gross revenue ratios while also claiming that Islamic banks demonstrate better leverage and gross revenue ratios	The study didn't look into impact of risk control self-assessment in companies
Amulyoto May	2014	COSO Framework In Modern Times	risk management seeks to; align risk appetite to business strategy, enhance risk response decisions, reduce operational surprises and losses, identify and manage multiple cross-enterprise risks, seize opportunities, reduce incidences of fraud and corruption .It also establishes accountability and enforces compliance with laws and regulations	Mechanism to address the impacts of both internal and external regulations was not given
Acord Jorion	2001	Risk Management in Property Management	the success of organizations depends upon the risk management practices and understanding properly the firm's sensitiveness to different types of risk	The finding did not touch impact of risk indicators on the performance of organizations

## 2.5 Conceptual Framework

This study will be guided by the researcher's conceptual model drawn from the literature review. The framework will include enterprise risk practices as independent variable from the first objective variable performance of commercial state corporations as dependent variable being the resultant role of ERMP. The indicators under ERMP in the diagrams are risk and control self-assessment, identification of risk indicators, incident management, and compliance of both internal and external regulations and action tracking. The inter play of the five have a resultant effect on the performance of an organization both positively and negatively.



Sources: Researcher (2017)

Figure 2.1: Conceptual Model

## 2.7 Chapter Summary

The study theoretical review has discussed, three theories have been advanced that explain the adoption of ERM practices in organisations. The theories are Modigliani-Miller framework, capital market theory, and modern portfolio theory. In this study, it is important to understand which theory may better explain the adoption of ERM for fund managers in Kenya.

The importance of a firm employing the enterprise resource management system and the various ERM practices has been expounded in detail both in the literature as well as from the empirical studies done on the subject area. Every day, the global markets experience volatility based on economic data, political news and other social-economic factors and as a result, the companies need to employ a management system that can easily identify the existence of the risk and come up with the mechanism of mitigating itself against the risk. Effective risk management is about identifying, analysing and implementing procedures to minimize or eliminate unnecessary risks to the core business. It is also about ensuring some level of financial predictability to future earnings.

A review of prior literature reveals that there exists a significant relation between a firm's performance and its risk management practices. A number of ERM practices employed by various firms include; risk identification, determination of organizations health, risk analysis, information and communication, risk evaluation. These measures are taken to mitigating underinvestment problem, to reduce asset substitution problem, undiversified managers wanting to reduce risk and management incentives structures, harmonizing investment and financing policies, reducing bankruptcy and financial distress costs, reducing the corporate tax burden.

However, it is evident from the literature that none of the studies has been able enough to develop a model that will assist managers to establish an appropriate ERM practices for a particular industry or business line. Instead, the literature and studies suggest the various ERM practices that can be adopted by a firm and also there exist an empirically validated model that will provide the relationship that exists between adoption of various ERM practices and firm performance. Therefore, the study proposes a conceptual framework to



close the identified gaps by assessing the role of ERM practice on the performance of commercialState Corporation in Kenya.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the research methodology. First, a presentation of the research design is provided. This is followed by an explanation on the target population, the sample and a description of data collection method and data analysis procedures.

#### **3.2 Research Design**

This study adopted a descriptive study design. Descriptive research design is a design that will be used when the researcher wants to describe specific behaviour as it occurs in the environment (Greener, 2008). The aim of the study was to examine the factors affecting enterprise risk management practice in commercial state corporations in Kenya. According to Mugenda & Mugenda (2003), the purpose of descriptive research is to determine and report the way things are and it helps in establishing the status of the population under study. Borg & Gall (1996) note that descriptive survey research is intended to produce statistical information about aspects of a study that interest policy makers

#### **3.3 Target Population**

According to Ogula (2005), a population refers to any group of institutions, people or objects that have common characteristics and meet the criteria needed the respondents to provide the information. The target population for this research was 136 staff obtained forming the unit of observation from the 34 selected commercial state corporations forming unit of analysis i.e. (34x4). The respondents were managers, internal audit managers, operations managers and accountants in each of the 34 state corporations. The 34 commercial state corporations in Kenya which also institutional forms the target and accessible population is informed by Planning and Devolution Ministry from the Report of The Presidential Taskforce on Parastatal Reforms (2013).

### **3.4 Sample and Sampling Technique**

Sampling is a procedure, process or technique of choosing a sub-group from a population to participate in the study (Ogula, 2005). According to Mugenda and Mugenda (1999), a sample is a smaller group or sub-group obtained from the accessible population.

This study conducted a census of the 134 which was the number obtained by selecting 4 staff from each CS corporation currently being 34. Census method is useful because it ensures total representation of the members and this helps reduce bias issues due to heterogeneity of the populations which might be taken as though being homogenous (Kothari, 2004).

