THE RELATIONSHIP BETWEEN MARKET RISK MANAGEMENT TOOLS AND PERFORMANCE OF INVESTMENT FIRMS IN KENYA

BY

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DECLARATION

This research project report is my original work and has not been presented for an award of a degree at the University of Nairobi, or any other degree at any other university.

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This research project report has been submitted for examination with my approval as the university supervisor

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ABSTRACT

For effective implementation of risk management methodologies and practices within firms, it is crucial for organizations it identify and understand the key factors that influence success of market risk management initiatives as they have profound effects on firm performance. The objective of this study was to determine the relationship between market risk management tools and firm performance with a particular emphasis on investment firms in Kenya. A descriptive design study was used and a population of 26 firms targeted of which 19 responded. The study used both primary and secondary data. Primary data was sourced via a questionnaire sent to respective firms whereas secondary data was sourced from the investment firms issued financial reports. Regression analysis, was used to determine the strength of the model through ANOVA by use of significance of T-statistics and F statistics at 5% level as well as using coefficient of determination (R^2). From the various components of risk management, the results reveal that risk management has a statistically significant relationship with financial performance. This is indicated by organizational culture, the link between risk management and organizational mission and objectives, determining the risk appetite, risk tolerance and risk treatment measures and linking risk management and strategic objectives. The study results also show that risk management tools have no statistically significant relationship with financial performance. From the findings, the researcher recommends that the Capital Markets Authority ensures that all players in the market align their risk management policy to their organizational culture to ensure all employees are aware of the risk management policies. The study further recommends that N.S.E and C.MA impress upon market players to have active teams within their structures to support the risk identification functions, which will be key to developing and implementing an essential risk management policy. Further the study recommends the setting up of key performance indicators by firms which can be used to gauge the performance of risk management policies owing to the effectiveness of key performance indicators in enhancing the performance of investment firms.

TABLE OF CONTENTS

LIST OF TABLES & FIGURES

LIST OF ABBREVIATIONS

ADB - African Development Bank

AT - Agency Theory

BSC - Balance Score Card

CAPM - Capital Asset Pricing Model

CFO – Chief Financial Officer

CMA - Capital Markets Authority

COSO – Committee of Sponsoring Organizations

EMH - Efficient Market Hypothesis

ERM - Enterprise Risk Management

FDI - Foreign Direct Investment

FRA - Forward Rate Agreement

IMF - International Monetary Fund

KIPPRA - Kenya Institute of Public Policy Research and Analysis

MPT - Modern Portfolio Theory

NSE - Nairobi Stock Exchange

PMS - Performance Management System

SPSS - Statistical Package for Social Sciences

RBA - Retirement Benefits Authority

TSE - Tokyo Stock Exchange

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

While most financial institutions are particularly proficient at measuring returns and constructing benchmarks to evaluate performance, it is argued that this expertise does not extend to the measurement of risk (JP Morgan, 1996). However, it is a universally accepted precept of modern financial economics that efficient portfolios can yield higher returns only at the expense of higher risk. Performance analysis based solely on realized returns belies this very fundamental economic principle and is, therefore, incomplete. In addition, several other factors may be identified as motivating recent levels of interest in market risk. Foremost among these is the increased variety, complexity and volume of trade in financial instruments and derivatives (Frain and Meegan, 1996).

Neely, Gregory and Platts (2002) describe performance measurement as the process of quantifying action, where measurement is the process of quantification and action correlates with performance. According to Atkinson et al. (1997) performance measurement should help the economic entity to understand and assess the value received from suppliers and employees, the value provided by the stakeholders and the effectiveness of processes implemented in the economic entity and its strategic properties. Therefore, performance measurement plays the role of coordination, monitoring and diagnosis of economic entity's activities.

The perception of risk management and organization practices is growing due to two main factors. First, the increased interest in corporate governance and a focus by Boards of Directors on identifying, assessing, treating and monitoring risks as well as evaluating the effectiveness of management controls to manage risks. Second, a trend towards world-wide government regulation utilising risk-based regulatory approaches that focus on tighter internal control mechanisms, such as the Sarbanes-Oxley Act of 2002, COSO and the adoption of ISO 31000 as the international risk management standard.

Risk Management refers to a process of identifying loss exposures faced by an organization and selecting the most appropriate techniques for treating these particular exposures effectively

(Rejda, 2003). Risk and risk management has become a feature of an organization in both private and public sectors. There is a great deal of attention to risk in academic circle, in industry, in the profession and in the media. Recent world events including the global financial crisis, the financial crisis facing the Eurozone, the Japanese earthquake and tsunami, the floods in Thailand and the Deepwater Horizon oil spill in the Gulf of Mexico have all reinforced and intensified interest in risk (Scheytt et al, 2006).

1.1.1 Risk Management Tools

According to Schwalbe (2009), project risk management is the act and science of of identifying, analyzing and responding to risk throughout the duration of a project with the aim of meeting the project objectives. An increasingly popular and understandable way of measuring and managing risk is by using the Value at Risk method or VaR. It defines risk as the worst possible loss under normal market conditions for a given time horizon (Grinblatt and Titman, 2001). According to Biglova *et al.* (2004) this risk measurement technique is simple to handle since it provides a risk measure by a single variable. This variable provides the investor with the possibility of losses given a probability (1-p) in a given time horizon and offers a comprehensible understanding of the likelihood of losing money on the investment. VaR can also measure risk to lose money within a time period and not just at the terminal date. According to Kritzman and Rich (2002) investors are generally exposed to far greater risks during the investment than on the actual end date. Investors often measure the outcome, positive or negative, on the expiring date of the investment. Continuous VaR however allows them to measure risk during the time period instead since the investment might not last the duration of the expected time. Focus should therefore shift from the end period measurement and focus on the risk during the whole holding period, so that losses during time will not affect the terminal investment.

Risk analysis is an activity geared towards assessing and analyzing system risks. Risk analysis can be conducted on a scheduled, event-driven, or as needed basis. Risk analysis can be implemented as an iterative process where information collected and analyzed during previous assessments are fed forward into future risk analysis efforts (US Department of Homeland Security, 2005). According to Ritter (2005), Sensitivity Analysis, seeks to place a value on the effect of change of a single variable within a project by analyzing that effect on the project plan.

It is the simplest form of risk analysis and management. Uncertainty and risk are reflected by defining a likely range of variation for each component of the original base case estimate. In practice such an analysis is only done for those variables which have a high impact on cost, time or economic return, and to which the project is most sensitive. Another method of risk analysis is probability analysis which overcomes the limitations of sensitivity analysis by specifying a probability distribution for each variable, and then considering situations where any or all of these variables can be changed at the same time (Ritter, 2009).

According to Schwalbe (2007), risk response and control involves reacting to identified and residual risks, carrying out risk response plans and evaluating the effectiveness of the strategies throughout the life of the project. It also involves taking steps to enhance opportunities and reduce threats to meeting project objectives. Multiple risk control measures may be used to implement a given technique. Risk control goals are designed to support the risk management program goals, which in turn support the individual's or organization's goals. To that end, risk control techniques must be effective and efficient, comply with legal requirements, assist in promoting life safety, and that ensure that a business can retain continuity during and immediately following a loss (Schwalbe, 2007).

