

“KROK” UNIVERSITY

Educational and Scientific Institute of Management and Adult Education
Department of Management Technologies

Ogunrinde Ibrahim Mayowa

UDC: 005.334

Thesis

ON THE TOPIC: RISK MANAGEMENT SYSTEM IN FEDEX
CORPORATION

Specialty: 073 Management

Educational Program: Management

Thesis contains the results of individual work. The use of ideas, results, and text of other authors have references to the relevant sources

_____ O. I. MAYOWA

(Signature, initials and surname of the applicant)

Scientific Supervisor

PROF. OLENA DANCHENKO

KYIV – 2021

TABLE OF CONTENTS

TABLE OF CONTENTS.....	2
ABSTRACT.....	4
INTRODUCTION	5
SECTION ONE	10
LITERATURE REVIEW	10
REVIEW OF CONSTRUCTS AND CONCEPTS INVOLVED	10
RISK MANAGEMENT SYSTEM.....	13
RISK MANAGEMENT SYSTEM VERSUS TRADITIONAL RISK MANAGEMENT.....	19
THE CRO AND RISK MANAGEMENT SYSTEM.....	22
AUDIT COMMITTEE (AC) AND RISK MANAGEMENT SYSTEM.....	28
TM SUPPORT AND RISK MANAGEMENT SYSTEM	29
REGULATORY ENVIRONMENT AND RISK MANAGEMENT SYSTEM.....	32
UNDERPINNING THEORY	37
RESOURCE BASED VIEW THEORY (RBV THEORY).....	37
SUMMARY	37
SECTION TWO.....	38
INTRODUCTION	38
RESEARCH METHODOLOGICAL PROCESS.....	38
POSITIVISM: (PHILOSOPHY OF THIS STUDY)	38
DEDUCTIVE RESEARCH APPROACH	39
QUANTITATIVE RESEARCH (THIS STUDY TYPE IS QUANTITATIVE).....	41
CHOICES	43
CROSS SECTIONAL RESEARCH (I DID CROSS SECTIONAL RESEARCH). 43	43
POPULATION	44
SAMPLING	45
CONVENIENCE SAMPLING (USED IN THE STUDY)	45
RESEARCH INSTRUMENT.....	46
RELIABILITY.....	46

Cronbach's alpha:	46
DATA COLLECTION TECHNIQUES	47
THE PRIMARY DATA COLLECTED IN THE STUDY:.....	47
SECONDARY DATA	47
DATA ANALYSIS.....	48
CORRELATION AND REGRESSION ANALYSIS:	48
SUMMARY	48
SECTION THREE.....	49
INTRODUCTION	49
DEMOGRAPHICS:.....	49
4.3 Reliability Test of Data.....	53
CORRELATION ANALYSIS.....	53
4.5 REGRESSION ANALYSIS	54
4.6 Summary	55
CONCLUSION.....	56
INTRODUCTION	56
CONCLUSION.....	56
LIMITATIONS.....	57
FUTURE RECOMMENDATIONS	57

ABSTRACT

Organizations are shifting their risk management systems, favouring approaches which are implemented across the enterprise compared with the traditional silo-based methods. Despite growing demands to adopt an Enterprise Risk Management System (ERMS), however, challenges remain in implementation. Research suggests that compartmental approaches of risk management systems must be replaced by ones which are holistic in their assessment and evaluation of the organization's risks. Existing literature suggests that risk reduction through ERMS can improve both performance and value. This improvement is only possible with managerial support, the formation of relevant committees and the hiring of relevant staff. This study explores the relationship between the successful implementation of an ERMS and a chief risk officer (CRO) being present, a functional audit committee (AC), and supportive top management (TM). This is done through an observational and correlational approach, using a survey instrument provided to self-identified FedEx Corporation employees. Using regression and correlation analysis, the findings indicate a significant relationship between a CRO being hired, an extant AC, and supportive TM with successful implementation of ERMS.

Keywords: Enterprise Risk Management system, Chief Risk Officer, Audit Committee, Top Management Support, Regulatory Environment, FedEx Corporation

INTRODUCTION

Risk management is undergoing a great change, as organizations shift from the traditional and compartmental to an enterprise wide approach. Consequently, enterprise risk management system (ERMS) is gaining global attention among risk management professionals and academics. The demand for the adoption of ERMS has led to several companies embracing it, yet its implementation has become challenging.

Relevance of topic. The current global financial crisis has seen the collapse of numerous international businesses due to inadequate or inappropriate risk management. Many organizational failures and financial disasters can be attributed to poor risk management and inadequate governance practices [90]. Research indicates that, the percentage of business initiatives that are unsuccessful is remarkably high. As a result, organizations have focused on remediating weaknesses in risk management systems to improve stakeholder protections. Consistent with this, observed that “balancing risk is becoming the only effective way to manage a corporation in a complex world.” Robust risk management has continued to be of great concern to practitioners, academics, and the business community because it augments organizational performance and creates value for shareholders. Inadequate risk management policies create adverse economic and social consequences for stakeholders as in Yamato Life Insurance, American International Group (AIG), Lehman Brothers, Fannie Mae, Freddy Mac, among others. Poor risk management can result in large “dead weight” costs in organizations, which negatively affect organizational value. By reducing risk, a company can reduce the amount of expensive equity capital needed to support its operating risk cost. Organizations are regularly

confronted with issues of risk management as strategic decisions are made. Consequently, developing an institution-wide approach to proactively dealing with and optimizing emerging threats and opportunities cannot be over emphasized. Effective risk management offers significant benefits to organizations, their projects, and their stakeholders. Example effective risk management could potentially reduce variability in earnings and possibly minimize economic distress on an entity. It also ensures that potential risks are identified, understood, and subsequently prioritized for better decision making which promotes the realization of strategic goals, lowers earnings volatility and subsequently increase profitability. As organizations expand, one of the keys to successful growth is steady risk management. In order to yield benefits, risk management must be addressed and practiced at all levels of an organization. For organizations to survive in this turbulent environment and gain competitive advantage, a holistic approach to handling risk needs to be adopted. Consistent with this, it's argued that holistic approach to risk management needs to be adopted.

The purpose of the work is a comprehensive study of the risk management in Fedex corporation. This study investigates the factors affecting the risk management.

The objectives of the work the main objective is to investigate the factors affecting on the risk management of the Fedex corporation. The following objectives are given in detail:

- To determine the impact of CRO chief risk officer on the enterprise risk management system in FedEx Corporation.
- To determine the impact of AC audit committee on the enterprise risk management system in FedEx Corporation.

- To determine the impact of TM top management on the enterprise risk management system in FedEx Corporation.
- To determine the impact of regulatory environment on the enterprise risk management system in FedEx Corporation.

The object of the study is risk management in Fedex corporation.

The subject of the study is the Fedex corporation

Overview of the problem. During the recent economic crisis some organizations failed because there was less focus on identifying, assessing, and managing their most important emerging risk. Other organizations failed because their aggressive pursuit of returns overshadowed underlying risk. In some situations, however, organizational leaders were blindsided by unknown risks, due to the lack of sufficient infrastructure to identify, assess, and monitor emerging risk within their enterprises. The recent economic failures have therefore brought to light the consequences of ineffective risk management. Poor risk management results in adverse economic and social consequences for stakeholders. In the U.S. alone, approximately \$63 billion is spent annually on IT projects that fail. However, even when risk management processes appear to have been effectively employed, many projects fail to meet their goals and fall short of stakeholders' expectations. Poor risk management could result in large dead weight costs on organizations resulting in long-term reduction of value. By properly managing risks, an organization can reduce the amount of expensive equity capital needed to support its operating risks. Corporate risk management can benefit organizations in a variety of ways. Taking a holistic approach to risk management allows organizations to decrease the level of volatility in earnings and stock price, reduce external capital costs, increase capital efficiency, and create synergies

between different risk management activities. The adoption of a holistic risk management approach enables a coordinated and consistent approach to managing risk, resulting in lower costs and better communication across an organization. A coordinated approach can also lead to the avoidance of losses as there will be a better approach to handle the overall risks.

To achieve this goal, the following issues that need to be addressed:

Organizational factors (such as the position of a Chief Risk Officer (CRO), the role of an Audit Committee (AC), and Top Management (TM) support) associated with enterprise risk management are examined in this report, which adds to existing research on the topic. The main findings revealed a positive and important relationship between the role of a CRO, an AC, and TM support and the implementation of a risk management system. The existence and position of a CRO, AC, and TM support affected the implementation of an enterprise-wide risk management system, according to this indicator.

Furthermore, as TM support increased, so did the involvement of the CRO and AC, and vice versa, according to the report. Furthermore, there was a clear positive association between having a CRO and having an AC, implying that organisations with a CRO were more likely to have an AC and vice versa. Paape and Speklé (2012) say that organisational risk management needs further progression. The results of the study are critical for decision-makers in organisations implementing strategic risk management, as they recommend that organisations should hire a CRO, an AC, and enlist the help of TM in implementing successful risk management policies and mechanisms.

Research methodology. Research process is followed step wise. Philosophy and type of study is defined. The study is quantitative and can be generalized. Based on results the conclusion and recommendations are given in the last section of the study.

The following **sources of information** were used in writing the work:

- scientific journals;
- electronic resources

The work consists of an introduction, three sections and conclusions to them, one of which is theoretical and two – practical. The work ends with general conclusions, a list of used sources used and annexes.

SECTION ONE

LITERATURE REVIEW

This section discussed the risk management system and its definitions and importance based on the previous studies. It further discusses the independent variables in relation to the dependent variable. This study discusses the definitions, importance and the theories related to the variables.

REVIEW OF CONSTRUCTS AND CONCEPTS INVOLVED

Although risk can be described as the possibility of loss or exposure to any loss, a vulnerability, an uncertainty, or a great opportunity [33], risk is ultimately a multi-layered notion indicating that there is much at stake for businesses [44]. Risk is usually estimated on two scales: the severity and the frequency. Severity is the seriousness that refers to the force or size of misfortune or harm, while frequency is the probability of misfortune, harm, or a botched chance [88]. In this light, risk could be seen as a chance or a danger. The administration of risk and reward is trying, as confirmed by the new (2008 – 2009) financial crisis and its related vulnerability [99]. The idea of organizational uncertainty has often been examined in economics, psychology, and organizational theory [77].

It may become more complicated with a rise in the volume and intensity; therefore, risk management is crucial to overall organizational success (Ben-Amar, [79]. Risk management helps make the presence of risk in an association's current circumstance much more clear and more obvious, and the executives settle on the game-plan dependent on the agreeableness of each risk. [73]. According to Ingley and van der Walt (2008), risk management is deemed to be an essential part of an organization's strategical processes and central to stakeholder value creation, performance, shareholder and competitive advantage. Risk management has been broadly debated as more and more firms or institutions implement strategic risk management [30]. Lately, there have been critical

changes in how risk is overseen on an authoritative level. Beforehand, it was overseen in silos, where specific organizational units took care of risk freely [23].

Though, some experts believe that all risks are somehow interconnected and thus should be managed accordingly. Therefore, most failures linked with poor risk management can frequently be credited to a conjunction of multiple factors [48]. There has never been a singular correct method for managing risk, but there has been some agreement about the requirement for the formulization of enterprise-wide risk management [22]. Hence, it is emerging as a priority for most organizations [18].

Risk is related to each step taken by any organizations, beginning from board level strategic steps to every day operational ones. Risk often gets affected by various factors, including government regulations, market competition, input costs, sales volume and so on. The greatly competitive and active business scenario always encourages risk management. According to [1] risk management is the most important process of first identifying, secondly analyzing and thirdly accepting the uncertainty of most decisions of investment. As argued by [2], risk management has truly evolved from the late 1940s to somewhere in the early 1950s as an integral and formal part of the organizational decision-making process. We see that the impact of massive global financial crisis was clearly focused on the importance of risk management. It has been seen that shareholders have become even more engaged and somehow seek for more transparency or some accountability for the management of risk [3].

Hence, this changing scene combined with expanding elements has justified an adjustment risk management approach. Rather than taking on isolated incidences and analyzing them, most organizations have chosen to analyze risk more comprehensively and historically. This new wording in the field of risk management is prevalently known as the Enterprise Risk Management (ERM) approach. [4] further guaranteed that ERM converged somewhere in the late 1990s through which a firm recognizes and measures all risky behaviour or decisions inside the organization, as compared to the silo approach. The primary benefit of ERM approach is giving some substantial assurance of accomplishing the goals or objectives. A holistic strategy helps with overseeing all risks and can build up

an organization to manage the risky issues and opportunities all the more effectively, accordingly, upgrading its ability to make and preserve the essence and value of partners.

The advantages of this process additionally incorporate making a more risk-focus culture in any organization. Additionally, as ERM upholds better reporting, structure, and examination of risks, in this way improving focus of the upper management so that an improved model of risk mitigation is adopted. The top managerial staff such as the board of directors have a huge and significant role part in giving oversight on the risk management activities being conducted. According to [5], the upper management or board members review any proposed strategy and cross-check whether these strategies align with the business objectives, goals and core values. As per [6], the CEO or leader of any organization is in the long run responsible for the execution or implementation of such an approach. The higher the authorities monitoring, the lesser is the level of adoption of ERM practices by the organizational employees. Usually, such an approach intends to increase the capability of upper management to oversee the complete portfolio of risks and deal with it efficiently. In many regions across the globe, regulators are pressing firms to improve their risk management and overall risk reporting [7].