### **3.5 Data Collection Instruments**

Both primary and secondary data were used. Primary data was collected using questionnaires (see appendix I) structured based on the objectives of the study. This specifically collected data on the practice and implementation of enterprise risk management. According to Schwab (2005) questionnaires are measuring instruments that ask individuals to answer a set of questions or respond to a set of statements.

#### **3.5.1 Reliability of the Instruments**

Reliability is a measure of how consistent the results from an instrument are (Kombo and Tromp, 2006). It is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda and Mugenda, 2003). To ensure consistency of the developed instrument, the instrument were pilot tested using a random sample of 10 employees from 10 commercial state corporations. The 10 were selected because of its their Headquarters in Nairobi. The number 10 were selected for pre-test because according to Kathuri and Pals (1993) 10 is the smallest number that can yield meaningful results on data analysis in a survey research. The researcher established the reliability of the instrument by using of Cronbach alpha method. This method was appropriate since it involves a single administration of the instrument therefore it

expected to yielded greater internal consistency. The research instruments was deemed reliable if the reliability coefficient will be above 0.7. (Borg and Gall, 2003).

### **3.5.2 Validity of the Instruments**

According to Mugenda and Mugenda (2003) validity is the degree to which an instrument measures what it purports to measure. According to Cozby (2001), using a panel of experts familiar with the content is the best way in which content validity can be established. In this study, the researcher reviewed the content of the study questionnaire with the panel comprising of masters students and the institution lecturer within the line of project management. This will compliment Cozby (2001) validation requirements.

### **3.6 Data Collection Procedure**

Data collection is the precise, systematic gathering of information relevant to the research sub-problems, using methods such as interviews, participant observations, focus group discussion, narratives and case histories. (Burns and Grove, 2003).

Questionnaires were administered through mail and drop and pick later methods. The respondents were risk managers and risk officers in each of the 34 state corporations. A two-week period was given for the respondents to fill in the questionnaires after which they were collected for analysis. Secondary data was collected for purposes of examining factors affecting enterprise risk management practice in commercial state corporations.

### **3.7 Data Analysis and Presentation**

Data was collected and analysed using descriptive statistics (measures of central tendency and measures of variations) and regression analysis. Multiple regression analysis was applied to the data to examine the role of the various aspects of ERM practices on the performance of the commercial state corporations in Kenya.

The questionnaires were coded and analyzed using the statistical package for social science (SPSS). Quantitative analysis were carried out using descriptive statistics including mean, mode, median, standard deviation and frequency. Qualitative data was

analysed using content analysis method, by categorizing the main themes or patterns of information. This was presented using graphs, pie charts and tables and a final report compiled for presentation containing the recommendations and conclusions of the study.

The dependent variable in the study was as per the conceptual framework. The independent variables for the study were 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 assumed the following form:

$$PCSC = f(X_1, X_2, X_3, X_4, X_5);$$

More specifically, the regression was 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 = Performance

$B_0$  = Constant

$X_1$  = Risk Control Self-Assessment

$X_2$  = Key Risk Indicators

$X_3$  = Incident Management

$X_4$  = Compliance of both Internal and External Regulations

$X_5$  = Action Tracking

### **3.8 Test of Hypotheses**

Mouton (2001) explains that observations or data can be interpreted by developing hypotheses or theories that explain observed patterns and trends in the data. Interpretation means associating the results and findings of the study to existing theoretical frameworks or models and showing whether these are supported or proven false by the new interpretation. The formulation of hypotheses is a fundamental principle in the scientific method and the purpose of hypothesis is to predict a relationship between variables that can be tested. The hypothesis, once formulated, can be accepted or rejected based on the statistical tests (Goddard and Melville, 2006).

### 3.9 Operationalization of Variables

The purpose of the following sections was to provide an overview of the operationalization of independent ERMPs variables and the dependent performance measurement variable. According to Das et al. (2000), each variable in a study should be operationalized by following a six columned table analysis (objectives, variables, measurements, measurement scale, study design, and tools of analysis). In this paper, the operationalization of variables, and thus the choice of measures encompassed in each ERMP construct were based upon an extensive research and review of previous empirical studies, with the purpose of finding adequate measures, which were both theoretically grounded as well as generally agreed upon by the various authors within the field of ERMP. In the following, deliberations and descriptions of the measures of each variable are provided. The exact measures underlying each ERMP construct are afterwards put together in the visualization of the model in the consecutive section. The full questionnaire containing the exact measures is provided in appendix I.