1.1.2 Firm Performance

Accounting-based indicators are generally used to measure firm performance. Stock brokers as well as investors and financial analysts regularly use them to measure the performance of firms. Hence, these indicators have been considered as the most important criteria to better measure firm's performance (Sher & Yang, 2005, p. 5).In addition, they are reliable, permitting objectivity when measuring and comparing the performance of different firms. However, other non-financial indicators such as customer profile, customer satisfaction, performance of a firm′s employees, satisfaction of a firm′s employees, quality of a firm′s products and services are other indicators that are used to measure firm′s performance. In this perspective, Kaplan and Norton developed a model known as the Kaplan and Norton′s Balanced Scorecard (BSC) to measure firm′s performance, incorporating the financial and non-financial indicators.

The Financial Perspective advocates the use of financial or accounting-based indicators such Return on Capital Employed (ROCE). Return on Assets (ROA), Net Assets Value (NAV) and

Earnings per Share (EPS) to measure firm′s performance. The financial perspective has been adopted in this study. Net Asset Value (NAV) was utilized in the study as it represent the value of the total equity, or it may be divided by the number of shares outstanding held by investors, thereby representing the net asset value per share. It is given by the value of a firm's assets less the value of its liabilities. This may also be the same as the book value or the equity value of a business.

Accounting-based indicators are useful tools to help determine whether a firm is performing satisfactorily when compared to its competitors. There are also used to measure the performance of a firm′s management, to determine whether a firm may be worth an investment opportunity as well as to evaluate the performance of a firm relative to its competitors (Wood & Sangster, 2002, p. 368). Moreover, accounting-based indicators have been considered useful in several other ways or for several other purposes. For instance (1) there are useful when assessing the ability of a firm to pay its debts (2) there are useful when evaluating a firm′s managerial successes and (3) there are useful when assessing a firm′s ability of complying with statutory regulations (Barnes, 1987, p. 449). Accounting-based indicators also permit the performance of a firm to be measured generally in terms of its physical volume such as its revenue, its profits as well as its value added (Mahato, 2011, p. 54). Nonetheless, different groups of stakeholders use different categories of accounting-based indicators to measure firm′s performance.

1.1.3 Risk Management Tools and Financial Performance

Finance theory suggests that risk management can increase the value of a firm by addressing so called corporate "under investment problem". The basic idea is that by hedging financial risk with derivatives, companies reduce the variability of their cash flow, thereby ensuring they will have sufficient funds to undertake all promising projects. This idea is supported by a leading theoretical study by Froot, Scharfstein, and Stein (1993), which demonstrated that when costs of external capital include deadweight costs, companies that require outside financing will under invest when internal operating cash flows are low.

An important and highly debated topic in corporate finance is whether active risk-management policies affect firm value. Conceptually, the seminal work of Modigliani and Miller (1958) has

long shown that in a frictionless setting, hedging is irrelevant for value. This invariance result, however, stands in sharp contrast to the prominence of risk management in practice, and the rapid growth in financial innovation (Miller, 1986; Tufano, 2003). Studies on the relationship between risk management and financial performance of banks mostly have been conceptual in nature, often drawing the theoretical link between good risk management practices and improved bank performance. Schroeck (2002) and Nocco and Stulz (2006) stress the importance of good risks management practices to maximize firms' value. In particular, Nocco and Stulz (2006) suggests that effective enterprise risk management (ERM) have a long-run competitive advantage to the firm (or banks) compared to those that manage and monitor risks individually. It is, therefore suggested that companies manage risks strategically by viewing all the risks together within a coordinated manner. In relation to this, Stulz (1996) associates good risk management practices with the elimination of costly lower-tail outcomes by proposing "full-cover" risk management as compared to "selective" risk management. The study suggests that prudent risks management is important in reducing the bankruptcy costs. Additionally, in the case of the US, there are potential benefits that risk management could also reduce taxes.

One effective way for organizations to understand the value of the Enterprise Risk Management (ERM) framework is to link it with their Performance Management System (PMS) (Acharyya, 2007). A study of CFOs by IBM Global Business Services in 2008 revealed that only 29 percent of organizations have aligned risk with performance. Therefore, there is still much room for improvement by aligning PMS with ERM in an organization. When ERM and PMS are linked, the value of an ERM framework can be effectively and efficiently understood within an organization. In other words if ERM framework would be integrated with an organization's PMS, the ERM framework would definitely enhance shareholders' value. Only when organizations understand that ERM framework is adding value to the company, they would be motivated to invest more resources in ERM framework implementation in order to drive strategic decisions for meeting organizational objectives and maximizing long-term shareholder value (Acharyya, 2007).

1.1.4 Investment Industry in Kenya

The Nairobi Stock Exchange (NSE) was founded in 1954 and has become an essential market playing a vital role in economic prosperity by fostering capital formation and sustaining economic growth. Stock markets are more than a place to trade securities; they operate as a

facilitator between savers and users of capital by means of pooling of funds, sharing risk, and transferring wealth. Stock markets are essential for economic growth as they facilitate the flow of resources to the most productive investment opportunities in other words; they help in terms of efficient allocation of credit in the economy. Demirguc-Kunt and Levine (1996), Singh (1997) and Levine and Zervos (1998) find that stock market growth plays an important role in predicating future economic growth in situations where the stock markets are active.

Individuals engaged in investment banking in Kenya may do so via the Nairobi Stock Exchange (N.S.E). Players in the investment industry are governed by the NSE rules, Capital Markets Authority (CMA) rules, Central Bank of Kenya's Prudential Regulations, Retirement Benefits Authority (RBA) rules and the Insurance Act. The players include companies listed under the investment segment of the Main market Segment and Growth and Enterprise Segment of the NSE, Institutional investors like pension funds, fund managers, insurance companies, high net worth investors and credit scoring companies. The stock exchange provides a platform for various players to perform effective risk management through use of tools such as; Credit Scores – which tries to assist this decision by finding what would have been the best rule to apply on a sample of previous applicants. This is the basis of credit scoring approach where a decision to accept or reject an application is made (Thomas et.al, 2002). It allows for case by case risk management assessment when appraising a loan application. It therefore refers to the use of statistical models to transform relevant data into numerical measures that guide credit decisions. It is therefore referred to as the industrialization of trust (Anderson, 2007). Credit scoring has been championed worldwide to be a better means of evaluating a creditworthy borrower as compared to the traditional methods of risk assessment.

In Kenya the Central bank has been involved in initiatives aimed at transforming the approach used for conducting its core mandate of supervision and regulation of banks to make it more risk focused, significant steps have been made towards implementation of risk based supervision. Inspection procedures and report formats have been modified, and the Central Bank received Risk Management programs (RMPs) from all institutions as required of them (Ngugi, 2001). Ngugi, (2001) postulates that in order to determine the needs of the local banking sector with regard to risk management, the Central Bank of Kenya conducted a survey in September 2004 that would provide a status position on the extent to which risk management is practiced in the

financial institutions operating in Kenya. The survey revealed that there is a high level of awareness in banking institutions on the importance of employing systematic methods of identifying, analyzing and controlling or mitigating risks (Cuthbertson and Nitzsche 2003).