The complete regulations of ERM are a lot more advanced or one can say matured if compared to the underdeveloped ones. According to [8] to bring all Public Companies up to mark with the prerequisites of the code; the boards and board committees need to implement an efficient risk management plan. Though, very few studies ever addressed the exact issue of ERM, there is still a somewhat lack of evidence regarding all the factors that influence its total level of adoption and complete effectiveness. Publicly listed firms require to maintain a sound risk management system according to The Code of Corporate Governance for Publicly Held Joint Stock Companies. For instance, [9] stressed the need for a active ERM program implementation. [10] showed that any public and private organization has realized the need for efficient risk management strategy. [11] found that there is just some knowledge or recognition of risk management assessment procedures.

Depending on the firm's many external and internal considerations, ERM technique should always be effectively developed for each firm independently. ERM is usually applied in the strategy formulation of a company to decide the uncertainties about the consequences.

Under such circumstances enterprise risk management only enhances the business operations as it clearly offers a detailed profitability analysis. It makes a suitable plan to manage the crisis appropriately by taking into regard the situations which cannot be predicted. [9] states that there is a need for the execution of a proactive approach of enterprise risk management technique.

RISK MANAGEMENT SYSTEM

Somewhere in the 1980s, collaborative risk management surfaced as an expansion of hazard risk management, which suggested that organizations are to manage their risk in a thorough, coordinated manner [63]. It is a complicated concept that affects every clear aspect of a corporation. [66] stated that for any risk management system to be efficient, it must be able to manage the various sectors widespread responsible for risks. According to Bowling and Rieger (2005), corporate risk management is the greatest level of risk management in any organization, and it only occurs when a universal approach is embraced. All related activities are linked to organizational strategy and are incorporated in the daily business processes. ERM is a new model for dealing with organizational risks that allow upper management to focus on how to improve corporate governance and especially general risk management [90].

The use of corporate wide risk management systems has been driven by risk management, corporate governance, and internal control [64]. Combined risk management allows companies to overcome limitations linked to conventional silo-based risk management and its practices [49]. Nevertheless, [21] observed that in spite of its fame, little is known about its efficiency. Even Though, the existing literature suggests that ERM deployment leads to great value creation, most of the studies however failed to explicitly reveal the elements that lead to the value creation mentioned earlier [54]. Likewise, even though the findings in the literature suggest a solid correlation between ERM and great value creation, Kraus [93] indicated that it is not clear which of these benefits attribute to ERM or any traditional risk management. Moreover, Altuntas et al. (2011) suggested that there was no agreement

on a definition for this, including specific management tools that promise to make it more efficient.

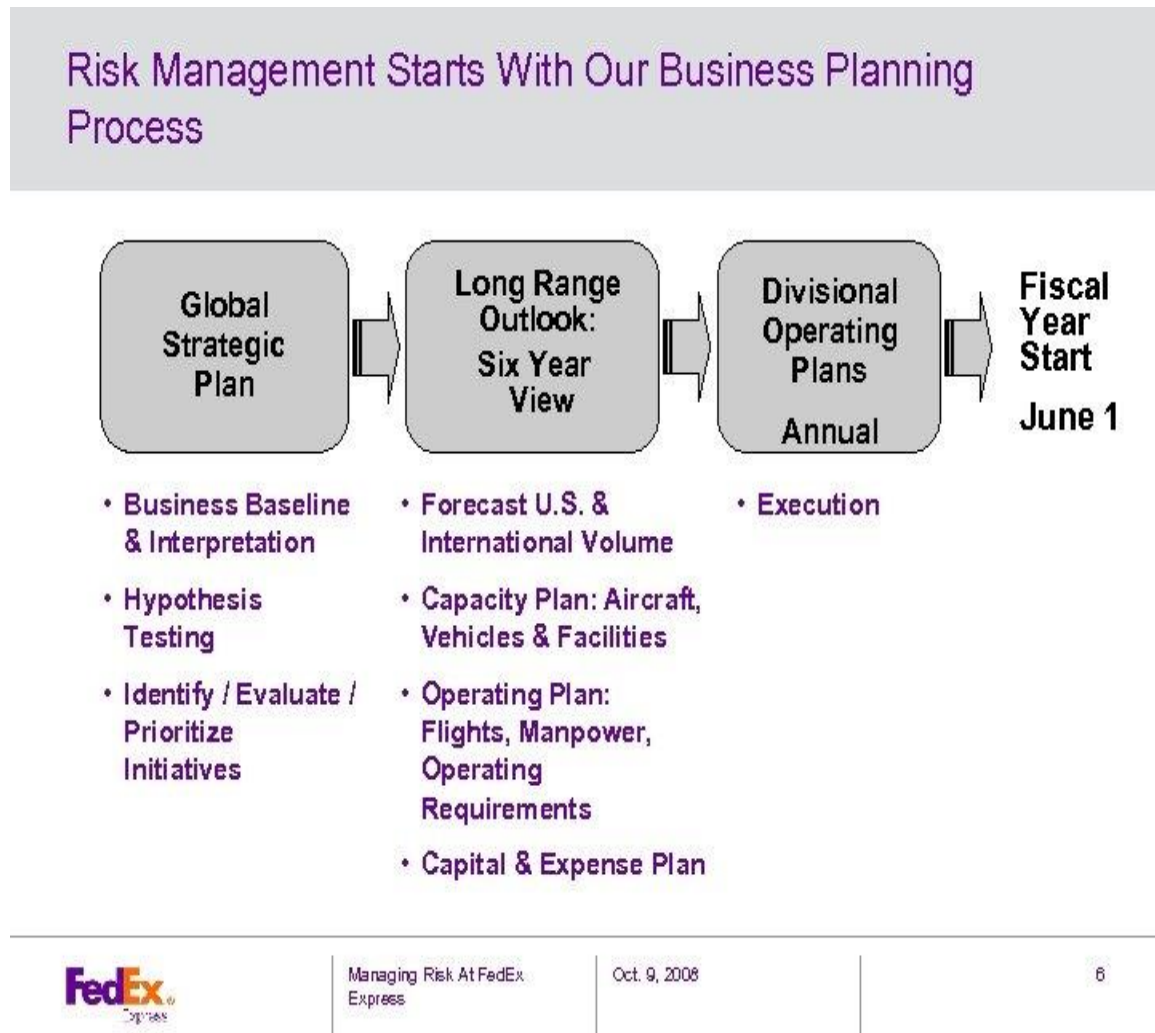


Fig:1.1 risk management system in fedex

As explained by Power [61] “risk management designs like ERM are fundamentally unable to process and represent internal systematic risk issues, since this would require an imagination of externalities well beyond their design”. Challenges clearly associated with implementing complete or holistic risk management systems may include unsuitable organizational structures (OS), extreme resistance to change, underwhelmingly poor understanding incorporation of new risk management systems, and of course difficulty in measuring risk [49]. Beasley, Branson, and Hancock (2009) found that most competing

priorities, clear inadequate resources, an absence of valid TM support, and vivid misconceptions that consolidated risk management confuses corporate bureaucracy resulting in low desire of implementation within organizations. Combined risk management sometimes enables an organization to very diligently work through a system of identifying and speedily analyzing risks with the view to making good, informed decisions (Brown et al., 2009).

It also encourages open discussions on the topic of risks (Liebenberg & Hoyt, 2003) as they are known to be effective in identifying, assessing, and thus, monitoring organizational risk (Beasley et al., 2009). Ben-Amar et al. (2014) stated that any collaborative risk management approach sometimes identifies, manages, and even mitigates risk allowing corporations to take advantage of on opportunities. A holistic risk management methodology provides as outline to identifying circumstances that influence the organizational objectives that evaluate the prevalence of risk and establishing a successful process to monitor risks in an organization (BenAmar et al., 2014).

Effective monitoring with any risk management system enables all organizations to firstly detect, secondly restrict, and thirdly rectify any discrepancies that would have impacted its strategic decision making and its long-term goals (Byrnes et al., 2012). Holistic risk management is sometimes viewed as a great paradigm shift, where all senior executives and upper management realign the organizational risk management (Gordon et al., 2009). Rochette (2009) argued that due to the constant change in the risk environment, all strategic risk management approaches must have a holistic approach and cover a variety of projects, services, processes, and products. Power (2009), claimed that as opposed to circling into the great beyond and filling in as a component that challenges the manner in which complex issues are evaluated and overseen by an association, across the upper management, wide risk management executives as a limit propagating arrangement of risk management. Risk management system is more often defined as cross-divisional, comprehensive, complex, and integrated system (Liebenberg & Hoyt, 2003).

Meagher and O'Neil (2000, p.10) described it as a great “approach that is positive and proactive, value-based and broadly focused, embedded in processes, integrated in strategy and total operations, and continuous.” A thorough risk management methodology

considers mutuality as well as conflicting components of the risk management system (Borker & Vyatkin, 2012). It also recognises clear and optimal objectives when it is dealing with internal issues (Kimbrough & Componation, 2009). The absence of a fully holistic risk theory can disturb the development of a utilized risk management system (Borker & Vyatkin, 2012). According to Brown et al. (2009) risk management system is the clear method, and the process organizations tend to use to management any risk, sometimes seize opportunities, and achieve objectives. Stroh (2005) defined it to recognise risk factors in business, sometimes assess severity, clearly quantify magnitude, and greatly mitigate the downward exposure associated with risks, alongside capitalizing on the opportunities.

De Loach (2000) also characterized it as a methodical approach to align strategy, sometimes processes, the people, all technology, and a lot of knowledge, with the purpose of assessing and controlling uncertainty to create value. COSO (2004) noted that ERM is a methodology for detecting and controlling risk events, bound to happen internally in an organizations risk desire to provide sufficient assurance for achieving goals. It is usually brought into effect by board of directors (BOD), the upper management, and many other personnel in a strategic positioning. Manab, Kassim, and Hussin (2010) referred to it as a painstaking system by which corporations assess several factors simultaneously. A unified approach to supervise risk demands and support from management, requires all workers to be responsible for risk assessment and its response, and sometimes utilizes a wide range of tools and clear methodologies within a uniting framework (Manab et al., 2010).

In combined risk management, risk is usually and openly defined to include any preventative action that could stop an organization from achieving its objectives. It emphasizes on employee involvement, with a special focus on risky practices, and empowers organizations to manage risks in a better and integrated fashion (Hoyt & Liebenberg, 2011). Gupta (2004) noted that this all-inclusive approach of dealing with risk was clearly rapidly emerging as a very powerful approach to better facilitate some decision-making as it provides an equal and uniform approach to risk identification and its measurement.

Risk is thought to have a negative effect with and by definition and sometimes by nature cannot be reduced. Most of the companies perform risk analysis before the implementation

of critical decision making impacting larger functions. Therefore, risk management has become vital in firstly planning, secondly designing and thirdly maintenance processes. Enterprise risk sometimes refers to most forms of risk faced by any business firm. It can be a financial risk, sometimes a speculative risk, maybe a strategic risk, even an operational risk and many more. According to [12] enterprise risk management (ERM) is the latest and most widely used tool which simplifies risk management process. ERM first emerged in the late 1990s through which a company identifies and subsequently measures all the risk events involved within the realms of the organization, as compared to the typical silo approach [4]. The typical “silo” approach mainly focuses on singular risks that exist within any organization. A very holistic approach sometimes assists in managing risks and can also strengthen an organization to deal with the greatly risky issues and clear opportunities more effectively, thereby sometimes enhancing its ability to create and then preserve value of all involved stakeholders.

The Committee of Sponsoring Organizations of the Treadway Commission COSO (2004) defined the ERM as sometimes a process impacted by an entity’s board of directors, upper management, and many other personnel, applied in a clear strategy setting and across the complete enterprise, designed to recognise potential events that may affect the organization, and manage risk to be within its risk range, to provide some reasonable assurances regarding the achievement of the goals. [13] ERM is an ever-ongoing process, which gets employed in strategies and is intended to detect the potential events that can influence the profitability rate of the business. It manages and sometimes provides reasonable reassurance with regards to the accomplishing of the targeted objectives. Along with other risks, this process sometimes incorporates financial, sometimes operational as well as the strategic risks [14]. Thus, with the help of robust ERM process, any company or business enterprise can detect and evaluate risks, thereby clearly deciding the event that would be in any way worth taking [15].

Generic risk research to a significant extent defines the risk science. However, applications of type may also be scientific if the effort leads to new insights, for example a greater grasp of how to implement a given risk assessment approach in practise. There have been relatively few publications on this topic, which explore concerns relating to science and

scientific standards on the one hand, and risk and risk areas on the other. However, some fundamental discussions of this subject have recently surfaced. These have helped to clarify the risk field's substance as well as its scientific foundation [10]. The following are some of the most important points raised. We must distinguish between the risk field, which encompasses all relevant risk educational programmes, journals, publications, researchers, research organisations and societies, and so on (what we may refer to as a risk discipline), and the risk field, which encompasses knowledge development.