*Table 3.1 Operationalization of Variables*

OBJECTIVES	VARIABLES	MEASUREMENTS	MEASUREMENT SCALE	STUDY DESIGN	TOOLS OF ANALYSIS
1. To determine whether risk control self-assessment affects the performance of commercial state corporations in Kenya	<u>Independent</u> Risk control self-assessment	Adoption of Risk control self-assessment	Ordinal Scale	Descriptive/ Quantitative	Measure of Central Tendency (Mean) Multiple regression analysis
	<u>Dependent</u> Net Income Return on Investment	Reduced/increased Net Income Return on Investment			
2. To establish how identification of risk indicators affects the performance of commercial state corporations in Kenya	<u>Independent</u> Risk registers	Presence of risk registers	Ordinal Scale	Descriptive/ Quantitative	Measure of Central Tendency (Mode)  Multiple regression analysis
	<u>Dependent</u> Net Income Return on Investment	Reduced/increased Net Income Return on Investment			
3. To examine whether incident management affects the performance of commercial state corporations in Kenya	<u>Independent</u> Risk control self-assessment	Incidence analysis	Ordinal Scale	Descriptive/	Measure of Central Tendency (Medium)  Multiple regression analysis
	<u>Dependent</u> Net Income Return on Investment	Reduced/increased Net Income Return on Investment			
4. To determine how compliance of both internal and external regulations affect the performance of commercial state corporations	<u>Independent</u> Risk control self-assessment	Nos. of Compliance risk audits	Ordinal Scale	Quantitative	Measure of Central Tendency (Medium)  Multiple regression analysis
	<u>Dependent</u> Net Income Return on	Reduced/increased Net Income Return on Investment			

<b>in Kenya</b>	Investment				
<b>5. To determine how action tracking influences the performance of commercial state corporations in Kenya</b>	<u>Independent</u> Risk control self-assessment  <u>Dependent</u> Net Income Return on Investment	Periodic monitoring & evaluation  Reduced/increased Net Income Return on Investment	Ordinal Scale	Descriptive/	Measure of central tendency (Mode)  Multiple regression analysis

Sources: Researcher (2016).

### 3.10 Ethical Considerations

The respondents were asked to indicate their willingness to participate in the study. The freedom of respondents was taken into consideration which indicated that their rights are respected. The primary data was handled with care to ensure anonymity and rights to privacy of respondents. Thus, the identity of the respondents was secured as names were associated with the data.

## CHAPTER FOUR

### DATA ANALYSIS AND PRESENTATION

#### 4.1: Introduction

The research objective was to establish the impact of enterprise risk management practice on the performance of commercial state corporations 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 Rate of Response

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

Table 4.1: Age of Corporation Operations in Kenya.

	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative percent</b>
2-5 years	1	3%	3%
6-10 years	3	9%	12%
Over 10 years	29	88%	100%
<b>Total</b>	<b>34</b>		<b>100%</b>

The results in Table 4.1 on the age of the corporation's shows that majority of the corporations had operated for more than 10 years (88%) while only 3% of the respondents had operated for less than 5 years. This results means that most of the corporations 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 to counties with international relation based on funding requirements which will have given it the impetus to initiate ERM in their businesses. On the question of whether the corporations have a structured risk management practices, all the respondents answered to the affirmative. It was pointed



that effective implementation of ERM by an organization will affect positively its performance.

### 4.3 Descriptive Analysis

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

Table 4.2 (a): ERM Practices adopted by Commercial State Corporations

	Mean	Std Deviation
<b>Risk and Control Self-Assessment</b>		
Line managers are the most prominent people responsible for the risk identification followed by the board of directors/executive management team	4.0357	1.13797
The organization has established a comprehensive business risk inventory of the risks that it expects the managers to manage	4.4286	.50395
Local/overseas experience examination and brainstorming are common techniques prominently used by the line managers	3.5357	1.13797
Tools of identifying risks like scenario analysis and strengths, weaknesses, opportunities and threats (SWOT) analysis are frequently used where the risk identification responsibility is that of board of directors/executive management team.	4.2500	.75154
Guidance on risk identification is offered by the organization both directly (internal consulting services) or indirectly (documents, such as "tool kits")	4.5000	.69389
There exist a linkage between the organizational mission and risk management process	4.1786	.77237
The business unit utilize facilitated self - assessment and/or survey techniques to map risks	4.1071	.78595
Overall Mean	<b>4.4179</b>	<b>0.8362</b>
<b>Identification of Risk Indicators</b>		
The organization assesses the well -being of the business's financial resources to determine its vulnerabilities and therefore develop plans to minimize their impact	4.6071	.62889
The practice may help identify areas of underutilized capacity, perhaps offering the option to capitalize on developing opportunities	4.3571	.55872