The use of derivatives in corporate risk management has grown rapidly in recent years, fueled in part by the success of the financial industry in creating a variety of over-the-counter and exchange-traded products. A 1995 survey of major non-financial firms revealed that at least 70 percent are using some form of financial engineering to manage interest rate, foreign exchange, or commodity price risk (Wharton-Chase, 1995). Although the types of risks confronting managers vary across industries, there is substantial commonality in the underlying rationale for the use of derivatives and the financial engineering techniques that are employed.

1.2 Research Problem

Finance theory suggest that businesses facing large exposures to interest rates, exchange rates or commodity price risk can increase their market values by using derivative securities to manage their risk exposures (Stultz, 1996). Such theories emphasize on the role of derivatives in reducing the variability of business cash flows and subsequent reduction in costs associated with financial distress (Stultz, 1996). However, the corporate use of derivatives does not seem to correspond closely to the theory and is criticized. Use of derivatives is not always beneficial; a hedged position can become un-hedged at the worst times, inflicting substantial losses on those who mistakenly believe that their risk exposure is covered (Rajan, 2006). At a minimum, whether hedging adds value appears to depend on the types of risk to which a firm is exposed (Smithson et. al, 2005).

In Kenya, market risk exposure is a real issue. An examination of annual reports of companies listed at the NSE shows that a number of them have had their values eroded because of market risk. Diffu (2011) in her study of the relationship between foreign exchange risk management and financial performance reports that Kenya Airways suffered losses at the end of 2009 due to failure to hedge its foreign exchange risk. Mwangi (2003) survey on hedging practices against interest risks in commercial banks in Kenya revealed that all except one bank have a hedging programme in place comprising; Forward Rate Agreements (FRAs), Interest Rate Swaps, Cross Currency Swaps and Swap options. No bank in Kenya had either Floors and caps or Interest rate collars as hedging tool. It was further found out that in Kenya, the primary commercial motives

that motivate the banks to put a hedging program in place are reduction of financial distress, increasing of competitive advantage, increasing internal contracting capacity and the desire to comply with the corporate bank investment policy. It is therefore important to accumulate evidence that risk management increases firm value.

Logue (1995) and Chowdhry and Howe (1999) argue that operating exposure cannot be effectively managed using financial hedges. Instead, they suggest that long-term strategy adjustments (i.e., operational hedges) are the most effective way of managing long-run operating exposure. According to Copeland and Joshi (1996), foreign exchange risk management programs may cause more harm than good. Their study of nearly two hundred large companies has yielded enough evidence to cast serious doubt about the economic benefits of foreign exchange hedging programs. Given scarce management time and the substantial amount of capital currently devoted to hedging, it is clear that many programs diminish value instead of creating it. Fok et al. (1997) have reported that although the primary purpose of hedging is to reduce earnings volatility, it may also increase firm value. Their study shows that hedging reduces the probability of financial distress, the agency costs of debt, and the costs of equity.

Managing risk should not be limited solely to finding accurate tools and generating precise results as being a significant step to risk management. Instead, it is the externalities of incorporate risk management techniques that are the fundamental reasons behind its positive effects (Millo & MacKenzie, 2009). It is important to acknowledge that risk management techniques might not be completely accurate, but this does not make it neglectable. All of these techniques have one very important effect in common; to start the process of thinking about risk. Whereas previous local studies have enumerated various risk management strategies adopted by firms, no study has focused on risk management, tools for risk management and its impact on performance. Hence the major problem identified is the relationship between the risk management tools used by firms and their effectiveness for performance evaluation purposes. The study seeks to answer the question: Is there a relationship between risk management tools and the performance of Investment firms in Kenya?

1.3 Objective of the Study

The objective of the study was to determine the relationship between market risk management tools and the performance of investment firms in Kenya.

1.4 Value of the Study

This study adds to existing literature and provides a better understanding on what value risk management is to firms as they decide to raise both debt and equity capital from the capital markets.

Management of firms who have never viewed financial management as a tool for getting an edge over their competitors understood what procedures and strategies needed to be put in place to ensure e.g. that the value at risk attained can be sustained and reduced and that market risk was better understood and measures put in place to mitigate their impact.

Investors were be able to better relate market risk taken by firms and their impact upon the value of their investments both in the short and long term.

Regulators have an important role to play in assessing risk management systems and practices in organizations. Failure by institutions to appropriately identify, measure and manage their risks has raised questions not only about corporate governance but also about the adequacy of regulatory oversight regarding risk management systems in place in firms.

Academicians were furnished with relevant information regarding the relationship between market risk measurement and performance evaluation and how market risk measures impact upon an organization's risk control measures. The study contributed to the general body of knowledge and form the basis for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is organized into four parts. Section 2.2 discusses the theoretical literature specifically the theories that the study is based on. Section 2.3 deals with empirical literature on enterprise risk management and seeks to establish the challenges faced in its implementation. Section 2.4 discusses local studies related to enterprise risk management, their challenges and the extent of its implementation. Lastly section 2.5 presents a summary of the literature review.

2.2 Theoretical Literature

Specific areas covered under theoretical literature review include Enterprise Risk Management Theory, Modern Portfolio Theory, Stakeholder Theory and Agency Theory.

2.2.1 Enterprise Risk Management Theory

This is the main theory for this research paper as it contextualizes risk from a wholistic perspective. Risk management is the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities (Wenk, 2005). Effective risk management can bring far reaching benefits to all organizations, whether large or small, public or private sector (Ranong and Phuenngam, 2009). Some of these benefits include; superior financial performance, better basis for strategy setting, improved service delivery, greater competitive advantage, more efficient use of resources, and better value for money and improved innovation (Wenk, 2005). According to Dorfman (2007), ensuring that an organization makes cost effective use of risk management first involves creating an approach built up of well-defined risk management practices and then embedding them.

Tseng (2007), defines enterprise risk management (ERM) as a framework that focuses on adopting a systematic and consistent approach to managing all of the risks confronting an organization.

2.2.2 Modern Portfolio Theory

According to Fischer and Jordan (2007), the persistent fundamental question in the minds of financial analysts is how the risk of an investment should affect its expected return. The

Portfolio theory developed by Markowitz prepared grounds for the beginning of the debate. However, because of the limitations found with its implementation including the huge time required to make the covariance calculations, The Capital Asset Pricing Model (CAPM), as developed by Sharpe (1964), Lintner (1965), and Mossin (1966), provided the first coherent framework for answering this question. It proposes the idea that not all risks should be considered as affecting asset prices because any risk that can be diversified away when held along with other investments in a portfolio is, in reality, not a risk at all but that real risks to any portfolio of investments are the un-diversifiable risks generally referred to as systematic risks.

Some of the assumptions of MPT which are also made by the efficient market hypothesis (EMH) include; the rational investor assumption, information symmetry i.e. information is immediately available and 'knowable,' that is understood, digested and thus becomes 'knowledge' and that such knowledge is immediately acted upon. Some have argued (for instance Ross, 1976; Chen et al. 1986 and Chamberlain and Rothschild, 1983) that even if a market is inefficient at a given moment, such inefficiencies will be made efficient through arbitrage, thereby reverting to a default efficiency. Critical to the EMH is the idea that returns on stock price are stochastic, following a normal bell curve distribution. However, most evidence suggests, especially with the rise of institutional investors, that returns are not independent; distributions are not normal; and there is possible infinite variation.