This understanding is consistent with [14], who claims that science is the practise that provides us with the most epistemically warranted statements that can be made, at the time, on subject matters covered by the community of knowledge disciplines, such as nature, ourselves as human beings, our societies, and our physical constructions, and our mental structures [17]. We contribute to the advancement of risk research by publishing papers in journals. The distinctions between danger levels are not always clear. Some works are truly generic in the sense that they can be used in a wide range of situations, although there are many different levels of generality. Some research may have a scope that focuses on one or a few application areas, but it is nonetheless relevant to all types of applications in these fields. A work on how to appropriately conceptualise risk in a corporate context, for example, may be of limited interest outside of this field. Consider the study risk management, which has lately evolved from a niche topic to a burgeoning research sector [18].

[21] provides a summary of quantitative and analytical models (i.e. mathematical, optimisation, and simulation modelling approaches) for controlling supply chain risks, as well as generative research fields that have contributed basic information, concepts, theories, tools, and techniques to the subject. [23] is an example of work that is particularly relevant here. These studies are primarily concerned with contributions to risk levels, but they are also important in other areas to variable degrees. [10] examine popular perspectives on risk in supply chain management and propose solutions for how to better conceptualise risk; clearly, this type of research is foundational for the supply chain discipline, but not for the risk field as a whole. With respect to some issues, [17]'s work is

in accord with current generic tendencies in risk conceptualisation, as summarised by [21], but not with others. This is a problem in all types of applications: knowledge and experience transfer is challenging, and we frequently notice that different sectors generate tailor-made notions that are out of date in comparison to the generic risk field's developments. This underscores the need for more awareness and impact for risk research in general. On the other hand, limited work in specialised areas can frequently drive and influence risk research in general. The author of this publication worked with offshore risk analysis applications, and the challenges raised there led to general risk conceptualization research [15]. Different types of perspectives are in conflict, which can lead to integrative and ground-breaking ideas. See [31], which is about maritime transportation risk, for another example of borderline work. See also [16], which discusses the risk and uncertainty's foundation.

RISK MANAGEMENT SYSTEM VERSUS TRADITIONAL RISK MANAGEMENT

Risk management incorporates a very comprehensive approach to all risk management, aligning with the overall organization's strategy while involving most employees at all levels (Liebenberg & Hoyt, 2000). Sobel and Reding (2004) said that risk usually has holistic effects, sometimes creating the need for a similar management. COSO's (2004) definition of organizational risk management addressed how mostly risk is managed, providing a clear basis for application across organizations, sometimes industries, and even different sectors. It also focused on accomplishment of objectives and sometimes provided a basis for identifying its effectiveness. With an increase in volume and intensity, risk management becomes more challenging; as a result, risk management is critical to overall organisational success (Ben-Amar, [79]). Risk management makes the presence of risk in an organization's current situation much clearer and more visible, and leaders decide on a game plan based on how acceptable each risk is. [73]. Risk management, according to Ingley and van der Walt (2008), is a critical component of an organization's strategic operations and is critical to stakeholder value generation, performance, shareholder value, and competitive advantage. As more organisations or institutions employ strategic risk

management, the topic of risk management has become a hot topic [30]. Recently, there have been significant shifts in how risk is managed at the highest levels of government. Previously, it was managed in silos, with specific organisational units handling risk on their own [23]. According to Pagach and Warr (2011), this clear strategic approach of dealing with risk recognizes and then assesses risks an organization might encounter and thus, examines potential control actions. Although these procedures are consistent with a very traditional risk management approach, sometimes certain variations exist. Managing risks individually as in the traditional approach, results in incompetence due to the lack of harmonization between departments.

Supporters of institutional wide risk management sometimes find that by clearly integrating decision-making across most risk types, most organizations can avoid the risk expenditure by the exploiting natural hedges (Liebenberg & Hoyt, 2003). Hedging sometimes could be viewed as a very traditional risk management activity that in some ways reduces the chances of financial clear distress on a corporation (Smith & Stulz, 1985). Through the massive exploitation of natural hedges, sometimes holistic risk management reduces the very extreme cost of capital and clearly subsequently improves the performance and intrinsic value of the company (Nocco & Stulz, 2006). Individual risk- management activities can occasionally reduce earnings instability from specific sources, but the holistic risk management aims to reduce volatility very much by preventing accumulation of risk across different entities (Hoyt & Liebenberg, 2011). The very traditional risk management approach is grouped in companies, whereas ERM usually involves a generally broader perspective, occasionally considering the various types of risk associated with organizational goals (Borker & Vyatkin, 2012).

It aims to gain a very systemic perspective of the interdependence among many risks (McShane et al., 2011). Instead of focusing on a single risk, attention is given to the risks that could very much impede a firm's objectives and its value; it may not be possible to control all risks; however, occasionally sources of risk can be recognised and managed in relation to the broader organization's overall objectives (Ben-Amar et al., 2014). Corporate risk management, unlike very traditional risk management approaches, occasionally requires an organizational-wide style be taken in identifying, then assessing, and then

managing risk (Kleffner et al., 2003). While the all-traditional approach to risk management mainly implicates to protect an organization from extreme financial losses, corporate risk management on the other hand considers risk management as a component of an establishment's strategy, thereby occasionally allowing for better decision making (Liebenberg & Hoyt, 2003).

The very traditional approach has also caused unnecessary cost to organizations, and never provides a clear and comprehensive view of the risks to the upper management and BOD (Lam, 2000). Adding, very traditional approaches to risk management have not considered stakeholder value and duties to investors when making important decisions (Meier, 2000). Combined risk management takes a very broad view of risk compared to the very fragmented, silo-structured risk management at most organizations (Bowling & Rieger, 2005). Occasionally an organizational wide approach of risk management also sometimes looks within and up across organizational activities, also in contrast to the silo approach to risk management (Bowling & Rieger, 2005). Whereas, the very traditional risk management is largely concerned with protecting the organizations against very adverse financial effects, a combined risk management allows for very wide-ranging risk-adjusted decision making that maximize shareholder-value (Meulbroek, 2000).

However, individual risk management actions may reduce some earnings volatility by reducing the overall probability of catastrophic losses, potential interdependences between risks exist occasionally across events that might go unnoticed in the very traditional risk management model. Enterprise-wide risk supervision, though, provides a clear structure that merges all risk management activities into one very integrated framework enabling the detection of such interdependences (Hoyt, & Liebenberg, 2011). Consequently, individual risk management activities sometimes limit earnings instability from specific sources, but an institutional wide strategy reduces such volatility by preventing the overall aggregation of risk from many different sources.

THE CRO AND RISK MANAGEMENT SYSTEM

Collective risk management strategy occasionally requires an individual or group of individuals at the upper management level who coordinate various framework procedures (Lam, 2001; Waweru & Kisaka, 2013). The role of upper managers is critical in the implementation and execution of effective risk management internally (Waweru & Kisaka, 2013). For this reason, some risk officers are critical influencers when implementing a corporate holistic risk system. The crucial benefit of a special risk champion is the ability to increase risk management duties throughout an organization's management structure (De La Rosa, 2007). Such an executive works closely with other managers to help set up a risk management system and occasionally disseminates risk information throughout the organization (COSO, 2004; Saeidi, Sofian, Rasid, & Saeid, 2012). The presence of a CRO can also sometimes reduce risk-related information asymmetry between many shareholders (Beasley et al., 2008). As they are ultimately liable for unifying all the risk management actions across the organization, risk officers help reduce the duplication of efforts across the many sectors within the organization and increase an organization's productivity (De La Rosa, 2007).

To ensure efficiency, a risk champion must develop a good strategic understanding of an organization's core activities in both instances of products and services (Rochette, 2009). Rochette (2009) also show strong written and oral communication skills, occasionally the ability to adapt to various conditions, some good interpersonal and leadership skills, maybe the ability to negotiate, and teambuilding skills are essential for CROs to be efficient. This endorsed the assertion by De La Rosa (2007) that an efficient risk champion is a generalist who occasionally advocates for teamwork and successful communication. As a strategic controller and consultant, the risk champion also advises TM about risk, accomplishment, and how the capital investments can be made (Mikes, 2008). For any organizational wide system to be clearly value-based, the role of such a champion is crucial (Rochette, 2009).

Researchers studying the impact of the CRO on a very holistic system of handling risk have noted that the existence of a risk officer was directly related to the adoption and proper implementation of an institutional wide approach of managing risk (Beasley et al., 2005;

Hoyt & Liebenberg, 2008; Kleffner et al., 2003; Liebenberg, 2003; Liebenberg & Hoyt, 2003; Pagach & Warr, 2011; Waweru & Kisaka, 2013). Similarly, Daud et al. (2010) argued that the quality of the risk champion impacted the collaborative risk management implementation and its related procedures. Consistent with this claim, Saeidi et al. (2012) observed that occasionally the presence and overall quality of the risk officer strongly correlated with the enterprise's risk management strategy. However, not always is the risk officer the risk owner, but instead the mediator of the risk system, so there is a dire need for the risk champion to coordinate with other risk specialists as well (Rochette, 2009). To do this, the great risk champion establishes a proper risk management framework to determine how to identify risks that will be managed later (Mikes, 2008).

The risk officer must have a clear understanding of important strategic reservations and be able to communicate that understanding to upper management (Mikes, 2008). The presence and impact of the risk officer in an organization encourages the smooth adoption and implementation of an efficient risk management system (Beasley et al., 2005). The presence of such a person also indicates an organization's serious aspiration to implement risk management strategies internally (Rochette, 2009). The risk champion is eventually responsible for unifying all risk management activities across the corporation and reducing the replication of efforts across the various departments within the organization (De La Rosa, 2007). Liebenberg and Hoyt (2003) noted that although occasionally the presence of a competent risk champion suggested enterprise-wide risk management use, the reverse however, did not indicate the lack of such a system. Liebenberg and Hoyt easily concluded that establishing a risk champion's position showed the degree of commitment to organizational wide risk management. Pagach and Warr (2007) preached that organizations occasionally engaging a risk champion in the complete implementation of corporate risk management sometimes did so only as a response to bad stock performance.

They added that such organizations occasionally tend to be prone to stock price crashes with very few growth options. In other words, corporations with more opaque assets had more chances of growth and development were less likely to engage a CRO (p. 3). The CRO is an important substitute noted in the literature as being sometimes very necessary for the deployment of a complete and consolidated risk management system. However,

occasionally the use of a CRO as clear indication of the readiness for the easy deployment of a robust risk management system is true (e.g. Aabo et al., 2005; Beasley & Hoyt, 2003; Beasley, Pagach, & Warr, 2008; Liebenberg & Hoyt, 2003; Pagach & Warr, 2010) could be confusing and needs to be done with a lot of caution, as this could sometimes potentially result in the misunderstanding of critical ERM activities such as idiosyncratic risks (Kraus & Lehner, 2012). Liebenberg and Hoyt (2003) observed that there was no arrangement about the structure of the committee that should oversee the execution of an ERM framework within any organization. While some advocates have a risk champion, others recommend just the use of risk management boards. An alternative approach by Hanbenstock advised that risk should always be managed through a single business unit (as cited in Liebenberg & Hoyt, 2003).

The board of directors also play a significant role in the overall enterprise-wide approach to the combined management of risk [19]. The risk is deemed as a persistent part of the strategies and all policies of the organization. The board of directors understand that the philosophy of risk on a much wider level and that the company is willing to agree to the created value of stakeholders. In addition, occasionally the board of directors also sometimes monitor the activities of executing the procedure of ERM within the events of business and facing many tests for the effectiveness in such programs. The board of directors of any such company occasionally creates a path for developing awareness of all the risks and all the different challenges which are faced by the overall business in the growth at the hands of the marketplace. [13] explained that there are certain good strategies adopted by the Board of directors for exclusively monitoring the level of action in ERM. Further, they constantly work on the aspect of knowledge and demand for actions for exposure in productivity.

The overall team members of board of directors occasionally use committees for identifying and monitoring the risks. Their major focus in such scenarios is on the risk management committee. They also need to ensure the role of different committees on the issues of risk for efficient management [20]. Furthermore, [21] argued that the formation of risk governance and level of a board are often fully aligned that mainly covers the complete role and responsibilities along with the clear flow of information and requirement

of decision made. In such situations, the board of the company becomes proactive for the policies of risk management. The appropriate agreement and clarification of roles among all the team members through the board of directors sometimes to help prevent the uncertainties linked to the overall enterprise risk management. They occasionally also monitor the policy of the company as well as implementation on the board and in the overall performance of ERM. In addition to this, according to [22] it is important to reinforce the sovereignty of risk management that can only be carried out with the help of a strong board of directors.

The board of company should always ensure the risk management actions as well as operational activities of the rest of the business. It mainly includes the complete reporting of a relationship among the valued chief risk officer as well as an important risk committee. As per the viewpoint of [18], the complete team of board of directors usually monitor the performance through the different market circumstances while affecting the policies of a company. It is vital to creating a positive atmosphere within an organization to develop a wide range of prospects and motivate all team members to accept the changes. Furthermore, the report by the board of directors is usually considered as one of the most significant evidence that brings changes within business activities for handling of risks. Now it also helps to make progress in the performance of all ERM activities and they can hopefully accept a wide range of changes in the organization.