	Mean	Std Deviation
The analysis of the organizations financial health is multifaceted and includes such areas as liquidity, solvency, repayment capacity, profitability, and financial efficiency measures	4.6071	.49735
The organizations response techniques include risk avoidance, risk reduction, risk sharing, and risk acceptance	4.5000	.57735
<b>Overall Mean</b>	<b>4.5178</b>	<b>0.5656</b>
<b>Incident Management</b>		
The organization address resource constraints, consider alternative methods of risk management, and outline specific steps to follow in management of the risk	4.3214	.61183
The organization quantifies its key risk to the best extent possible	4.5357	.50787
The organization has a process to integrate the impacts of the major risk types (strategic, operational, financial, hazard, and legal)	4.4643	.69293
There exist a risk management implementation team that work with each reporting department to link the organization's strategy to that area's objectives and residual risks in the organization	4.3571	.78004
The organizations business units develop and determine risk mitigation strategies	3.8214	.98333
Both risks and characteristics is identified from the widest possible range of issues, including at least strategy, operations, culture, systems, competence and brand	4.0000	.72008
<b>Overall Mean</b>	<b>4.25</b>	<b>0.716</b>

The findings of Table 4.2 (a) above show that the ERM practice that is popular among commercial state corporations and which is practiced most is the identification of key risk indicators (M=4.5178, SD= 0.5656). In assessing the commercial state corporations financial health, the process includes assessment of such areas as the corporations liquidity level, solvency, repayment capacity, profitability, and financial efficiency measures (M=4.6071, SD=0.49735) and also the assesses of the well-being of the business's financial resources to determine its vulnerabilities and develop plans to minimize their impact (M=4.6071, SD=.62889) was found to be a common practice within the commercial state corporations sector.

The assessment of the corporation's identification of key risk indicators is found to be a major practice because of the need to keep the commercial state corporations financially sound. In this case therefore, it is expected that corporations in Kenya will seek to have higher solvency level such that they will be able to provide products and services at a

competitive rate, 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 commercial state corporations will also depend on the level of regulation from the Government. The lower overall standard deviation for the need to the commercial state corporations to determine their risk indicators is an indication that the response of the corporations was more uniform and therefore reinforcing the need to assess once risk indicators as a major ERM practice among the commercial state corporations.

This finding are similar to that of Hahm (2004) who argues that it is necessary to improve government supervision and state corporations 'risk management to ensure successful financial performance in the developing countries. In his study of the Korean commercial state corporations before the 1997 Asia Pacific economic crisis, he found that the performance of commercial state corporations was significantly associated with their pre-crisis risk exposure and risk management practices adopted by the corporations. The findings whereby all of the respondents commercial state corporations 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 commercial state corporations 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 the corporations also was found to be a common practice that is undertaken by corporations ( $M=4.5$ ,  $SD=4.4179$ ). The corporations management offers guidance on risk and control self-assessment both directly (internal consulting services) or indirectly through such documents as tool kits ( $M=4.5$ ,  $SD= 0.6939$ ). The process of risk and control self-assessment involves the organization establishing a comprehensive business risk inventory of the risks that it expects the managers to manage and also ensuring that line managers and the board of directors are responsible for the risk and control self-assessment process ( $M=04.0357$ ,  $SD=1.139$ ). The standard deviation in the case of risk and control self-assessment ( $SD=0.8364$ ) was however found to be much higher than the other three practices and

this means that there was much higher variation in the responses among the commercial state corporations.

Table 4.2 (b): ERM Practices adopted by Commercial State Corporations

	Mean	Std Deviation
<b>Compliance of both Internal and External Regulations</b>		
The organization has a corporate-wide common language for communicating risk-type exposures, control activities, and monitoring efforts	4.3929	.68526
There is a regular briefs to the board and executive committee on risk management issues	4.5000	.63828
The organization has communicated a risk management mission statement, value proposition, and benefits statement to senior managers	4.2857	.65868
The organization has incorporated responsibility for risk management into the position description of all managers	4.1786	.72283
The board of directors is actively involved in the risk management process	4.3214	.66964
Perceived benefit of ERM to measure risk -adjusted performance among business units	3.9643	.63725
Perceived benefit of ERM to increase ability to meet strategic goals	4.0357	.57620
Perceived benefit of ERM to reduce earnings volatility	3.8929	.62889
Perceived benefit of ERM to increase profitability	4.0357	.74447
<b>Overall Mean</b>	<b>4.1785</b>	<b>0.6624</b>
<b>Action Tracking</b>		
The management has put in place measures to evaluate the success of risk management strategies in the organization	4.3571	.62148
Corporate management monitors performance outcomes against intended strategic goal to ensure that corporate activities remain on track and correspond to the set course	4.0714	.60422
The balance score card and the ratios analysis are some of the techniques used for evaluation in the organization	4.3214	.72283
The organization communicates the evaluation results openly to all the departments concerned	4.0000	.90267
The management has put in place measures to evaluate the success of risk management strategies in the organization	2.9643	1.20130
<b>Overall Mean</b>	<b>3.9428</b>	<b>0.8105</b>