MPT's second assumption is that investors are risk averse and make decisions based on the axioms of expected utility theorem. That is, a risk-averse investor is one who when presented with two different portfolios with the same expected utility/return prefers the portfolio with the lower overall risk over the one with the higher overall risk. Furthermore, MPT assumes that risk aversion (the risk-return trade-off) is linear or constant13, while there is significant evidence that it is non-linear (Rabin and Thaler, 2001). A further assumption is that the investor knows the expected return of each asset in his/her portfolio. The expected return is then the sum of all returns at different "states of the world" weighting by the probability that each state happens. Therefore to calculate the expected return of an asset one needs to know the distribution of the return of that asset, that is, its net present value. Thus, taking these assumptions into account MPT concludes that the overall risk of a portfolio depends on the risk of each asset in the

portfolio, the proportion of the portfolio in that asset and the correlations among different assets in the portfolio when considering the pattern of returns. Thus the modern portfolio theory allows us review how the risk of an investment affects the expected returns thus affecting performance targets of investment firms.

2.2.3 Stakeholder Theory

Stakeholder theory, developed originally by Freeman (1984) as a managerial instrument, has since evolved into a theory of the firm with high explanatory potential. Stakeholder theory focuses explicitly on an equilibrium of stakeholder interests as the main determinant of corporate policy. The most promising contribution to risk management is the extension of implicit contracts theory from employment to other contracts, including sales and financing (Cornell and Shapiro, 1987). In certain industries, particularly high-tech and services, consumer trust in the company being able to continue offering its services in the future can substantially contribute to company value. However, the value of these implicit claims is highly sensitive to expected costs of financial distress and bankruptcy. Since corporate risk management practices lead to a decrease in these expected costs, company value rises (Klimczak, 2005). Therefore stakeholder theory provides a new insight into possible rationale for risk management. However, it has not yet been tested directly. Investigations of financial distress hypothesis (Smith and Stulz, 1995) provide only indirect evidence (e.g. Judge, 2006).

In his study of the effect of stakeholder theory on risk management, Aabo (2004) investigates the relationship between the objectives of companies and the risk management strategy that the companies employ. The study shows a distinct difference between the two groups of companies in relation to actual risk management decisions which in turn have an effect on whether the risk management decisions will have a value addition or value retention effect on the company. This study concludes that this difference in risk management behavior could not be explained by company characteristics normally identified in the literature as being decisive for the extent of hedging such as firm size, leverage, and export ratio. Rather, the study finds a unique relationship between the managerial focus on stakeholders taking a conservative risk management strategy (that focused more on value preservation) and managerial focus on shareholder taking a forward looking risk management strategy (that focused on value addition).

Thus the theory ensures an understanding of actual risk management decisions which in turn helps determine whether the decisions have a value addition or value retention effect on the company.

2.2.4 Agency Theory (AT)

The 1976 article "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure" by Jensen and Meckling helped establish AT as the dominant theoretical framework of the CG literature , and position shareholders as the main stakeholder (Lan et al. 2010, Daily et al,2003). The adoption of the agency logic increased during the 1980's as companies started replacing the hitherto corporate logic of managerial capitalism with the perception of managers as agents of the shareholders (Zajac et al. 2004). The subsequent stream of literature would break with the tradition of largely treating the firm as a black box and the assumption that the firm always sought to maximize value (Jensen 1994). AT addressed what had become a growing concern, that management engaged in empire building and possessed a general disregard for shareholder interest, what Michael Jensen called "*the systematic fleecing of shareholders and bondholders*"(1989, p.64), through providing prescriptions as to how the principal should control the agent to curb managerial opportunism and self-interest (Perrow 1986, Daily et al.2003).

Agency theory extends the analysis of the firm to include separation of ownership and control, and managerial motivation. In the field of corporate risk management agency issues have been shown to influence managerial attitudes toward risk taking and hedging (Smith and Stulz, 1985). Theory also explains a possible mismatch of interest between shareholders, management and debt holders due to asymmetries in earning distribution, which can result in the firm taking too much risk or not engaging in positive net value projects (Mayers andSmith, 1987). Consequently, agency theory implies that defined hedging policies can have important influence on firm value (Fite and Pfleiderer, 1995). The latter hypotheses are associated with financing structure, and give predictions similar to financial theory.

Thus the theory aids in determining whether a possible mismatch of interest between shareholders, management and debt holders due to asymmetries in earning distribution can result in the firm taking too much risk or not engaging in positive net value projects.

2.3 Empirical Studies on Risk Management and Firm Performance

As suggested by Pagach and Warr (2007), Enterprise Risk Management creates firm value if it reduces negative net cash flows and firms will not suffer losses while selecting a single project. Studies from Hoyt and Liebenberg (2006, 2008) found that Enterprise Risk Management was positive and significant at 1 percent level. The empirical results support that Enterprise Risk Management would increase firm's value by 3.6% (Hoyt and Liebenberg, 2006) and 17% (Hoyt and Liebenberg, 2008). The study suggests that, if the company practices Enterprise Risk Management, the value of the company is 3.6 percent (to 17 percent) higher than companies which do not practice Enterprise Risk Management. Therefore, it is argued that Enterprise Risk Management is one of the factors that can add value to a firm.

After almost two decades since the inception of BSC by Kaplan and Norton (1992), many companies all around the world have adopted it as a PMS tool. On the other hand ERM is a relatively new concept and still not many companies have adopted this framework. In fact adoption of ERM is still a voluntary concept among the firms. The empirical study by Liebenberg and Hoyt(2003) identified only 26 firms in the US that have adopted ERM during 1997 to 2001, and even the most recent study of Pagach and Warr (2011) detected only 138 firms in the US, which have adopted ERM framework during 1999 to 2005.

Another example is the survey results of the Economist Intelligence unit, which discovered that only 41 percent of companies in Europe, North America, and Asia have adopted some form of ERM. As scholars have tried to find the reason behind low adoption rates of ERM, they cite some common barriers and challenges such as the resistance of board of directors or senior executives. Another challenge to successful implementation of ERM is the improper understanding of top-down approach that should be taken for this purpose (Tax Management Inc., 2011). However, as Beasley et al. (2006) suggested, BSC can serve as an infrastructure for ERM adoption. Therefore challenges such as board of directors' resistance and requirement of a top-down approach can be solved and organizations would find it easier to implement an effective ERM framework. Meanwhile, there are already some organizations which have integrated their ERM framework with BSC. Examples include Bank of Tokyo-Mitsubishi and Tesco PLC (Nagumo, 2005;Woods, 2007). Also, Mobil, Chrysler, and the US Army have

associated their scorecards with risk management (Olson & Wu, 2010, p. 185). It is expected that integrating the two management tools would enhance organizational performance to higher levels than practicing two frameworks in parallel without any linkage.