In risk conceptualization and risk assessments, uncertainty is a key notion. From the early phases of risk assessment in the 1970s and 1980s through now, how to recognise and deal with uncertainties has been extensively debated in the literature. Nonetheless, the subject is important. [10] offer a fresh take on the issues, challenges, and future directions for representing and conveying uncertainty in risk assessment. The most common strategy for dealing with the uncertainties in risk analysis is probabilistic analysis. There is widespread agreement that probabilities with a restricted relative frequency interpretation should be used when dealing with uncertainty. However, the answer is not so simple when it comes to describing and expressing epistemic doubt. The most frequent subjective probability approaches are Bayesian subjective probability approaches, however numerous others have been presented, such as interval probabilities, probabilistic measurements, and qualitative

methodologies. [13] Examine the problem and identify issues that must be addressed before it can be resolved. See also [15]'s discussion note. When subjective probability isn't suitable is one of the points discussed. The reasoning is that if the background knowledge is lacking, assigning a subjective probability with some certainty will be difficult or impossible. A subjective probability, on the other hand, can always be ascribed. The issue is that a given probability is taken to represent a higher level of knowledge than can be justified. Forcing the analyst to assign one probability distribution would necessitate the addition of some previously unavailable data. Probability distribution bounds are presented to us.

[11] provides a new perspective to the conversation. The main issue is to use probability to convey the experts' beliefs as well as to reflect the available knowledge. Although these ideas are known to be subjective, they do support decision-making. It is neither either or from this perspective; probability and alternative techniques complement one other. [15] also touches on this topic.

Advocates of non-probabilistic techniques such as possibility theory and evidence theory, in the author's experience, frequently lack a comprehension of the subjective probability idea. If the concept is understood, the interpretation frequently refers to a disputed betting interpretation [14]. This means that the assessor compares his or her level of uncertainty (degree of belief) regarding the event's existence to the standard of choosing a certain ball at random from an urn of ten balls [10].

When subjective probabilities are employed to describe uncertainty, we must also consider the knowledge that underpins the probabilities. Consider a scenario in which some risk analysts generate probabilistic risk metrics; in one example, background knowledge is strong, while in the other, it is weak, but the probability and metrics are the same. Alternative methodologies, such as possibility theory and evidence theory, can be used to handle this problem, but it is also possible to think differently, attempting to convey qualitatively the strength of this information in order to inform decision-makers. See also [16], who offers five levels of uncertainty expression: event, parameter, and model uncertainty – as well as two extra-model levels for acknowledged and unknown flaws in

the modelling process, such as possible conflicts about the problem framing. It is also significant and relevant to consider background information and the strength of this knowledge when using interval probabilities, which are based on possibility theory and evidence theory, for example. Normally, prior knowledge would be greater in the case of intervals than in the case of particular probability assignments, but they would be less informative in terms of expressing the experts' judgments. Many academics today are more flexible than in the past about utilising non-probabilistic representations of uncertainty, as stated by [19]. The core premise is that while probability is the primary tool, alternative approaches and methodologies might be useful when credible probabilities are difficult to estimate or agree upon. There appears to be widespread acceptance of the necessity to think beyond probability in situations characterised by significant and "deep" uncertainties. As we've seen, this doesn't always imply the application of possibility or evidence theory. The use of a combination of probabilistic and qualitative methodologies is an intriguing new study direction. We see components of integrative thinking here as well, with the conflict between diverse viewpoints for representing and expressing uncertainties being used to create something new, broader, and ideally better. Uncertainty importance analysis is a key area of uncertainty in risk assessment. The task is to determine which factors are the most important and vital in determining output uncertainty and risk. There has been a lot of research done in this area; see [17]. [19] proposes a reassessment of the reason behind uncertainty significance measures. What information they provide is questioned in comparison to standard significance measurements such as improvement potential. Based on the integration of a traditional significance measure and a related uncertainty importance measure, a new form of combined set of measures is developed. [6] Investigate how uncertainties affect traditional important metrics and how uncertainties can be reflected in the ranking of components or basic events with a similar scope. Models play a significant role in risk assessments, and the subject of model uncertainty has received a lot of attention over the years and more lately.

In recent years, a lot of work has been done on robustness in the context of risk and uncertainty; for example, [10] gives a survey of robustness research. He uses the adjective "robust" to describe the ability to resist "vague approximations" and/or "zones of

ignorance" in order to avoid negative consequences. In this light, robustness research aims to ensure this capacity to the greatest extent possible. Robustness is linked to a process that responds to a concern: the requirement for a resistance or self-protection capacity. [15] give an overview of recent advances in the topic of robust optimisation, which aims to identify the optimum strategies when parameters are unclear or ambiguous. [18] offers some broad viewpoints on risk-related techniques and notions of optimisation in decision-making, design, and planning. The author claims that when making judgments under uncertainty, robustness should be prioritised over efficiency, and that satisficing rather than optimising should be used.

AUDIT COMMITTEE (AC) AND RISK MANAGEMENT SYSTEM

In many uncertain global environments, the Audit Committee (AC) is critical for natural organizational success [77], and it plays an important role in risk management [7]. [80] suggested that ACs are vital in the management of risk management activities. [55] explained that ACs spend time evaluating risk instead of examining the risk management process, and [43] noted that ACs and BODs internally examine the financial reporting from TM to lessen financial risk. The AC is accountable for issues related to the relationship between the organization and all its auditors [52]. Agreeing to the National Commission on Fraudulent Financial Reporting, ACs create a good platform where all directors, upper management, and all auditors can coordinate issues linked to risk management and much of financial reporting [93]. The AC is able to impact the BOD to make sure that risk management actions are allotted attention and valid resources in order to be effective [69].

The AC is also important in advocating for CG principles to safeguard the public interest [79] additionally observed that the formulation of efficient management practices needed a pleasant relationship between the AC, CG, shareholders, and upper management. [4] stated that ACs must be unbiased and financially knowledgeable; however, [62] argued that ACs did not necessarily need financial knowledge, as risk is not limited to just realm. Organizational effectiveness can also be enhanced by good CG and occasionally the AC process [67]. The long effectiveness of the AC is largely based on the BOD, and it is crucial

for organizations to sustain sound controls and make sure the strong existence of independent auditors [65]. [56] noted that the AC has a very important responsibility to review financial information on a regular basis to promote some reliability and ensure organizations maintain strong control. [54] suggested that sometimes companies with high-quality auditors might be more dedicated to efficient risk management. Others have also argued that auditors can be influential in urging clients to improve their overall risk management practices [65].

It is occasionally difficult for the AC to be just unbiased, particularly in instances where committee selection is based on the influence of upper management or members of the BOD [65]. Because of this, ACs might not fulfil the interest of shareholders [56]. [70] noted that ACs comprised of independent, external members were more likely to be accountable and very transparent as independence increases potential interference or manipulation. For efficacy, [29] suggested the clear establishment of a just risk management committee separate from all the AC as well as an interface between the AC and the BOD. The risk management team is also responsible for reporting to both the BOD and the AC. According to [29], some members of the risk management committee could be individuals from multiple departments including finance, research, compliance, human resources management, assurance, logistics, production, quality control and development.

An effective AC can be impactful in resolving disagreements, as they tend to be unbiased towards the shareholder and very supportive towards the auditor reporting from TM to lessen financial risk. The AC is accountable for issues related to the association between the organization and all its auditors [21].

TM SUPPORT AND RISK MANAGEMENT SYSTEM

[42] noted that TM engagement and support are used often interchangeably. Also, TM and senior management are also sometimes used interchangeably, so for consistency in this study, TM support will be used everywhere. Occasionally enterprise-wide risk management execution can encounter setbacks and even failure at times. [78] identified some possible causes of holdups as a lack of buy-in from TM and management committees

such as the AC, a lack of knowledge of theoretical risk, a poorly developed approach, a poorly defined language on paper, an unsuitable oversight structure, inadequate resources, deficient supervision, the clear inability to maintain the momentum of the execution, and a poor tone of the upper management. During 2008 economic crisis, risk management has now become a very important concern. TM [9] observed that there has been a major increase in the demands for TM for oversight in risk management. According to Jarvenpaa and Ives, TM support involves the clear participation of executives or TM [7]. [75] said that TM support is vital as TM holds all the primary decision-making functions within an organization. TM are impactful because of their authority, and they are more likely to overcome any resistance [66]. TM support also could result in the availability of any or all appropriate resources for the execution of any new projects [77]. Scholars sometimes agree that effective risk management initiatives also cannot succeed without the steadfast TM support [87]. Davenport observed that with a strong TM commitment, many favourable endeavours could be possible [65]. TM can impact knowledge sharing and constant learning through the creation of appropriate office climate, work culture, and correct resources [43]. [43] explained that through knowledge donation and sometimes collection, an organization is clearly able to enhance its modernization abilities.

Effective TM support affects the setting of organizational values and promotes the development of proper management styles to improve the performance of any company [59]. Pringle and Kroll stated that TM's implementation of new programs also usually signals the importance of the programs, which can easily promote team commitment [39]. The usefulness of a management system is closely related to the reliability and ethical values of TM [76]. [52] observed that the procedures and environment within an organization influence TM's ability to achieve their objectives and goals. [65] asserted that an effective AC needs a strong organization charter, as well as TM cooperation and utmost support. TM support greatly improves organizational functioning [89].

In short, TM support is crucial for organizational accomplishment [87]. Enterprise-wide risk management is strategic and cannot succeed without the clear TM support [19]. [19] said that in the absence of a clear TM support, many opportunities can be missed, and projects can easily fail. According to [87], strong leadership and good management support

creates success for almost all strategies, and those organizations that satisfy stakeholders and maintain profitability must continue to promote it. Therefore, TM must join in in the early stages of the execution of a collaborative risk management system [2]. [92] cautioned, however, that the efficacy of TM support may vary across industries and businesses. According to [90], organizational boards and TM must ensure that systems enhance standards of first cost, second codes of conduct, and any other required policies. Management clearly impacts the CG mechanism through impact on board appointments and information shared with all other members [54].

The efficacy of a CG structure for achieving goals requires support of TM and leadership [43]. [39] attributed that in the context of low task interdependency, TM support regarding collective risk management execution success was low, while on the other hand, TM support had a significant impact on application success with high task interdependency. TM opinion about risk could influence cooperation and commitment in terms of performance and trust [68]. Rodriguez et al. explained that a positive TM attitude towards risk urges various sectors to undertake more tasks. [56] observed that TM played a crucial role in the success of any efficient risk management system. TM assistance enables the incorporation of risk management and any strategy across the complete organization. Finally, the nature, sometimes the scope, and of course impact of corporate risk management must have some strong support from TM to be successful [78]. Other employees of an organization are ready to accept and even adopt an enterprise-wide risk management system when TM and BOD are supportive and actively participating in the risk management process [7]. Hence, for any cooperative risk management structure to succeed, it is crucial that the entire organization finally gets involved.

There are various duties on the upper management for enterprise risk management which covers the chief risk officer for the clear betterment of the company [23]. The framework of ERM mainly states that the managers of an organization should support the risk management and promote compliances with the clear and appropriate management of risk in the area. The efficient approaches of ERM affect the culture of business in a very positive manner and it is only possible with support of upper management. The upper level of management creates a positive work atmosphere for managing and changing the events of

business through the expansion of activities within the business. Further, the approach of enterprise risk management helps the seniors to curb the problems of company that improves the level of opportunity.

The upper management at workplace, according to [24] supports the actions related to handling any competitive advantage in the enterprise risk management to alter the overall conditions of business. It is vital for the managers to embed the risk-aware culture that helps in providing a much better understanding of the activities. [20] explained that there are different methods adopted by the upper management to increase the chances of positive implementation of ERM within an organization. The top management always seems to support the employees for the expansion in the system of enterprise risk management with appropriate planning and good execution. Further, the upper management supports in a positive manner with the pertinence of laws and regulations for the complete ERM process.

REGULATORY ENVIRONMENT AND RISK MANAGEMENT SYSTEM

To attain the goal of adding value for stakeholders, it is essential that there is a sound relationship compliance with risk management and an organisation's governance [25]. The company should ensure that it complies with regulations, and align the requirement for risk management with corporate governance. Based on the resource requirements to implement ERM, it costs more to regulated industries in comparison with unregulated businesses. Companies listed with a country's relevant Securities Market must comply with the legally binding Code of Corporate Governance for Publicly Listed Companies. According to this code, a company's Board of Directors is primarily responsible in ensuring compliance with any new code of corporate governance.

Literature suggests that the Board of Directors must report on any new which may impact the performance of risk managers [8]. Furthermore, organisations are also required to ensure that the listed companies lead with the complaints of new code that impact the

effectiveness of ERM within its activities. Therefore, by overseeing compliance with regulation, the board of directors protect their organisation from potential risks [26]. Therefore, it is essential for risk managers to concentrate their efforts on strategic planning to maximize an ERM's effectiveness.