Table 4.2 (b) above shows the results on the compliance of both internal and external regulations; as well as action tracking practices from the respondents. The commercial

state corporations ERM need to encompass the practice of communicating all risk facing the organization to the relevant departments and evaluating the risks facing the corporations. From the results, the most common practice among the corporations is action tracking and incident management. From the findings, incorporation of information and communication of the corporations risk susceptibility (M=4.393, SD=0.661) came out as the most common practiced by the corporations. Commercial state corporations should have frequent briefings to the members of staff on the risk exposure and what measures are being made to contain the same (M=4.5, SD=0.6383). The standard deviation of the information and communication practice (SD=0.661) was lower than in other practices.

What the findings show is that an organization's ERM practices should be a holistic one such that the effect of the environment on the performance of the corporation 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 commercial state corporations 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 corporation's value will be created, preserved or eroded by management decisions ranging from strategy setting to day-to-day operations of the enterprise. In the management decision, it is imperative that the management considers information about internal and external environments, deploys precious resources and recalibrates enterprise activities to changing circumstances ([www.erm.coso.org](http://www.erm.coso.org)).

Table 4.3: Impacts of ERM on Commercial State Corporations Financial Performance

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

The findings in table 4.3 above show that most of the corporations consider adoption of ERM as influencing the financial performance as measured by return on investment (M=3.8928, SD = 0.78595). The respondents pointed that an effective ERM affects mostly the cost level of the firm in that it will lead to its reduction (M=4.1071, SD=0.87514) and also its liquidity level (M=4.3214 SD=0.72283). With a standard deviation averaging 0.8 for most of the results, it indicates that there was a moderate variability among the respondents as to the extent of effect of ERM on the performance of the firm.

#### 4.4 Inferential Statistical Analysis

##### 4.4.1 Regression Analysis

The impact of ERM practices on the performance of the commercial state corporations is investigated for all 34 corporations surveyed. From Table 4.4 below, the established multiple linear regression equation becomes:

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

Table 4.4: ERM and Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	25.045	14.654		1.373	0.174		
X <sub>1</sub>	2.457	2.498	0.007	0.067	0.947	0.902	.893
X <sub>2</sub>	3.272	0.583	0.071	0.690	0.492	0.934	1.071
X <sub>3</sub>	1.925	1.654	0.086	0.789	0.433	0.833	0.972
X <sub>4</sub>	2.929	1.413	0.093	2.861	0.392	0.854	1.171
X <sub>5</sub>	2.181	1.118	0.441	1.194	0.000	0.896	1.116

The coefficient of the independent variables (X<sub>1</sub> – X<sub>5</sub>) is significant at 5% significance level thus all the five hypothesis were true indicating as significant effect on CS corporations performance. The coefficient of the determination under identification of

risk indicators is the highest of the independent variables and this means that a unit increase in the determination towards ERM increase the commercial state corporations performance by 3.272 units. Compliance of both Internal and External Regulations will impact with 2.929 units, Risk and Control Self-Assessment will impact with 2.447 units, Action Tracking with 2.181 units and Incident Management an impact of 1.925 units.

The variance inflation factor (VIF) quantifies the severity of multicollinearity in an ordinary least squares regression analysis. It provides an index that measures how much the variance of an estimated regression coefficient is increased because of collinearity. The variance inflation factor of the model variables is small which means that there is a small collinearity between the independent variables and the SD of around 1.0 for the independent variables indicates that the standard error of the variables will decrease by a unit if one of the variables is excluded.

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

To ascertain the extent of the difference in the adoption of ERM practices and commercial State Corporation’s 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 4.5: ANOVA

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

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

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

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

#### 5.2 Summary

The primary data in this analysis was collected from the all the commercial state corporations. The researcher successfully got data from all the 34 commercial state corporations.

The coefficient of the determination under identification of risk indicators is the highest of the independent variables and this means that a unit increase in the determination towards ERM increase the commercial state corporations performance by 3.272 units. Compliance of both Internal and External Regulations will impact with 2.929 units, Risk and Control Self-Assessment will impact with 2.447 units, Action Tracking with 2.181 units and Incident Management an impact of 1.925 units.