Waweru and Kisaka (2012) alluded that larger organizations were more likely to be complex operations and therefore be more exposed to threatening events. ERM has the potential to provide an organization with competitive advantages which can be used by large firms to initiate strategies that can build synergies that can translate to cost advantages, differentiation and focus (Woon et al, 2011). Yazid et al (2012) explained the importance of managing assets categorized into tangible and intangible assets as they are extremely useful in supporting ERM activities that could provide overall benefits to the firms concerned. In support to this, Hoyt and Liebenberg (2008) justify why large firms are more likely to engage in ERM, apart from being complex and face a wider array of risks; they have the institutional size to support the administrative cost of ERM program. Gordon, Loeb and Tseng (2009) also suggest that there is a positive relation between the size of a firm and its need for an ERM system.

Another factor of firm characteristic is ownership structure of an organization. Ownership structure is looked at in two dimensions, concentration of ownership and legal status which control firm's activities. In this context, the decision to implement ERM as an integrated approach could also come directly from a company's board of directors (Yazid, Razali & Hussin, 2012). Hoyt and Liebenberg (2008) found out that pressure from external stakeholders is regarded as an important driving force behind the adoption of ERM program. A company with institutional share ownership is more likely to have pressure from such group to adopt ERM program. Therefore, we expect that firms with higher percentage of institutional ownership will be more likely to engage in ERM than those with individual ownership. Tahir and Razali (2011) explain that institutional ownership influences any decision by management of companies and therefore an important variable. Altuntas, Stolzle, and Hoyt (2011) found out that group affiliation in ownership is positively related to the likelihood of adopting ERM.

2.4 Risk Management and Firm Performance in Kenya

Enterprise risk management in Kenya is weak, according to a survey done by PricewaterhouseCoopers in Kenya in 2011 on risk, 81% of the chief executive officers (CEOs)

interviewed from various firms felt that risk to their organizations is increasing and traditional risks were evolving (PWC, 2012). Waweru and Kisaka (2011) examined the state of ERM in Kenya and found out that there was positive relationship between firm's size on ERM and financial performance of listed firms in Kenya. According to Deloitte and Touche (2012) traditional risks such as; operational, regulatory and market was rated at 95%, 89% and 83% respectively as the key risks affecting firms in Kenya. This means that ERM framework in Kenya is not effective or inadequate.

Despite the fact that majority (94%) of commercial banks and financial institutions in Kenya had developed ERM framework according to CBK guidelines of 2005, 74% (32) of the institutions had challenges due to weak ERM system and this had increase risk affecting the firms (CBK, 2010). The main cause of increase in risk was; complexity, unpredictability, evolving risks and globalization of trading activities (PWC, 2012). According to the Deloitte ERM survey report of 2012 for the financial service industry, risk governance was identified to be critical in risk management. However, the findings of the report showed that a few (29%) number of institutions had put in place proper governance models to oversee risk management (Deloitte, 2012). Weak ERM has affected the performance of Kenya as a country in terms of competiveness (KIPPRA, 2009). Kenya was ranked in position eighty six (86) in terms of GDP among two hundred and seven (207) countries while in attractiveness as a business destination it was ranked at number seventy two (72) out of one hundred and seventy eight (178) countries. In comparison with Singapore, Taiwan and Malaysia which were ranked in position six (6), eight (8) and nine (9) respectively (KIPPRA, 2009). According to Deloitte and Touche survey report of 2012, 85% of the respondents felt that ERM was adding value to their business since it reduces volatility and enhances liquidity problem. The ERM legal framework in Kenya is contained in the Capital Market Authority regulations on corporate governance of 2002 Legal Notice Number 3362 (Republic of Kenya, 2002).

2.5 Summary of the Chapter

ERM is an organizational concept that applies to all levels of the organization. In conducting ERM, some of the areas or aspects of the organization that a risk manager need to look into include: the people, intellectual assets, brand values, business expertise and skills, principle

source of profit stream and the regulatory environment (Searle, 2008). This will help organizations to balance the two most significant business pressures; the responsibility to deliver success to stakeholders and the risks associated with and generated by the business itself in a commercially achievable way. By doing so, the risk manager is constantly aware of the risks it faces and therefore constantly monitors its exposure and be positioned to change strategy or direction to ensure the level of risks it takes is acceptable.

After almost two decades since the inception of BSC by Kaplan and Norton (1992), many companies all around the world have adopted it as a PMS tool. On the other hand ERM is a relatively new concept and still not many companies have adopted this framework. In fact adoption of ERM is still a voluntary concept among the firms. The empirical study by Liebenberg and Hoyt(2003) identified only 26 firms in the US that have adopted ERM during 1997 to 2001, and even the most recent study of Pagach and Warr (2011) detected only 138 firms in the US, which have adopted ERM framework during 1999 to 2005. Another example is the survey results of the Economist Intelligence unit, which discovered that only 41 percent of companies in Europe, North America, and Asia have adopted some form of ERM.

Waweru and Kisaka (2011) examined the state of ERM in Kenya and found out that there was positive relationship between firm's size on ERM and financial performance of listed firms in Kenya. According to Deloitte and Touche (2012) traditional risks such as; operational, regulatory and market was rated at 95%, 89% and 83% respectively as the key risks affecting firms in Kenya. This means that ERM framework in Kenya is not effective or inadequate.

Financial institutions recognize that an institution need not engage in business in a manner that unnecessarily imposes risks upon it; nor should it absorb risk that can be efficiently transferred to other participants. Rather, it should only manage risks at the firm level that are more efficiently managed there than by the market itself or by their owners in their own portfolios. In short, it should accept only those risks that are uniquely a part of the bank's array of services. The main cause of increase in risk among firms has been identified as; complexity, unpredictability, evolving risks and globalization of trading activities (PWC, 2012). According to the Deloitte ERM survey report of 2012 for the financial service industry, risk governance was identified to

be critical in risk management hence the need for firm's to give it proper attention that it deserves.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter is organized into 5 sections. Section 3.2 discusses the research design adopted in this study and justification of choice for the study, section 3.3 deals with the population and the sample. It clearly describes the population of the study by understanding what unit of analysis is in the study and explaining how the sample was drawn from the population to ensure that it is representative of the study population and also states and justifies the sampling technique and sampling period. Section 3.4 deals with data and data collection instruments by stating the type of data the study was used, describing clearly how he data were measured, providing a justification where the variables are measured in an unconventional manner and describes the instrument that was used to collect data. Section 3.5 deals with two parts of data analysis i.e. conceptual model and analytical model by clearly explaining how the variables were measured and stating the expected theoretical relationship between the dependent and independent variables. Relevant statistical tests, how the decision was reached and at what level of statistical significance are included.

3.2 Research Design

Research design is the plan and structure of investigation so conceived as to obtain answers of the research question. The plan is the overall program of the research and includes an outline of what the investigator will do from writing the hypothesis and their operational implications for the final analysis. The essentials of research design as an activity and time based plan, always based on the research question, guides the selection of the sources and type of information and provides a framework for specifying the relationship among variables and outlines the procedure for every research activity (Muthee, 2010).

The researcher employed a descriptive design method. Descriptive research is the investigation in which quantity data is collected and analysed in order to describe the specific phenomenon in its current trends, current events and linkages between different factors at the current time (Mugenda and Mugenda, 2003). Saunders et al (2003) defined descriptive survey design as one which looks with accuracy at the phenomena of the moment and describes precisely what the researcher sees. A descriptive study was undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in a carried out study.