The ERM team works on planning and setting objectives to be aligned with regulatory requirements. Risk is associated with every decision made by a business, beginning from the board-level strategic decisions, to daily operational ones by the organisations' employees. Risk is influenced by a number of factors, including government regulations, input costs, market competition, sales volume, etc. Thus, this increasingly dynamic environment has necessitated changes in the risk management approaches. Rather than identifying risks from a silo-based perspective, businesses now view risks more holistically using an ERM approach. [4]. An ERM approach provides a reasonable level of assurance that targeted objectives can be achieved. This approach also aids an organization in effectively dealing with problems and prospects, thus improving its ability to create and preserve value of stakeholders.

This process also has the benefit of inculcating a risk-focused organizational culture. As ERM supports a methodologically sound analysis and reporting structure for risks, thus drawing the focus of the top management. The board of directors, thus, can oversee the risk management activities, review proposed strategies, assess whether these strategies are in alignment with the organisation's objectives and core values, and improve risk mitigation decisions [5]. The CEO of an organisation is thus responsible for the implementing this approach [6].

Environmental regulation has quickly emerged as a major regulatory instrument. These were developed to cope with rapidly degrading environment, and have been a part of intense and organised effort among nations to adopt environmental law. This ecological crisis is a result of the under-regulated but expanding footprint of industrial activities since

the 1960s. Since then, an increasingly complex regulatory governance has been growing owing to rapid diffusion of environmental regulatory regimes from developed economies to developing countries. This has manifested as the ever-expanding regulatory scope of multiple environmental sectors for pollution control and ecological conservation.

It must be noted that top-down approaches (i.e. – directed by upper management) results in lower levels of adopting ERM practices by employees. While top-down approaches intend to increase the ability of upper management to manage the risk portfolio, and deal with it effectively. In many countries, regulators pressure organisations to improve risk management and risk reporting [7]. ERM regulations are more advanced and matured as compared to the underdeveloped ones. The Code of Corporate Governance for Publicly Held Joint Stock Companies necessitates the maintenance of a sound risk mitigation system by publicly-traded firms. The focus on examining national styles of environmental regulation has gradually shifted to a focus on the local level, down to street-level regulators.

Along with emerging progressive ideas regarding the creation of value in regulatory governance, a greater deal of complexity has been added to extant discourse between legalistic and voluntary paradigms. Regarding regulatory strategies for improving compliance, regulated industrial enterprises, have shifted from being forced to choose between complying or evading, to considering compliance as a component of sustainability strategies to achieve business innovations. Developing and emerging economies have adopted their own regulatory regimes to address their national circumstances, particularly the specific threats of climate change and industrial pollution affecting them. New theoretical frameworks are needed to account for how cross-national variations affect compelling and emerging issues in environmental regulatory governance.

To bring Publicly Companies up to par with code requirements, boards of directors must adopt and adapt risk management plans [8]. As few studies address this specific aspect of ERM, there is a little evidence on the factors impact the adoption and effectiveness,

particularly among publicly listed companies. For instance, some studies emphasize the need for a proactive ERM program implementation, public and private organizations have need for effective risk management strategy, there is a little knowledge and awareness of risk management assessment procedures [9-11].

The benefits of this technique also include creating a risk-focused culture in any firm. Furthermore, because ERM promotes better risk reporting, structure, and investigation, it improves top management's attention, allowing for the adoption of a better risk mitigation approach. Top management, such as the board of directors, play a critical role in ensuring that risk management tasks are carried out effectively. According to [5,] high management or board members analyse each proposed strategy and make sure it aligns with the company's objectives, goals, and fundamental values. According to [6,] every organization's CEO or leader is ultimately responsible for the execution or implementation of such an approach. The lower the level of adoption of ERM practises by organisational personnel, the higher the level of authority monitoring. Typically, such a strategy aims to improve top management's ability to oversee the entire portfolio of risks and deal with them. Regulators in many parts of the world are pressuring businesses to enhance their risk management and overall risk reporting [7].

When compared to the underdeveloped ones, the ERM regulations are far more evolved, or one could say mature. According to [8,] in order for all public companies to meet the code's requirements, the boards and board committees must establish an effective risk management plan. Despite the fact that very few studies have ever addressed the specific topic of ERM, there is still a dearth of evidence regarding all of the aspects that determine its overall level of acceptance and efficacy. According to The Code of Corporate Governance for Publicly Held Joint Stock Companies, publicly traded companies must maintain a strong risk management strategy. For example, [9] emphasised the importance of a proactive ERM programme deployment. [10] demonstrated that every public or private business recognises the importance of an effective risk management approach. [11] discovered that risk management assessment processes are only partially understood or recognised.

ERM techniques should always be established for each firm independently, depending on the many external and internal variables. ERM is commonly used in the creation of a company's strategy to determine the risks associated with the outcomes. In such cases, enterprise risk management improves corporate operations by clearly displaying a complete profitability analysis. It develops a reasonable plan to handle the problem effectively, taking into account unforeseeable circumstances. According to [9], there is a need to implement a proactive strategy to corporate risk management.

2.7 Framework of the Study

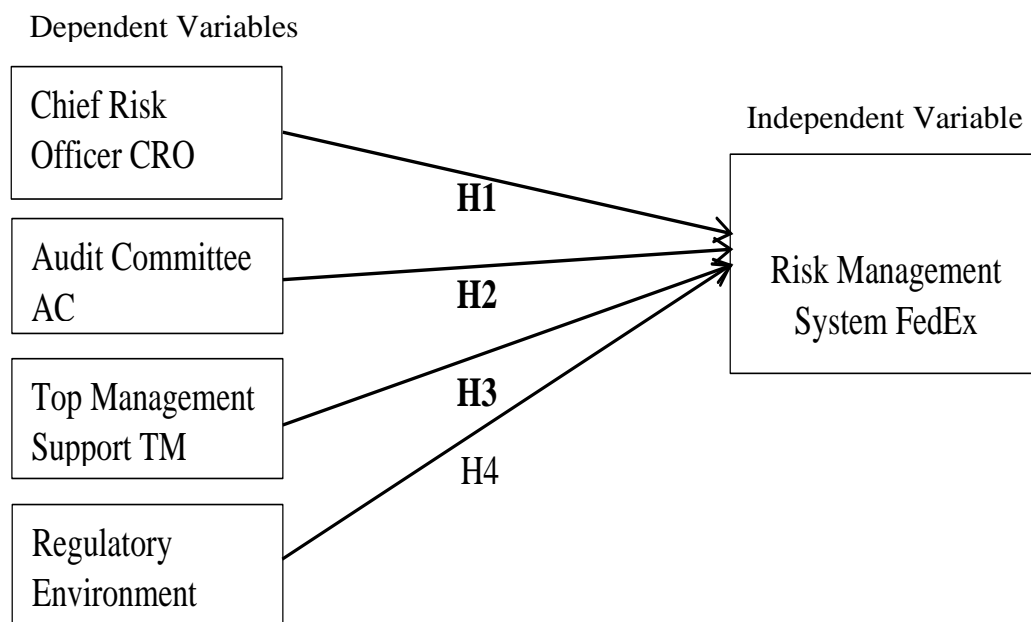


Figure 2.1: Framework of the study

Dependent Variables: Independent variables: Chief Risk Office, Audit Committee, Top Management Support, Regulatory Environment

Independent variable: Risk Management System

UNDERPINNING THEORY

RESOURCE BASED VIEW THEORY (RBV THEORY)

A fair appreciation of the RBV models seen as a very critical aspect in the application of the innovation system in any business. The RBV model believes that businesses' internal resources and capabilities are the main determinants for businesses' success or failure in the market [62]. They see the businesses' strategic choices on how to compete in their external environment based on the type and strength of those resources and capabilities [18]. In short, the RBV theory sees a firm's resources as the primary determinants of its performance and contributing to its overall competitiveness [54]. [2] however, add that such resources should also be rare, valuable, and not substitutable. According to the RBV theory, resources include assets, capabilities, organizational processes, firm attributes, information, and knowledge controlled by a firm to enable it to formulate and implement strategies that improve its efficiency and effectiveness [4].

SUMMARY

This section discussed the dependent variable of the study based on the literature review. It further discussed the literature review related to the independent variables in relation to the dependent variable. Further discussed the definitions, importance and the theories related to the variables.

SECTION TWO

INTRODUCTION

This section starts with the introduction of research methodology and will discuss the different steps involved in the research methodology of the current study. Further it discusses the philosophy, approaches and instrumentation. It also discusses the population and sample and data collection and analysis procedures.

RESEARCH METHODOLOGICAL PROCESS

Research strategies area unit completely different tools for analysis. The strategies facilitating analysis area unit referred to as analysis strategies. These scientific strategies embody experimental studies, theoretical tools, numeric and statistical approaches. Methodology helps to choose the population and sample conjointly. All the results are supported by facts and figures.

POSITIVISM: (PHILOSOPHY OF THIS STUDY)

The philosophy of positivism is characterised as the belief that only knowledge based on facts and figures can be trusted. According to positivism theory, the researcher's position is restricted because he or she gathers data and interprets it critically and without coercion. This analysis is based on this viewpoint.

Positivism is based on quantifiable evidence that can be analysed statistically. It must be admitted that the positivist research philosophy is difficult to describe precisely and succinctly. This is due to the wide range of contexts in which positivism is applied by researchers. The number of different ways to describe positivism may be proportional to the number of writers who have written about study theory. Nonetheless, positivism is founded on the premise that science is the only way to discover the facts. The following text discusses positivism with an emphasis on business studies.

Positivism is a theory that holds that only "factual" information obtained by observation (the senses), including measurement, is reliable. The researcher's position in positivism studies is limited to data collection and objective analysis. The study results in these types of studies are typically measurable and quantifiable.

Positivism is based on quantifiable evidence that can be analysed statistically. "As a theory, positivism is in line with the empiricist view that understanding arises from human experience," according to one source. It takes an atomistic, ontological view of the universe, seeing it as made up of discrete, measurable elements and events that interact in predictable, predictable, and normal ways."

Furthermore, in positivism studies, the researcher is separate from the sample, and there are no safeguards in place to protect human interests. According to Crowther and Lancaster (2008), positivist studies often use a deductive method, while inductive analysis is often associated with a phenomenology theory.

Furthermore, positivism refers to the idea that researchers should focus on facts, whereas phenomenology focuses on meaning and allows for human interest. "If you take a positivist approach to your study, you believe that you are independent of your research and that your research can be purely objective," the researchers warn.

When doing research, independent means that you engage with your research subjects as often as possible." To put it another way, positivist studies are focused solely on evidence and treat the environment as external and objective. Since the researcher's position in this study is limited to data collection and objective analysis, positivism is also used. In many such studies, the research findings are often quantifiable, as well as observable.

DEDUCTIVE RESEARCH APPROACH

Hypotheses are formulated on the basis of current theory in the deductive method, and the results can be generalised. The deductive method will be used to establish and analyse hypotheses in this review. The deductive method formulates a research approach to test a hypothesis or hypotheses based on a pre-existing theory (Silverman, 2013).

This method is ideally suited to situations where the aim of the study is to see whether the observed phenomena match expectations based on previous studies (Wiles et al., 2011).

As a consequence, the deductive method can be especially well adapted to the positivist approach, which allows for the formulation of theories and statistical testing of predicted outcomes to a predetermined degree of probability (Snieder & Larner, 2009).

A deductive approach, on the other hand, can be used through qualitative analysis methods, but the expectations created by prior research will be expressed differently than by hypothesis testing (Saunders et al., 2007).

The deductive method is described as a progression from general to specific: first, a general theory and knowledge base is developed, and then the specific knowledge obtained through the research process is evaluated against it (Kothari, 2004).

The key distinction between inductive and deductive research approaches is that a deductive approach is concerned with testing theory, while an inductive approach is concerned with generating new theory from evidence. A hypothesis is generally the starting point for a deductive approach, while research questions are typically used to limit the reach of an analysis in an inductive approach.

Inductive methods are typically based on investigating new phenomena or looking at previously studied phenomena from a particular viewpoint, whereas deductive approaches are usually focused on causality.

Inductive methods are more commonly associated with qualitative analysis, whereas deductive methods are more commonly associated with quantitative methods. There are no hard and fast laws, and some qualitative experiments can be deductive in nature. Grounded theory, pioneered by Glaser and Strauss, is one inductive technique that is frequently mentioned in research literature. This method requires the researcher to start with an open mind and no preconceived notions of what would be discovered. The aim is to come up with a new theory that is based on the evidence. After completing the data analysis, the

researcher must look at current hypotheses in order to place their new hypothesis within the discipline.

Grounded theory is a method that should not be taken lightly. To find new hypothesis, it takes extensive and repetitive sifting through the data, as well as analysing and re-analyzing the data several times. It's a method that works well in research projects where the phenomenon being studied hasn't been studied before.

When deciding whether to use an inductive or deductive methodology, the most important considerations are the intent of your study and the methods that are ideally suited to test a hypothesis, investigate a new or evolving field within the discipline, or address specific research questions.

The deductive method is used in this study since it is focused on developing hypotheses based on a pre-existing theory and then formulating a research approach to test it. This method is ideally suited to situations where the aim of the study is to see whether the observed phenomena match expectations based on previous studies.