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



The findings of Table 4.2 (a) above show that the ERM practice that is popular among commercial state corporations and which is practiced most is the identification of key risk indicators (M=4.5178, SD= 0.5656). In assessing the commercial state corporations financial health, the process includes assessment of such areas as the corporations liquidity level, solvency, repayment capacity, profitability, and financial efficiency measures (M=4.6071, SD=0.49735) and also the assesses of the well-being of the business's financial resources to determine its vulnerabilities and develop plans to minimize their impact (M=4.6071, SD=.62889) was found to be a common practice within the commercial state corporations sector.

The need for an enterprise risk management practice has necessitated commercial state corporations to adopt a holistic, portfolio approach in the management of their risk. The corporations 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 analysed to enable the corporations develop appropriate risk mitigation measures. The ERM practices that were analysed included: risk and control assessment; assessment of key risk indicators, incident management, and compliance of both internal and external regulations as well as action tracking. It was found that the determination of the corporations 's key risk indicators was the most important ERM practice by the Kenyan commercial state corporations surveyed. The corporations 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 corporation'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 corporations. The influence of ERM practices on the performance of the firm was found through, the regression equation, to be positively correlated with the performance of the firm. There was also little collinearity between the independent variables found in the study.

### 5.3 Conclusion

The first objective aimed at establishing the impact of risk control self-assessment on the performance of commercial state corporations in Kenya. The findings are in line with Beasley et al., (2008) point that the management need to consider the risk appetite, set objectives, identify risks, identify risk responses, consider risk alternatives, assess capital needs for the risks, and so on.

The second objective sought to establish the impact of risk indicators on the performance of commercial state corporations in Kenya. The coefficient of the determination under identification of risk indicators is the highest of the independent variables and this means that a unit increase in the determination towards ERM increase the commercial state corporations performance by 3.272 units. The findings are in support of Simmons (2000) posit the definition of the business objectives is a crucial initial step towards mitigation of risk because if an organization does not know where to go it is difficult to identify what risks may arise.

The third objective examined the impact of incident management on the performance of commercial state corporations in Kenya. The results revealed there was a likeness in Hallikas (2004), the aim of incident management is to enhance organization transparency, determine improvements to avoid the same incident recurring, provides objectives data of various risk types, identification of risk problem areas and acts as a staff problem recording system.

The fourth objective, aimed at determining the impacts of both internal and external regulations on the performance of commercial state corporations in Kenya. The management actions that result in the same profit may not equal in either their resource costs or associated risk levels. For this reason, the practice is acutely focused on evaluating situations for their impact on the resource base, implications for costs and returns, and more importantly for the levels of risk (Nishat, 2007).

The last objective aimed at determining the impact of action tracking on the performance of commercial state corporations in Kenya. The findings were in line with Gupta (2009) notes that formal risk management process resemble control element whereby corporate management is supposed to monitor performance outcomes against intended goal to

ensure that corporate activities remain on track and correspond to the set course is that some digression from the beaten track also can hold the key for generating innovation ideas and adaptive responses to changing environmental conditions.

In summary the study also found out that a significant number of the Commercial SCs are still at the planning stages where ERM is not a regulatory requirement. Their Performance may be threatened due to weak ERM system, complexity, unpredictability, evolving risks and globalization of trading activities.

Operational risk management, Strategic risk management, financial risk management and Governance risk management practices had positive significant effects on the Financial Performance of Commercial SCs in Kenya. Overall Enterprise Risk Management practices accounted for most of the variance in Financial Performance of the firms. Thus, the study concludes that Enterprise risk management practices influence the Financial Performance of Commercial SCs in Kenya to a very large extent.

It was evident that most state organizations' current risk management practices support strong corporate governance. The COSO-Integrated Control Framework is the most widely used risk management framework. In line with the findings and conclusions arrived at, the study recommends that: Enterprise risk management strategies employed by state corporations should support strong corporate governance. This will ensure effective and responsible management of these entities as required by the public. State corporations should ensure effective strategic risk management since this is critical in achieving the goals and objectives of their organizations. The reason for this is that risks curtail achievement of an organization's goals and objectives.

As organizational environments become increasingly turbulent and complex, the management of risks has become a critical function for managers of commercial state corporations. 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 able to enable companies to link risk management with overall organizational objectives. In addition, the organizations risk communication must be improved 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**

Based on the findings, the study makes a number of recommendations:-

First, the study recommends that all the commercial SCs in Kenya not only should employ robust enterprise risk management practices but also fully implement their ERM frameworks. Both are likely to influence their financial performance in one way or another.

Secondly, the study recommends that in order for commercial SCs to improve on their financial performance, they should focus on full involvement of all relevant stakeholders at all the ERM implementation stages.