3.3 Population and Sample

Population refers to the entire group of individuals, events or objects having common observable characteristics in which the results will be generalized (Mugenda and Mugenda, 2003). It is further described by Varden Bergh and Katz (1999) as the group of people from which a sample can be drawn for the purposes of a research. Thus population is the total collection of elements about which we wish to make some inferences.

The population of the study consisted of the 20 investment firms as listed in the Nairobi Stock Exchange (N.S.E) website as well as the 5 firm's listed under the Investment category and 1 firm listed under the Investment Services category of the Nairobi Stock Exchange. The target was 26 investment firms recognized by the N.S.E and C.M.A because they are answerable to shareholders and are better placed to evaluate the benefits of risk management approaches. The researcher targeted the Chief Risk Officers (CRO) of the targeted firms. In the absence of a CRO, the questionnaires was sent to the heads of Internal Audit or Chief Financial Officer. The study covered the years 2010 – 2014. Since the population is not large, a census survey was conducted where questionnaires were circulated to all the 26 firms.

3.4 Data Collection Method

The study used both structured/closed ended questionnaires and unstructured/open ended questionnaires. Unstructured/open ended questionnaires let the thoughts of the respondents roam freely. Ideas are generated from respondents in their own language and expressed spontaneously, which are worthwhile as a basis of new hypothesis. This took care of the qualitative part of the research where the study sought to find out the opinions and attitudes of respondents on risk management and tools in their organizations. The unstructured questionnaires required probing which called for self-administered questionnaires presented by the interviewer. This method ensures high response rate and gives the benefit of degree of personal n (Paton, 2002).

Quantitative methods adopt structured/closed ended questionnaires. In the questionnaire, the questions were accompanied by a list of possible choices from which the respondents select the answer that best describes the situation. The questions were easy and quick to answer since there was no extended writing. Use of open and close-ended questionnaires was used in the collection

of primary data. Research assistants were engaged to collect data from the various organozations. Secondary data was used to review documented and relevant information concerning the effects of risk management on the performance of investment firms.

3.4.1 Data Validity

Joppe (2000) described validity as whether the research truly measures that which it was intended to measure or how truthful the research results are. To enhance validity of the instrument, a pilot study was done in order to assess the clarity of the items in the questionnaire and those found to be inadequate, modified with the aim of improving the instrument. The self-administered questionnaire was validated using content validity, which is a process of logical analysis that involves careful and critical examination of items in the questionnaire. In order to achieve criterion validity of the instrument, all team members involved in the research were given an equal chance to score well. In order to achieve construct validity of the instrument, the research team was encouraged to check for variances in the results. Subsequently, they were required to keep on asking themselves the reasons for the observed variances. Triangulation was used to check for validity as it is defined as a validity procedure where researchers search for convergence among multiple and different sources of information to form themes or categories in a study" (Creswell & Miller, 2000, p. 126).

3.4.2 Reliability of the Instrument

According to Mugenda and Mugenda (1999), the reliability of an instrument is the degree to which a research instrument yields consistent results or data after repeated trials. In order to test the reliability of the instrument, a pilot study was conducted involving 4 respondents who will not be sampled for the study to test the reliability of the instrument to be used. In this study, the reliability was improved via minimizing external sources of variation say boredom, fatigue or poor logistics and standardizing the conditions (improving the equivalence aspect) under which the measurements was done by carefully designing the directions for measurement or measurement guide.

3.5 Data Analysis

Data Analysis involved data preparation where data was checked for accuracy, entered into a computer, examined critically and inferences made (Kombo and Tromp (2006). Questionnaires were edited for completeness and consistency. Responses were coded to facilitate statistical analysis using the software package, statistical package for social sciences (SPSS). Data was

analysed using descriptive statistics such as mean, standard deviation, frequencies and percentages. Quantitative data were presented in tables to allow for comparison. Descriptive analysis was used to determine frequencies in central tendencies (highlighting mean, median and mode) as well as standard deviation to determine the average distribution of each score from the mean.

3.5.1 Conceptual Model

The study applied the conceptual model of the form:

$$Y = f(x1, x2, x3, x4, x5)$$

Where:

Y = Performance of Investment firms

X1 = Risk Identification

X2 = Risk Analysis and Assessment

X3 = Risk Monitoring

X4 = Organisation Risk Management

X5 = Risk Management tool

The import of a regression model is to provide a basis for estimating the relationship between variables, specifically the relationship between risk management and performance management. Study done by Al-Tamimi and Al-Mazrooei (2007) showed a positive relationship between risk management practices and various aspects of risk management processes using the same model.

3.5.2 Analytical Model

The regression equation tested is as follows:

$$Y = \alpha + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \beta 4 X4 + \beta 5 X5 + \varepsilon_t$$

Where:

α = constant\intercept point of the regression line and the y-axis.

$\beta 1, \beta 2, \beta 3, \beta 4$ = the co-efficients of the independent variables that were determined

Y = performance as measured by Net Asset Value

X_1 = Risk Identification

X_2 = Risk Analysis and Assessment

X_3 = Risk Monitoring

X_4 = Organization Risk Management

X_5 = Risk Management tool

ε = any other variable that can contribute to information asymmetry

Y is the dependent variable and represents performance as measured by Net Asset Value which shows the efficiency of a business. A high NAV shows that resources of a business are used efficiently. Net Asset Value is determined by subtracting total firm's assets by the firm's liabilities. X_1, X_2, X_3, X_4 and X_5 are the independent variables and represent, risk identification, risk analysis and assessment, risk monitoring, risk management and risk management tools, respectively. Correlation Analysis was used to test for correlation between the independent variables. Correlation matrix for dependent and independent variables was used to analyze: correlation. Regression analysis, was used to determine the strength of the model through ANOVA by use of significance of T-statistics and F statistics at 5% level as well as using coefficient of determination (R^2). A positive correlation coefficient means that the two variables move in the same direction. A negative correlation coefficient means that the two variables move in the opposite direction. The analysis was done using Statistical Package for Social Sciences (SPSS V20) software to code, enter and compute the measurements of the multiple suggestions and recommendations on the topic under study, which was then presented in tables and graphs regressions.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

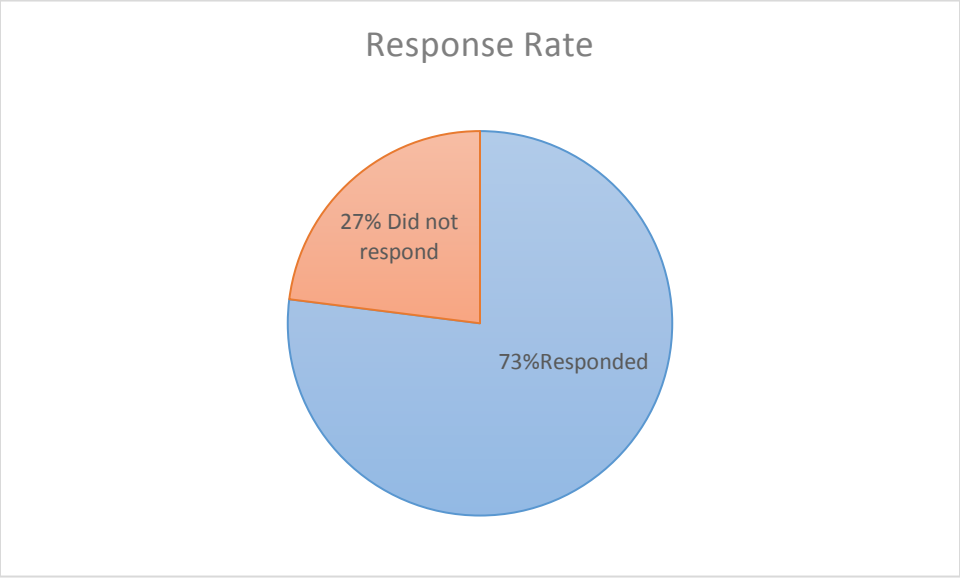
This chapter is organized into four parts. Section 4.2 discusses the summary statistics describing the data used in the study. Section 4.3 deals with the estimated empirical model by providing the relevant statistics used. Section 4.4 provides a discussion of the study results and Section 4.5 provides a summary of the chapter.