As a consequence, the deductive method can be especially well adapted to the positivist approach, which allows for the formulation of theories and statistical testing of predicted outcomes to a predetermined degree of probability.

QUANTITATIVE RESEARCH (THIS STUDY TYPE IS QUANTITATIVE)

This method is concerned with quantitative data, as the name implies (Flick, 2011). It adheres to a number of agreed statistical criteria for the validity of the approach, such as the minimum number of respondents needed to achieve statistical significance (Goddard & Melville, 2004). Despite the fact that this research method is based on a positivist theory, it can be applied to a broad variety of social phenomena, including emotions and subjective perspectives. Despite the fact that this research method is based on a positivist theory, it can be applied to a broad variety of social phenomena, including emotions and subjective perspectives.

Deductive reasoning is used in quantitative analysis, in which researchers start with theories and then gather data to see whether there is empirical evidence to support such hypotheses. Since quantitative analysis involves numeric data in the form of variables, there are observable variables in this review.

A variable is a unit of measurement for any characteristic that varies or has several potential values. Many characteristics are naturally quantitative in nature (for example, years of schooling, age, and income); the numbers used to quantify these numeric variables are meaningful in that they measure the sum of that characteristic that is present.

Even though these statistics do not quantify the sum of the characteristic present, researchers also are interested in characteristics that are not numeric in nature. These variables are given numeric values for use in quantitative analysis.

Even if the divisions of the variable "sex" are coded as female=1, male=2, this does not mean that males have twice as much of the characteristic "gender" as females. Numeric variables (in which the numbers have meaning) and categorical variables (in which the numbers do not have meaning) can thus be distinguished (which are commonly words or ranges).

Quantitative information can be gathered in a number of ways. Researchers can specifically obtain quantitative data (such as reaction times or blood pressure) in laboratory environments, or study subjects can self-report such data on a pretest or posttest.

Questionnaires are widely used to gather quantitative data by asking respondents to record perceptions, experiences, and demographics. They may be conducted by an interviewer or self-administered. Direct observation of quantitative data collected for a different reason, such as quantitative data captured in patients' medical charts or the results of students' standardised tests, is also popular.

Secondary data analysis is a popular quantitative method in which a researcher analyses data that was originally obtained by another research team. Large-scale, nationally representative data sets are often used. Many organisations make such data sets accessible

to enable many researchers to do independent research using high quality data, which requires a lot of resources.

The quantitative method is particularly useful when dealing with specific questions regarding well-defined phenomena. Quantitative research necessitates high-quality data with well-measured variables (meaning the values of the variables must accurately represent differences in the characteristics of interest).

When conducting research in complex or understudied areas that do not lend themselves to being assessed with precise variables, this can be difficult. The quantitative methodology is often considered as having better empirical proof than other research methods because it uses deductive inference and is therefore more readily interpreted as "true science."

CHOICES

The mono process, mixed method, and multi-method options are all illustrated in the study onion (Saunders et al., 2007). The mono-method entails using only one research technique for the analysis, as the names say. Mixed-methods analysis necessitated the use of two or more research methods.

And generally refers to the application of both qualitative and quantitative research methods. A larger number of approaches are used in the multi-method (Bryman, 2012). The key distinction between the mixed and multi-method approaches is that the mixed-method employs a combination of methodologies to produce a single dataset (Flick, 2011).

The multi-method approach divides the analysis into different parts, each of which produces a distinct dataset, which is then analysed using quantitative or qualitative methodologies (Feilzer, 2010). This thesis employs a mono method approach since it employs only quantitative analysis methods rather than multiple or mixed methods.

CROSS SECTIONAL RESEARCH (I DID CROSS SECTIONAL RESEARCH)

The longitudinal and cross-sectional studies are also observational studies. This ensures that researchers record data about their subjects without tampering with the research

environment. We will simply calculate the cholesterol levels of daily walkers and non-walkers, as well as any other characteristics of interest to us, in our research.

We will not persuade non-walkers to start walking or urge regular walkers to change their habits. In a nutshell, we'd try not to get in the way. A cross-sectional analysis is distinguished by the ability to compare various demographic groups at a single point in time. Consider it like taking a picture.

Findings are derived from whatever works inside the confines of the picture. To return to our previous example, we might compare cholesterol levels in daily walkers in two age groups, over 40 and under 40, to cholesterol levels in non-walkers in the same age groups. We could also construct gender subgroups.

We would not, however, accept past or potential cholesterol levels because they would be beyond the scope. We'd only examine cholesterol levels at a single point in time, that is, just once. A cross-sectional study design has the advantage of allowing researchers to compare several variables at once. At little or no additional cost, we may, for example, look at age, gender, income, and educational level in relation to walking and cholesterol levels. Cross-sectional research, on the other hand, do not offer conclusive evidence of cause-and-effect relationships. This is because such studies include a snapshot of a particular moment in time and do not take into account what occurs before or after the snapshot. As a result, we can't say for sure if our daily walkers had low cholesterol levels before starting their exercise routines or whether the daily walking behaviour helped to lower cholesterol levels that were previously large.

POPULATION

The population is a group of people that have similar characteristics and have been chosen as a unit of study for research purposes (Fox and Bayat, 2007). The citizens who work for FedEx Corporation are the study's target population. Employees are chosen based on their availability.

The population refers to the group of individuals, activities, or items of interest that the researcher is interested in studying. Every single individual in the population is referred to as an element. The total number of this element's population is denoted by the letter "N." Sampling is the method of selecting a number of elements (depending on the population size) in order to learn about the population's characteristics. The two types of sampling methods are probability sampling and nonprobability sampling. In this analysis, non-probability sampling will be used.

SAMPLING

CONVENIENCE SAMPLING (USED IN THE STUDY)

A convenience sample is one in which the units chosen for inclusion in the sample are the most available. Sampling is the process of selecting a representative sample of the population. The sample size can be calculated in a variety of ways, using a combination of formulas.

The sample size is specified as the total number of responses received, regardless of the number of questionnaires distributed. One of the most important tasks before beginning data collection is determining the appropriate sample size for a population.

The sample size, population estimate, degree of freedom, expected significance level, and expected level accuracy are all factors to consider when deciding on a sample size. It is easy and simple to calculate the sample size of the population using Cochran's (1953) sample determination formula, which is given below.

Formula:

$$n = (t^2pq/d^2) \div (1 + (((t^2pq/d^2) - 1) \div N))$$

n = sample size

$$t_2 = 3.8416$$

$$p = 0.50 \text{ (maximum assumed sample size)} \quad q = 1 - p$$

$$d = 0.05$$

N = population size

If the population is less than 14, the sample size is proportional to the population size, and if the population is greater than 200,000, the sample size remains the same at 350.

The sample size for this analysis, according to Cochran, will be 350. So far, more than 350 questionnaires have been distributed, with 250 of them successfully returned. The study's interpretation is focused on the data that was successfully obtained from a total of 250 respondents.

RESEARCH INSTRUMENT

The information from the respondent was obtained via a questionnaire in this review. The items in this study's questionnaire were taken from the previous researcher. The objects are taken exactly as they are. The questionnaire employs a five-point Likert scale.

RELIABILITY

Cronbach's alpha:

It is used to determine the questionnaire's reliability; a reliability test evaluates the degree of accuracy between different measurements of a variable. The internal accuracy and reliability of measurements were estimated using the Cronbach's alpha coefficient. The data collection would be accurate if the Cronbach's alpha value is greater than 0.7. If the value is similar to 1, the query is more trustworthy. Using statistics software, the coefficient

value will be determined, and the Cronbach's alpha test will be used to determine if the questionnaire is accurate or not.

DATA COLLECTION TECHNIQUES

The analytical methodology used determines how data is collected and analysed. The method used at this point of the analysis makes a major contribution to the study's overall reliability and validity. Regardless of the project's strategy, the data obtained can be divided into two categories: primary and secondary.

THE PRIMARY DATA COLLECTED IN THE STUDY:

The term "primary data" refers to information obtained from firsthand sources. This can be data derived from respondents in survey or interview data, or data derived from historical first-hand sources (Bryman, 2012). However, it is not always data that has been produced by the research project. Data collected from statistical collections such as the census, for example, may be considered primary data.

Similarly, secondary data obtained from other researchers may be used as primary data, or it can be interpreted by a text that is being analysed (Flick, 2011). The primary data, rather than being seen through the lens of another study, is better interpreted as the data that is being analysed as such.

SECONDARY DATA

Secondary data is information extracted from other researchers' work or opinions (Newman, 1998). Since it is information that has already been processed by another, the findings of a research paper, for example, may be considered secondary data. Analyses of statistical surveys may also be considered secondary evidence (Kothari, 2004). However, the data is characterised to some degree by its usage rather than its intrinsic existence (Flick, 2011). Depending on whether the writer was actually present, newspapers will serve as both a primary and secondary source of information. Newspapers may be used as

primary data in a study of social attitudes in the eighteenth century, or in a study of the causes of fear of crime in the modern United Kingdom. As a result, rather than an intrinsic feature of the data, the most effective distinction between the two types of data which be determined by the use of which it is placed in a report.

DATA ANALYSIS

CORRELATION AND REGRESSION ANALYSIS:

Correlation is used to check the relationship among the variables and regression is used to check the dependency of dependent variable on independent variables.

SUMMARY

This section discussed the following things: research design steps and particularly the steps involved in this study, population and sampling, questionnaire, data collection and analysis procedures.

SECTION THREE

INTRODUCTION

This section discusses the results based on descriptive statistics, Cronbach's alpha, correlation and regression. It discusses the acceptance of hypothesis based on these results. All the results are found significant as all the independent variable are affecting the dependent variable.

DEMOGRAPHICS:

From total 250 respondents, there were 165 male and 85 female. Their percentage was 66% & 34% respectively. Their age level: 25-35 were 65; 35-45 were 100 and 45 and above, were 85.

Descriptive Statistics:

Table 4.1: Impact on Risk management system by the Chief Risk Officer (CRO)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Confirms robust oversight of risk at the board committee and CRO levels.	7	6	20	196(78.4)	21
2. Promotes a culture that is risk-focused and open communication across the organization with the help of risk officer.	2	12	8	51	177(70.8)
3. Assigns clear accountability and promotes an effective risk management	3	12	8	71	156(62.4)

framework through risk officer.					
4. CRO appropriately assesses risks while planning new strategies, activities, and/or products.	7	35	39	152(60.8)	17

In the table above, 78.4 percent of respondents believe that the board committee and CRO have strong risk control. With the guidance of a risk officer, 70.8 percent strongly agree that promotes a culture that is risk-focused and thereby, opens communication all around the company.

62.4 percent strongly agree that appointing a risk officer establishes clear lines of responsibility and promotes an efficient risk management framework. CRO appropriately assesses risks when preparing new plans, programmes, and goods, according to 60.8 percent of respondents.

Table 4.2 Effects of Audit Committees (AC) on Risk Management System (RMS).

	Strongly Disagree	Disagree	Neutral	agree	Strongly agree
1. We encourage independent audit committee AC.	10	13	18	182(72.8)	27
2. Audit committees are helpful in building the risk management system.	4	37	38	163(65.2)	8
3. All team members contribute equally to decision making.	7	10	45	147(58.8)	41

In the table above, 72.8 percent of respondents agreed that independent audit committee AC should be encouraged. Audit committees are beneficial in the development of a risk management scheme, according to 65.2 percent of respondents. In question three, 58.8% of respondents agreed that everyone on the team contributes equally to decision-making.

Table 4.3 Impact of Top Management Support on risk management system.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The environment in my organization provides an suitable foundation for risk management system.	2	12	8	51	177(70.8)
2. CEO is suitably involved in the enterprise risk management system to ensure the process is appropriately dedicated on the strategic and reputation risks.	11	31	28	149(59.6)	31
3. All managers key to the organization participate and contribute in the risk system management process.	7	10	45	147(58.8)	41

In the table above, 70.8 percent of respondents strongly agree that my organization's internal climate provides an effective basis for risk management. The CEO is adequately active in the enterprise risk management system process, according to 59.6% of respondents, to ensure that the process is properly based on strategic and reputation risks. Both main managers of the company participate and contribute in the risk system management process, according to 58.8% of respondents.

Table 4.4 Impact of Regulatory Environment on risk management system.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Compliance with the requirements of regulation for effective corporate governance is the driving-force to even consider the adoption of an ERM approach.	2	12	8	51	177(70.8)
2. Non-compliance to the requirement of regulation for the adoption of ERM approach is resulting in my organization facing penalties.	11	31	28	149(59.6)	31
3. Coordination has improved between different areas responsible for risk management due to the compliance to the regulatory requirements	7	10	45	147(58.8)	41

According to the above table, 70.8 percent of people strongly believe that the regulatory imperative for good corporate governance is the guiding force behind the consideration of adopting an ERM strategy. My company is facing fines as a result of noncompliance with the regulator's provision for the implementation of an ERM strategy, according to 59.6% of respondents. Compliance with regulatory requirements has strengthened communication between various areas responsible for risk management, according to 58.8% of respondents.

4.3 Reliability Test of Data

Table 4.5 Results of Cronbach's Alpha.