Thirdly, the study recommends that the government, on a frequent basis, evaluate the enterprise risk management practices and measures put in place by the commercial SCs in Kenya and reward those with excellent practices. This will encourage more firms to institute ERM practices as well as create more awareness on the need for the same in all organisations.

Fourthly, the study recommends that risk function profiling should be upheld and that the risk management and risk control measures should be emphasized in the organizations. By observing and implementing risk control and management practices, financial performance would likely improve.

Lastly the, study recommended that risk analysis should be upheld, enhanced and prioritized in the whole process of risk management. Further, corporate governance should be enhanced in order to support risk analysis. Elements such as risk forecasts should not be ignored and should be further enhanced.

#### **5.4.2 Suggestions for Further Research**

There is need for more studies in this area to examine how ERM influences Financial Performance of State-Owned institutions in Kenya. This can be done by including all other State Agencies in Kenya and by conducting a panel regression analysis.

More studies should be done to examine other factors that may influence Financial Performance of Commercial SCs in Kenya. This study only assessed how ERM practices can influence Financial Performance and more studies need to examine other factors that may influence their Financial Performance.

It is also important that future research examine the issue of ERM deeply by examining the practice of ERM in State Corporations and the trends in ERM practice. This will inform policy makers on what areas need changes for the ERM practices to be effective.

Further research should be done on other types of risks that affect Financial Performance of State Corporations such as effects of Reputation Risks on Financial Performance or effects of Integrity Risks on Financial Performance of State Corporations.

Research can also be done to compare Effects of Implementation of ERM on Financial Performance among different Industries within the Economy.

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## APPENDICES

### APPENDIX I

#### QUESTIONNAIRE

Questionnaire Number \_\_\_\_\_

The objective of the study is to determine the role of enterprise risk management practice on the performance commercial state corporations in Kenya. The information collected herein will only be used for academic purpose and the identities will be held in confidence.

#### SECTION A: PERSONAL DETAILS

1. How long have been working at this organization? (*circle the relevant answer*)  
  
Less than two years (    )  
3 - 5 years (    )  
6 - 10 years (    )  
Above 10 years (    )
  
2. Does your organization have a structured and well-documented risk management approach?  
  
Yes (    )  
No (    )
  
3. Does risk management improve your commercial state corporation's financial performance?  
  
Yes (    )  
No (    )

#### SECTION C: PART B: ENTERPRISE RISK MANAGEMENT PRACTICES

Please tick appropriately the extent to which your organization has been practicing the following enterprise risk management practices and impact it has had on the firms performance (use the scale below to tick the most appropriate response).

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

ERM PRACTICES		1	2	3	4	5
<b>Risk and Control Self-Assessment</b>						
1.	Line managers are the most prominent people responsible for the risk identification followed by the board of directors/executive management team					
2.	The organization has established a comprehensive business risk inventory of the risks that it expects the managers to manage					
3.	Local/overseas experience examination and brainstorming are common techniques prominently used by the line managers					
4.	Tools of identifying risks like scenario analysis and strengths, weaknesses, opportunities and threats (SWOT) analysis are frequently used where the risk identification responsibility is that of board of directors/executive management team.					
5.	Guidance on risk identification is offered by the organization both directly (internal consulting services) or indirectly (documents, such as "tool kits")					
6.	There exist a linkage between the organizational mission and risk management process					
7.	The business unit utilize facilitated self - assessment and/or survey techniques to map risks					
<b>Identification of Risk Indicators</b>						
1.	The organization assesses the well-being of the business's financial resources to determine its vulnerabilities and therefore develop plans to minimize their impact					
2.	The practice may help identify areas of underutilized capacity, perhaps offering the option to capitalize on developing opportunities					
3.	The analysis of the organizations financial health is multifaceted and includes such areas as liquidity, solvency,					

<b>ERM PRACTICES</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	repayment capacity, profitability, and financial efficiency measures					
4.	The organizations response techniques include risk avoidance, risk reduction, risk sharing, and risk acceptance					
<b>Incident Management</b>						
1.	The organization address resource constraints, consider alternative methods of risk management, and outline specific steps to follow in management of the risk					
2.	The organization quantifies its key risk to the best extent possible					
3.	The organization has a process to integrate the impacts of the major risk types (strategic, operational, financial, hazard, and legal)					
4.	There exist a risk management implementation team that work with each reporting department to link the organization's strategy to that area's objectives and residual risks in the organization					
5.	The organizations business units develop and determine risk mitigation strategies					
6.	Both risks and characteristics is identified from the widest possible range of issues, including at least strategy, operations, culture, systems, competence and brand					
<b>Compliance of both Internal and External Regulations</b>						
1.	The organization has a corporate-wide common language for communicating risk-type exposures, control activities, and monitoring efforts					
2.	There is a regular briefs to the board and executive committee on risk management issues					
3.	The organization has communicated a risk management mission statement, value proposition, and benefits statement to senior managers					