4.2 Summary Statistics

4.2.1 Response Rate

Out of the targeted 26 investment firms the researcher was able to receive feedback from 19 of the targeted population representing a 73% response rate. The response rate was deemed appropriate and consistent with Dillman, 1991; Groves et al., 2000; and Groves, Presser & Dipko, 2004 who indicate that surveys enjoy higher response rates when their contents are seen as relevant to the respondents' own experiences and values. According to Mugenda (2003) above 70% response rate is very good.

Figure 4.1 Response Rate



Source: Author's Computation

4.2.2 Risk Identification

4.2.2.1 Asset Base

As shown in Table 4.1, a majority of the respondents (37%) had an asset base of over 5 billion, similarly (37%) had an asset base of less than 1 billion. The least number of the respondents (21%) had an asset base of 1 to 5 billion.

Table 4.1 Asset Base of Investment Firms

		Frequency	Percent	
	Between 1 and 5 billion	4	21	
	Less than 1 billion	7	37	
	Above 5 billion	7	37	
	Total	18	95	

Source: Author's Computation

4.2.2.2 Responsibility for Identifying Risks

Majority of the firm's (38%) have charged their risk manager with the task of identifying risks within the firm, (21%) of the firms use all their employees to identify risk. (17%) of the firms rely on the internal auditor to identify risks, (13%) of the firms rely on the board to identify risk, (8%) rely on the line managers to identify risk while (4%) rely on the CEO to identify risk.

Table 4.2 Responsibility for Identifying Risks

		Frequency	Percent
	CEO	1	4
	Board	3	13
	Internal Auditor	4	17
	Risk Manager	9	38
	Line Manager	2	8
	All Staff	5	21
	Total	24	100

Source: Author's Computation

4.2.2.3 Risk Management Policy

The results indicate that 95% of firms have a documented risk management policy while 5% did not have a documented risk management policy.

Table 4.3 Risk Management Policy

		Frequency	Percent
	Have risk management policy	18	95
	Don't have risk management policy	1	5
	Total	19	100

Source: Author's Computation

4.2.2.4 Significance of Information

The results indicate that 79% of firms agreed that the information being sought on the tools used for identifying risk were significant, 11% agreed that the information was somewhat useful while 5% did not see the usefulness of the information as shown in Table 4.5

Table 4.4 Significance of Information

		Frequency	Percent
	Significant	15	79
	Somewhat	2	11
	Not at all	1	5
	Total	18	95

Source: Author's Computation

4.2.2.5 Tools used for Identifying Risk

Responses indicate that 90% use audits to identify risks, 21% rely on brainstorming to identify risks. 16% of the firms rely on examination of local and overseas experience and use of interviews to identify risks, 26% of the firms rely on SWOT analysis, Judgement and past organizational experience to identify risks. 21% of the firms rely on operational modelling to identify risks while 32% rely on scenario analysis and process analysis to identify the risks facing the firms while the least number of firms 5% rely on surveys to identify risks.

Table 4.5 Tools for Identifying Risk

		Frequency	Percent
	Audits	17	90
	Brainstorming	4	21
	Examination of local/overseas experience	3	16
	SWOT Analysis	5	26
	Interviews	3	16
	Judgement	5	26
	Survey	1	5
	Scenario Analysis	6	32
	Operational Modelling	4	21
	Past Org. Experience	5	26
	Process Analysis	6	32
	Total	19	

Source: Author's Computation

4.2.3 Risk Analysis and Assessment

As shown in Table 4.6 majority of the respondents (79%) agreed that their firms widely used qualitative analyze to assess the levels of risk within the firm. 11% of the respondents agreed that somewhat their firms utilize qualitative analysis while 11% of the firms did not use qualitative analysis in the assessment of their risks.

Moreover, 47% of the respondents agreed that their firms always use quantitative analysis whereas 53% agreed that to some extent their firms utilize quantitative analysis in assessing their levels of risk as represented in Table 4.6 below.

Table 4.6 Risk Analysis and Assessment

Statement	Always		Somewhat		Not at all	
	f	%	f	%	f	%
Qualitative Analysis i.e. High, Medium, Low.	15	79	2	11	2	11
Quantitative Analysis > 1,000,000.	9	47	10	53	0	0

Source: Author's Computation

4.2.3.1 Organizations Response to Analyzed Risk

Concerning the effectiveness of the existing controls and risk responses, the majority of the respondents 74% strongly agreed that the existing controls and risk management responses were effective. 21% of the respondents were neutral on whether the existing controls and risk management responses were effective while only 5% of the respondents strongly disagreed on the effectiveness of the existing controls and risk management responses as shown in Table 4.7 below.

In reference to the assessment of the costs and benefits of addressing risks 47% strongly agreed on its usage in risk analysis by the firm whereas a similar 47% of the respondents were neutral on its usage in risk analysis whereas 5% strongly disagree on its usage.

Firms that prioritize risks and select those that need active management was clearly evidenced with the majority of the respondents (79%) strongly agreeing on its usage within the firm whereas 16% were neutral while only 5% strongly disagreeing on the prioritization of risks within their firms as indicated in Table 4.7 below.

Further, prioritizing of risk treatment at times of resource constraints was viewed by 47% of respondents as vital for responding to analyzed risks within the firm whereas 42% somewhat agreed on the prioritizing of risks while 11% disagreed as indicated in Table 4.7.

Table 4.7 Response to Analyzed Risk

Statement	Level of consideration									
	Strongly disagree		disagree		Neutral		agree		Strongly agree	
	f	%	f	%	f	%	f	%	f	%
An evaluation of the effectiveness of existing controls and risk management responses	1	5	0	0	4	21	0	0	14	74
An assessment of the costs and benefits of addressing risks	1	5	0	0	9	47	0	0	9	47
Prioritizing of risks and selecting those that need active management.	1	5	0	0	3	16	0	0	15	79
Prioritizing risk treatment where there are resource constraints on risk treatment implementation.	0	0	2	11	8	42	0	0	9	47

Source: Author's Computation

4.2.4 Risk Monitoring

4.2.4.1 Risk Management Reviews

As shown in Figure 4.2 most of the firm's 42% reviewed their risks based on the risk today, 32% reviewed risks spanning beyond 2 years while only 26 % reviewed their risk based on 1-2 years' time period.