Independent variables	Cronbach's alpha coefficient
Chief Risk Officer (CRO)	.854
Audit Committee (AC)	.861
Top Management Support	.821
Regulatory Environment	.833

The standard standards for testing and measuring scale reliability have been met in full. The results of our study indicate a value of 0.27 (), and the minimum value should not be less than 0.7. (Nunnally, 1978). So, based on the above table, we can see that the Cronbach alpha values are greater than 0.7, which is considered excellent (Sekaran, 2003) and indicates data reliability.

CORRELATION ANALYSIS

Here we have tried to find out the basic correlation between independent and dependent variables.

Table 4.6 Results of Correlation analysis between (D.V) and Independent variables is below.

Correlation between Independent variables Risk Management System	r value	p value
Chief Risk Officer (CRO)	.81	.00
Audit Committee (AC)	.87	.00
Top Management Support	.77	.00
Regulatory Environment	.86	.00

The Pearson r value is much greater than the p value, which is 0.00, and the sigma (2-tailed) “p” value is less than 0.05, as seen in the table above. As a result, it's obvious that both of the independent variables and the dependent variable have a positive correlation.

4.5 REGRESSION ANALYSIS

The results obtained through regression methods are shown in Table 4.7 given below.

Table 4.7: Results of the Regression Analysis showing the Impact of Independent variables on Risk Management System.

Summary of Regression Analysis				
Model	R	R²	Adjusted R Square	Std. Error of the Estimate
1	.531	.092	.25	.45309

According to the data in the table above, bivariate correlation r (R) is 0.531, indicating a good positive linear relationship with independent variables having a large effect. The r² (R square) coefficient of determination of 0.092 indicates that the independent variables affect the dependent variable. However, since this could be overestimated, we used modified R square as the more accurate approximation for the entire sample. The estimate's standard error was 0.453. We can see and interpret from the above findings that independent variables have a significant effect on the risk management system.

Table 4.8: Hypothesis Support from Results

Hypotheses	Status
H1: CRO significantly affects the Risk Management System.	Supported
H2: AC affects the Risk Management System.	Supported

H3: Top Management Support affects the Risk Management System.	Supported
H3: Regulatory Environment affects the Risk Management System.	Supported

Based on the above discussion table 4.8 shows that all the four hypothesis of this study are accepted based on the results of correlation and regression.

4.6 Summary

The effects of descriptive statistics, cronbach's alpha, correlation, and regression were discussed in this section. It debated whether or not to consider a hypothesis based on these findings. Since all of the independent variables influence the dependent variable, all of the results are important.

CONCLUSION

INTRODUCTION

This section is based on conclusion and recommendations. It discusses the importance of the contributing factors towards the risk management system in answering the research questions.

CONCLUSION

Organizational factors (such as employee positions like Chief Risk Officer (CRO), the important role of an Audit Committee (AC), and especially Top Management (TM) support) associated with enterprise risk management are examined in this report, which adds to existing research on the topic. The main findings revealed a positive and important relationship between the role of a CRO, an AC, and TM support and the implementation of a risk management system. The existence and position of a CRO, AC, and TM support affected the implementation of an enterprise-wide risk management system, according to this indicator.

Furthermore, as TM support increased, so did the involvement of the CRO and AC, and vice versa, according to the report. Furthermore, there was a clear positive association between having a CRO and having an AC, implying that organisations with a CRO were more likely to have an AC and vice versa. Paape and Speklé (2012) say that organisational risk management needs further progression. The results of the study are critical for decision-makers in organisations implementing strategic risk management, as they recommend that organisations should hire a CRO, an AC, and enlist the help of TM in implementing successful risk management policies and mechanisms. A CRO and an AC should be in place, and TM funding should be strong, for organisations to reap the potential benefits of implementing risk management systems. This study adds to the body of information by indicating that risk management systems are used in a variety of industries,

including education, infrastructure, healthcare, government, legal, business services, manufacturing, not-for-profit, engineering and energy/oil & gas.

LIMITATIONS

Only a few variables were studied in this analysis. Future researchers will be able to explore more variables. Another flaw in the report is its narrow emphasis on a single industry. Despite these flaws, this research adds to the body of knowledge about the risk management system.

FUTURE RECOMMENDATIONS

The findings of this study have implications for risk management practise and analysis in the future. It is proposed that the impact of organisational structure on risk management effectiveness be studied in order to better understand the factors that affect the deployment of an integrated risk management system. A comprehensive risk management system's ability to successfully handle operational risk should also be investigated. In terms of risk and organisational structure, more research is needed to see how organisational hierarchy affects risk management system implementation. Furthermore, using contingency theory, more research can be done to see if more variables like growth rate, independence of board, firm size, legislation, ownership structure, business type, corporate governance, efficient communication, and risk culture in the enterprise have an influence on the effective implementation of organisational broad risk management.

Although the role of risk management systems in value creation was not explicitly addressed in this report, it is suggested that the effect of various levels of deployment and their related contributions to value creation be investigated. A study like this may reveal whether and how a collaborative approach to risk management affects stakeholder value development (Kraus et al., 2012). Finally, to determine a potential cause and effect relationship between variables, an experimental testing approach may be used.

REFERENCES

1. Aabo, T., Fraser, J. R. S., & Simkins, B. J. (2005), The rise and evolution of the chief risk officer: Enterprise risk management at Hydro One, *Journal of Applied Corporate Finance*, 17(3), 62-75. doi:10.1111/j.1745-6622.200500045.x
2. Abrams, C., J, V. K., Müller, S., Pfitzmann, B., & Ruschka-Taylor, S. (2007), Optimized enterprise risk management, *IBM Systems Journal*, 46(2), 219-234.
3. Ai, J., Brockett, P. L., Cooper, W. W., & Golden, L. L. (2012), Enterprise risk management through strategic allocation of capital, *Journal of Risk and Insurance* 79(1), 29-55. doi:10.1111/j.1539-6975.2010.01403.x
4. Aiken, M., & Hage, J. (1971), The organic organization and innovation, *Sociology*, 5(1), 63- 82. doi:10.1177/003803857100500105
5. Alboali, S., hamid, E., & Moosavi, S.A. (2013). The study of contingency components roles in the design of municipals' accounting systems: A case study, *Journal of Business and Management Science*, 1(5), 96-104. doi: 10.12691/jbms-1-5-3
6. Allayannis, G., & Weston, J. P. (2001), The use of foreign currency derivatives and firm market value, *Review of Financial Studies*, 14(1), 243-276. doi:10.1093/rfs/14.1.243
7. Altuntas, M., Berry-Stölzle, T. R., & Hoyt, R. E. (2011), Implementation of enterprise risk management: Evidence from the German propertyliability insurance industry, *Geneva Papers on Risk & Insurance*, 36(3), 414-439. doi:10.1057/gpp.2011.11
8. Alviniussen, A., & Jankensgård, H. (2009), Enterprise risk budgeting: Bringing risk management into the financial planning process, *Journal of Applied Finance*, 19(1/2), 178-192. Retrieved from <http://www.fma.org/Publications/JAFIndex.htm>
9. Andrews, R., & Beynon, M. J. (2011), Organizational form and strategic alignment in a local authority: A preliminary exploration using fuzzy clustering, *Public Organization Review*, 11(3), 201-218. doi:10.1007/s11115-010-0117-4

10. Andriole, S. J. (2009), Boards of directors and technology governance: The surprising state of the practice, *Communications of the Association for Information Systems*, 24(22), 373-394. Retrieved from <http://aisel.aisnet.org/cais/>
11. Archer, D. (2002), Creating a risk management framework, *CMA Management*, 76(1), 16-19.
12. Arena, M., Arnaboldi, M., & Azzone, G. (2010), The organizational dynamics of enterprise risk management, *Accounting, Organizations and Society*, 35(7), 659-675 doi: 10.1016/j.aos.2010.07.003
13. Aretz, K., Söhnke M. B., & Dufey, G. (2007), Why hedge? Rationales for corporate hedging and value implications, *The Journal of Risk Finance*, 8(5), 434-449. doi:10.1108/15265940710834735
14. Arnold, V., Benford, T. S., & Hampton, C., & Sutton, S. G. (2012), Enterprise risk management as a strategic governance mechanism in B2B-enabled transnational supply chains, *Journal of Information Systems*, 26(1), 51-76. doi:10.2308/isys-10253
15. Bartlett, K. R. (2005), Survey research in organizations: In R. A. Swanson & E. F. Holton III (Eds.), *Research in organizations: Foundations and method of inquiry* (pp. 97-113). San Francisco, CA: Berrett-Koehler Publishers.
16. Bates, L. (2010), Avoiding the pitfalls of enterprise risk management, *Journal of Risk Management in Financial Institutions*, 4(1), 23-28. Retrieved from <http://web.ebscohost.com>
17. Baxter, R., Bedard, J. C., Hoitash, R., & Yezegel, A. (2013), Enterprise risk management program quality: Determinants, value relevance, and the financial crisis, *Contemporary Accounting Research*, 30(4), 1264-1295. doi:10.1111/j.1911-3846.2012.01194.x 18.
18. Beasley, M. S., Branson, B. C., & Hancock, B. V. (2009), ERM: Opportunities for improvement, *Journal of Accountancy*, 208(3), 28-32. Retrieved from <http://www.journalofaccountancy.com> 19.
19. Beasley, M. S., Branson, B. C., & Hancock, B. V. (2010), Are you identifying your most significant risks? *Strategic Finance*, 92(5), 29-35. Retrieved from <http://sfmagazine.com> 20.

20. Beasley, M. S., Branson, B. C., & Hancock, B. V. (2010a), COSO's 2010 report on enterprise risk management (2nd ed): Current state of enterprise risk oversight and market perceptions of COSO's ERM framework. Retrieved from <http://poole.ncsu.edu/d/erm/weblogs/summaries/2008/state-erm-2nd-2010.pdf>
21. Beasley, M. J., Carcello, J. V., Hermanson, D. R., & Neal, T. L. (2009), The audit committee oversight process, *Contemporary Accounting Research*, 26, 65-122. doi:10.1506/car.26.1.3
22. Beasley, M. S., Clune, R., & Hermanson, D. R. (2005), Enterprise risk management: An empirical analysis of factors associated with the extent of implementation, *Journal of Accounting and Public Policy* 24(6), 521-531. doi: 10.1016/j.jaccpubpol.2005.10.001
23. Beasley, M. S., & Frigo, M. L. (2007), Strategic risk management: Creating and protecting value, *Strategic Finance*, 88(11), 25-53. Retrieved from <http://sfmagazine.com>
24. Beasley, M., Pagach, D., & Warr, R. (2008), Information conveyed in hiring announcements of senior executives overseeing enterprise-wide risk management processes, *Journal of Accounting, Auditing & Finance*, 23(3), 311-332. doi:10.1177/0148558X0802300303
25. Ben-Amar, W., Boujenoui, A., & Zeghal, D. (2014), The relationship between corporate strategy and enterprise risk management: Evidence from Canada, *Journal of Management and Strategy*, 5(1), 1-17. doi:10.5430/jms. v5n1p1
26. Berinato, S. (2004). Risks rewards: Are you on board with enterprise risk management? You had better be, It's the future of how businesses will be run. *CIO*, 18(3), 1-58. Retrieved from <http://www.cio.com>
27. Borker, D. R., & Vyatkin, V. N. (2012), Toward a general holistic theory of risk, *Journal of American Academy of Business, Cambridge*, 18(1), 33-38. Retrieved from <http://www.jaabc.com/journal.htm>
28. Bostrom, R. (2003), Corporate governance: Developments and best practices one year after Sarbanes-Oxley, *International Financial Law Review* 22(10), 189-204. Retrieved from <http://www.iflr.com/>

29. Bowling, D. M., & Rieger, L. (2005), Success factors for implementing enterprise risk management, *Bank Accounting & Finance*, 18(3), 21-26.
30. Bromiley, P., McShane, M., Nair, A., & Rustambekov, E. (2014), Enterprise risk management: Review, critique, and research directions, *Long Range Planning* [In press, corrected proof online]. doi: 10.1016/j.lrp.2014.07.005
31. Brown, I., Steen, A., & Foreman, J. (2009), Risk management in corporate governance: A review and proposal, *Corporate Governance: An International Review*, 17(5), 546-558. doi:10.1111/j.1467-8683.2009.00763.x
32. Buchalter, S. D., & Yokomato, K. L. (2003), Audit committees' responsibilities and liability, *The CPA Journal*, 73(3), 18-23. Retrieved from <http://www.cpajournal.com/>
33. Buchanan, L. (2004), Breakthrough ideas for 2004: Watch your back, *Harvard Business Review*, 82(2), 13-16. Retrieved from <https://hbr.org/>
34. Burkhardt, M. E., & Brass, D. J. (1990), Changing patterns or patterns of change: The effect of a change in technology on social network structure and power, *Administrative Science Quarterly*, 35(1), 104-127. doi:10.2307/2393552
35. Burns, T., & Stalker, G. M. (1961), *The management of innovation*. London, UK: Tavistock,
36. Byrnes, S. E., Williams, C., Kamat, S., & Gopalakrishnan, S. (2012). Making the case for an enterprise risk management program, *The Journal of Equipment Lease Financing*, 30(2), 1-10.
37. Carcello, J. V., Hermanson, D. R., & Ye, Z. (2011), Corporate governance in accounting and auditing: Insights, practice implications, and future research directions, *Auditing: A Journal of Practice & Theory* 30(3), 1-31. doi:10.2308/ajpt-10112
38. Chen, I. J., & Paulraj, A. (2004), Towards a theory of supply chain management: The constructs and measurements, *Journal of Operations Management*, 22(2), 119-150. doi: 10.1016/j.jom.2003.12.007
39. Churchill, G. A., Jr. (1979), A paradigm for developing better measures of marketing constructs, *Journal of Marketing Research*, 16(1), 64-73. doi:10.2307/3150876