<b>ERM PRACTICES</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4.	The organization has incorporated responsibility for risk management into the position description of all managers					
5.	The board of directors is actively involved in the risk management process					
6.	Perceived benefit of ERM to measure risk -adjusted performance among business units					
7.	Perceived benefit of ERM to increase ability to meet strategic goals					
8.	Perceived benefit of ERM to reduce earnings volatility					
9.	Perceived benefit of ERM to increase profitability					
<b>Action Tracking</b>						
1.	The management has put in place measures to evaluate the success of risk management strategies in the organization					
2.	Corporate management monitors performance outcomes against intended strategic goal to ensure that corporate activities remain on track and correspond to the set course					
3.	The balance score card and the ratios analysis are some of the techniques used for evaluation in the organization					
4.	The organization communicates the evaluation results openly to all the departments concerned					

<b>ERM PRACTICES</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
5.	Some of the communication methods employed by the organization are not effective					

The statements below describe the role of ERM practices on commercial state corporations in Kenya. Please indicate the extent to which your organization financial performance has been influenced by the ERM practices adopted

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

<b>ERM PRACTICES ROLE IN COMERCIAL STATE CORPORATIONS</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	Return on Investment					
2.	Total Cost Reduction					
3.	Financial Liquidity					
4.	Market Share Growth					

**THANK YOU**

## APPENDIX II

### LIST OF COMMERCIAL STATE CORPORATIONS IN KENYA

#### Purely Commercial Corporations

No.	State Corporation	Sector
1.	Agro-Chemical and Food Company	Agriculture, Livestock and Fisheries
2.	Kenya Meat Commission	Agriculture, Livestock and Fisheries
3.	Muhoroni Sugar Company Ltd	Agriculture, Livestock and Fisheries
4.	Nyayo Tea Zones Development Corporation	Agriculture, Livestock and Fisheries
5.	South Nyanza Sugar Company Limited	Agriculture, Livestock and Fisheries
6.	Chemilil Sugar Company Limited	Agriculture, Livestock and Fisheries
7.	Nzoia Sugar Company Ltd	Agriculture, Livestock and Fisheries
8.	Simlaw Seeds Kenya	Agriculture, Livestock and Fisheries
9.	Simlaw Seeds Tanzania	Agriculture, Livestock and Fisheries
10.	Simlaw Seeds Uganda	Agriculture, Livestock and Fisheries
11.	Kenya National Trading Corporation (KNTC)	East African Affairs, Commerce and Tourism
12.	Kenya Safari Lodges and Hotels (Mombasa Beach Hotel, Ngulia Lodge, Voi Lodge)	East African Affairs, Commerce and Tourism
13.	Golf Hotel Kakamega	East African Affairs, Commerce and Tourism
14.	Kabarnet Hotel Limited	East African Affairs, Commerce and Tourism
15.	Mt. Elgon Lodge	East African Affairs, Commerce and Tourism
16.	Sunset Hotel Kisumu	East African Affairs, Commerce and Tourism
17.	Jomo Kenyatta Foundation	Education, Science and Technology
18.	Jomo Kenyatta University Enterprises Ltd	Education, Science and Technology
19.	Kenya Literature Bureau (KLB)	Education, Science and Technology
20.	Rivatex (East Africa) Ltd	Education, Science and Technology
21.	School Equipment Production Unit	Education, Science and Technology
22.	University of Nairobi Enterprises Ltd	Education, Science and Technology
23.	University of Nairobi Press (UONP)	Education, Science and Technology
24.	Development Bank of Kenya	Industrialization and Enterprise Development
25.	Kenya Wine Agencies Ltd (KWAL)	Industrialization and Enterprise Development
26.	KWA Holdings	Industrialization and Enterprise Development
27.	New Kenya Co-operative Creameries	Industrialization and Enterprise Development
28.	Yatta Vineyards Ltd	Industrialization and Enterprise Development
29.	National Housing Corporation	Lands, Housing and Urban Development
30.	Research Development Unit Company Ltd	Lands, Housing and Urban Development
31.	Consolidated Bank of Kenya	National Treasury
32.	Kenya National Assurance Co. (2001) Ltd	National Treasury
33.	Kenya Reinsurance Corporation Ltd	National Treasury
34.	Kenya National Shipping Line	Transport and Infrastructure

**Sources:** Report of The Presidential Taskforce on Parastatal Reforms (2013), reclassified Government Owned Entities and came up with 34 Purely Commercial State Corporations.