40. Cohen J. R., Gaynor, L. M., Krishnamoorthy, G., & Wright, A. M. (2011), The impact on auditor judgments of CEO influence on audit committee independence, *Auditing: Journal of Practice & Theory*, 30(4), 129-147. doi:10.2308/ajpt-10146
41. Cohen, J., Krishnamoorthy, G., & Wright, A. (2004), The corporate governance mosaic and financial reporting quality, *Journal of Accounting Literature*, 23(1), 87-98. Retrieved from <http://www.journals.elsevier.com/journal-of-accounting-literature>
42. Cohen, J. R., Krishnamoorthy, G., & Wright, A. M. (2007), The impact of roles of the board on auditors' risk assessments and program planning decisions, *Auditing: A Journal of Practice & Theory*, 26(1), 91-112. doi:10.2308/aud.2007.26.1.91
43. Cohen, L., Manion, L., & Morrison, K. (2007), *Research methods in education* (6th ed.), New York, NY: Routledge.
44. Collins, D. (2003), Pretesting survey instruments: An overview of cognitive methods, *Quality of Life Research*, 12(3), 229-238. Retrieved from <http://www.isoqol.org/research/quality-of-liferesearch>
45. Colquitt, L. L., & Hoyt, R. E. (1997), Determinants of corporate hedging behavior: Evidence from the life insurance industry, *Journal of Risk and Insurance*, 64(4), 649-671. doi:10.2307/253890
46. Committee of Sponsoring Organizations of the Treadway Commission [COSO]. (2004), *Enterprise risk management - Integrated framework*, New York, NY: Author.
47. Cooper, D. R., & Schindler, P. S. (2007). *Business research methods*, New York, NY: McGraw-Hill.
48. Cozijnsen, A. J., Vrakking, W. J., & van IJzerloo, M. (2000), Success and failure of 50 innovation projects in Dutch companies, *European Journal of Innovation Management*, 3(3), 150-159. doi:10.1108/14601060010322301
49. Creswell, J. W. (2012), *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.), Boston, MA: Pearson.
50. Csaszar, F. A. (2012), Organizational structure as a determinant of performance: Evidence from mutual funds, *Strategic Management Journal*, 33(6), 611-632. doi:10.1002/smj.1969

51. Cumming, C. M., & Hirtle, B. J. (2001), The challenges of risk management in diversified financial companies, *Economic Policy Review*, 7(1), 1-17. Retrieved from <http://www.ny.frb.org/research/epr/>
52. Dabari, I. J., & Saidin, S. Z. (2014), A theoretical framework on the level of risk management implementation in the Nigerian banking sector: The moderating effect of top management support, *Social and Behavioral Sciences* 164 (2014), 627 – 634. doi: 10.1016/j.sbspro.2014.11.156
53. Daft, R. L. (2001), *Organizational theory and design*, Cincinnati, OH: Southwestern.
54. Damanpour, F. (1991), Organizational innovation: A meta-analysis of effects of determinants and moderators, *Academy of Management Journal*, 34(3), 555-590. doi:10.2307/256406
55. Das, S. C., & Gope, A. K. (2014), Impact of demographic features of employees on HRD in life insurance corporation of India: The multinomial logistic regression modeling, *Review of HRM*, 3, 236-244
56. Daud, W. N. W., Haron, H., & Ibrahim, D. N. (2011), The role of quality board of directors in enterprise risk management (ERM) practices: Evidence from binary logistic regression, *International Journal of Business and Management*, 6(12), 205-211. doi:10.5539/ijbm.v6n12p205
57. Daud, W. N. W., Yazid, A. S., & Hussin, H. M. R. (2010), The effect of chief risk officer (CRO) on enterprise risk management (ERM) practices: Evidence from Malaysia, *The International Business & Economics Research Journal*, 9(11), 55-64. Retrieved from <http://www.cluteinstitute.com/>
58. De La Rosa, S. (2007), Moving forward with ERM, *Internal Auditor*, June, 50-54. Retrieved from <https://iaonline.theiia.org/>
59. De Loach, J. W. (2000), *Enterprise-wide risk management: Strategies for linking risk & opportunity*, London, UK: Prentice Hall.
60. Deloitte. (2008), *Perspectives on ERM and the risk intelligent enterprise: Enterprise risk management benchmark survey*, Retrieved from http://www.ipai.pt/fotos/gca/surveyerm_pt_1_1233338524.pdf

61. Demidenko, E., & McNutt, P. (2010), The ethics of enterprise risk management as a key component of corporate governance, *International Journal of Social Economics*, 37(10), 802-815. doi:10.1108/03068291011070462
62. Desender, K. (2011), On the determinants of enterprise risk management implementation, In N. S. Shi & G. Silvius (Eds.), *Enterprise IT governance, business value, and performance measurement* (pp. 87-100). doi:10.4018/978-1-60566-346-3.ch006
63. Devers, C. E., McNamara, G., Wiseman, R. M., & Arrfelt, M. (2008), Moving closer to the action: Examining compensation design Effects on firm risk, *Organization Science*, 19(4), 548-566. doi 10.1287/orsc.1070.0317
64. Dia, M., & Zéghal, D. (2008), Fuzzy evaluation of risk management profiles disclosed in corporate annual reports, *Canadian Journal of Administrative Sciences*, 25(3), 237-254. doi:10.1002/cjas.66 65.
65. Dickhart, G. (2008), Risk: Key to governance, *Internal Auditor*, 65(6), 27-34. Retrieved from <https://iaonline.theiia.org/>
66. Dickinson, G. (2001), Enterprise risk management: Its origins and conceptual foundation, *The Geneva Papers on Risk and Insurance*, 26(3), 360-366. doi:10.1111/1468-0440.00121
67. Didraga, O. (2013), The role and effects of risk management in IT project success, *Informatica Economica*, 17(1), 86-98. doi:10.12948/issn14531305/17.1.2013.08
68. Draft. R. L. (2001), *Organizational theory and design* (7th ed.), Boston, M.A: South-Western College. 69.
69. Drazin, R., & van de Ven, A. H. (1985), Alternative forms of fit in contingency theory, *Alternative Administrative Science Quarterly*, 30(4), 514-539. doi: 10.2307/2392695
70. Kelley, P. C., & Kendrick, T. (2006), Five elements of corporate governance to manage strategic risk, *Business Horizons*, 49(2), 127-138. doi: 10.1016/j.bushor.2005.07.001
71. Teasley, R., & Robinson, R. (2005), Understanding technology transfer effectiveness in Japanese organizations: A test of contingency theory, *Academy of*

- Strategic Management Journal, 4, 77- 97. Retrieved from <http://www.alliedacademies.org>
72. Thompson, J. D. (1967), *Organizations in action*, New York, NY: Mcgraw-Hill.
 73. Tiller, S. R. (2012), Organizational structure and management systems, *Leadership and Management in Engineering*, 12(1), 20-23. doi:10.1061/(ASCE)LM.1943-5630.0000160
 74. Torben, J. A. (2006), *Global derivatives: A strategic risk management perspective*, Harlow: Pearson Education. 191.
 75. Torben, J. A. (2009), Effective risk management outcomes: Exploring effects of innovation and capital structure, *Journal of Strategy and Management*, 2(4), 352-379. doi:10.1108/17554250911003845
 76. Tourangeaus, R., Rips, L. J., & Rasinski, K. (2000), *The psychology of survey response*, Cambridge, MA: Cambridge University Press.
 77. W. M. (2001), *The research methods knowledge base*, Cincinnati, OH: Atomic Dog.
 78. Trochim, W. M. (2006), *The research methods knowledge base (2nd ed.)*. Retrieved from: <http://www.socialreserachmethods.net/k/b/desty p es.php>
 79. Turley, S, & Zaman, M. (2004), The corporate governance effects of audit committees, *Journal of Management and Governance*, 8(3), 305-332. doi:10.1007/s10997-004-1110-5
 80. Vasile, E., & Croitoru, I. (2013), Corporate governance in the current crisis, *Internal Auditing & Risk Management*, 8(2), 1-11. Retrieved from <http://univath.ro/aimr/en/content/home>
 81. Vaclavik, M., & Jablonsky, J. (2012), Revisions of modern portfolio theory optimization model, *Central European Journal of Operations research*, 20(3), 473-483. doi:10.1007/s10100-011-0227-2
 82. Van Donk, D. P., & Molloy, E. (2008), From organizing as projects to projects as organizations. *International Journal of Project Management*, 26(2), 129-137. doi: 10.1016/j.ijproman.2007.05.006
 83. Vogt, W. P. (2007), *Quantitative research methods for professionals*, New York, NY: Pearson Education.

84. Walker, P. L., Shenkir, W. G., & Barton, T. L. (2002), *Enterprise risk management: Pulling it all together*, Altamonte Springs, FL: Institute of Internal Auditors Research Foundation.
85. Waweru, N., & Kisaka, E. (2013), The effect of enterprise risk management implementation on the value of companies listed on the Nairobi stock exchange, *Journal of Applied Finance and Banking*, 3(3), 81-105. doi:10.2139/ssrn.1907248
86. Wester, K. L. (2011), Publishing ethical research: A step-by-step overview, *Journal of Counseling and Development*, 89(3), 301-307. doi:10.1002/j.1556-6678.2011.tb00093.x
87. Wu, D., & Olson, D. L. (2010), Enterprise risk management: Coping with model risk in a large bank, *The Journal of the Operational Research Society*, 61(2), 179-190. doi:http://dx.doi.org/10.1057/jors.2008.144
88. Wycoff, J. (2003), The "big 10" innovation killers, *Journal for Quality and Participation*, 26(2), 17-22. Retrieved from <http://asq.org/pub/jqp/>
89. Yazid, A. S., Razali, A. R., & Hussin, M. R. (2012), Determinant of enterprise risk management: A proposed framework for Malaysian public listed companies, *International Business Research*, 5(1), 80-86. doi:10.5539/ibr.v5n1p80
90. Yeoh, P. (2009), Causes of the global financial crisis: Learning from the competing insights, *International Journal of Disclosure and Governance*, 7(1), 42 – 69. doi: 10.1057/jdg.2009.18
91. Yermack, D. (1996), Higher market valuation of companies with a small board of directors, *Journal of Financial Economics*, 40(2), 185-212. doi:10.1016/0304-405X(95)00844-5
92. Yin, R. K. (2003), *Case study research: Designs and methods* (3rd ed.), Thousand Oaks, CA: Sage.
93. Zwikael, O. (2008), Top management involvement in project management: A cross country study of software industry, *International Journal on Management in Project Business*, 1(4), 498-511. doi:10.1108/17538370810906228.

Annexes

Questionnaire

No.	Items					
1.	RISK MANAGEMENT SYSTEM					
	1. Develops risk management system that addresses key risks across the company and elevate risk discussions to the strategic level.					
	2. Approves the firm's risk management system as a component of its strategy.					
	3. The internal environment in my organization provides an appropriate foundation for risk management system.					
	4. Requires companies to disclose risk policies in their statement of disclosures and set out the obligations of management to risk management and internal control.					
	5. The top management sends an appropriate level of emphasis on the importance of risk					

	management system in my organization.					
2.	CHIEF RISK OFFICER (CRO)					
	1. Ensures robust oversight of risk at the board committee and CRO levels.					
	2. Promotes a risk-focused culture and open communication across the organization with the help of risk officer.					
	3. Assigns clear lines of accountability and encourages an effective risk management framework through risk officer.					
	4. CRO Appropriately assesses risks when planning new strategies, activities and products.					
3.	Audit Committee (AC)					
	1. We encourage independent audit committee AC.					
	2. Audit committees are helpful in building the risk management system.					
	3. All team members contribute equally to decision making.					

4.	TOP MANAGEMENT SUPPORT (TM)					
	1. The internal environment in my organization provides an appropriate foundation for risk management system.					
	2. CEO is sufficiently involved in the enterprise risk management system process to ensure the process is appropriately focused on the strategic and reputation risks.					
	3. All key managers of the organization participate and contribute in the risk system management process.					
5.	Regulatory Environment					
	1. The driving force behind the consideration for adoption of an ERM approach is the compliance with the regulatory requirement for effective corporate governance.					
	2. My organization is facing penalties as a result of noncompliance to the regulators requirement for the adoption of ERM approach.					
	3. The compliance to the regulatory requirements has					

	improved the coordination between different areas responsible for risk management.					
--	--	--	--	--	--	--