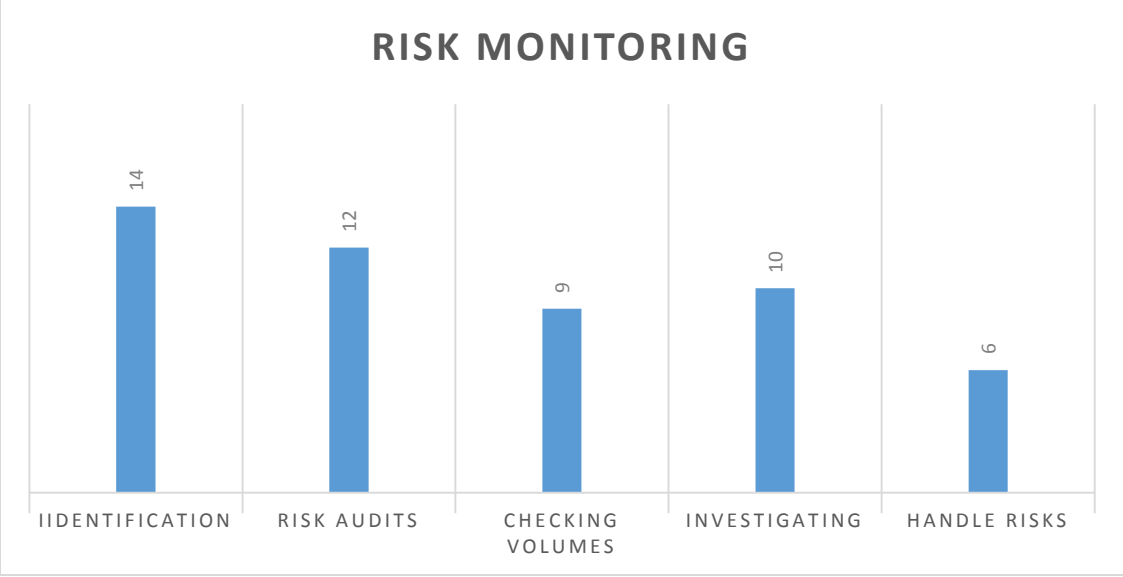
Figure 4.2 Frequency of Risk Management Reviews

Source: Author's Computation

4.2.4.2 Risk Monitoring Aspects

Risk monitoring proved vital for risk management and control purposes with 74% relying on identification of risks as soon as possible, 63% relying on risk audits in their risk monitoring, 53% relying on checking operating volumes, 47 % rely on investigating other risks while only 32% deciding on where and how to handle risk as a method of risk monitoring.

Figure 4.3 Risk Monitoring Aspects



4.2.4.3 Tools for Risk Monitoring

Risk monitoring tools showed varied results among respondents with 42% of the firms relying on variance and trend analysis always, while 53% somewhat using variance and trend analysis while only 5% did not use it. Further, 42% of respondents always used work performance indication as a tool of risk monitoring, 53% somewhat relied on it while 5% did not use it at all. In regard to the usage of risk register 63% always applied it, 21% somewhat used it while only 16% do not utilize risk registers. Approved change requests as a tool of risk monitoring was used by 53% of respondents always, 37% somewhat used it while only 5% did not use it at all. Further, 79% of firms use risk audits, 16% somewhat used risk audits while only 5% did not use it at all. Risk assessment for risk monitoring purposes was used by majority of firms (90%) while only 5% somewhat used risk assessment similarly to the firms that did not use it at all.

Table 4.8 Tools for Risk Monitoring

Statement	**Always**		**Somewhat**		**Not at all**	
	f	**%**	**f**	**%**	**f**	**%**
Variance and Trend analysis	8	42	10	53	1	5
Work Performance indication	8	42	10	53	1	5
Risk Register	12	63	4	21	3	16
Approved change requests	10	53	7	37	1	5
Risk Audits	15	79	3	16	1	5
Risk Assessment	17	90	1	5	1	5

Source: Author's Computation

4.2.5 Organization Risk Management

Executive sponsorship, support and focus was viewed by 58% of the respondents as an effective risk management method of the organization, 21% were neutral on its effectiveness, 11% viewed it as ineffective while 11% of the firms did not have it in place. In regard to the defined and communicated policies, procedures, systems and internal controls 63% of the respondents

viewed it as an effective method while 21% were neutral on its effectiveness. 5% viewed it as an ineffective method while in 11% of the firms it was not in place as shown in Table 4.9.

Further, 53% of the respondents viewed line management ownership of risk management as an effective method. 16 % were of a neutral opinion on its effectiveness while 11% of the firms did not have it in place. 74% of the respondents were of the view that the usage of effective organizational culture was an effective risk management method while 16% were of a neutral opinion. 5% of the respondents viewed it as un-applicable method while a similar number of firms (5%) did not have it in place in their risk management. Linkage between risks and corporate claims and the objectives of firm was viewed by 63% of respondents as an effective method whereas 21% and 5% of the respondents viewed linkage between risks and corporate claims and the objectives of firm as neutral or ineffective respectively. 5% of the firms did not have it in place as shown in Table 4.9.

In addition, 58% of the respondents viewed level of understanding of risk and risk management as an effective risk management method, 326% were neutral concerning its effectiveness, and 11% were of the view that it was an ineffective method. Concerning the specification of the organization risk environment including articulation of the objectives, 58% viewed it as an effective method, 21% were of a neutral opinion on the effectiveness of the method while 5% viewed it as ineffective and 115% of the firms did not have it in place. Linkage between risk management and individual performance appraisal was viewed by 53% of the respondents as an effective method whereas 21% and 11% of respondents viewed it as a neutral and ineffective opinion respectively. 16% of the firms did not have it in place as a risk management policy.

Establishment of the organizational risk appetite, risk tolerance and risk treatment measures as an effective method was viewed by 53% of respondents as effective, 16 were of neutral opinion. 5% of the respondents viewed it as ineffective method while 21% of the firms did not have it in place. Concerning the establishing of a criteria for evaluating risk, 58% of the respondents viewed it as an effective policy. Conversely, 21% of the respondents were neutral on its effectiveness while 5% viewed it as ineffective method and 16% of the firms did not have it in place.

Identification of risk as an effective risk management method was viewed by 63% of respondents as effective, 21% were of a neutral opinion, and 11% viewed it as an ineffective method of risk

management. 58% of respondents viewed recording, analysis and prioritizing of risk as an effective method, 16% of the respondents were neutral on its effectiveness while 5% viewed it as ineffective method and a similar 5% of the firms did not have it in place. With regard to the development and implementation of risk management strategies, 63% of the firms saw it as an effective method, 21% were of a neutral opinion on its effectiveness and 5% of the respondents viewed it as an ineffective method. Further, 11% saw it as an inapplicable method within their firms.

As represented in Table 4.9, effectiveness of resourcing risk management processes and strategies was viewed by 63% of the respondents as an effective method, 21% were of a neutral opinion on its effectiveness while 11% viewed it as an ineffective method. Appropriate use of risk recording tools was viewed by 69% of the respondents as an effective method. 11% were of a neutral opinion on its effectiveness. A further 11% of the respondents were of the opinion that it was an ineffective policy while 5% saw it as inapplicable method within their firm. In regard to development of key performance indicators against which to measure success of strategies and emerging issues 58% of the respondents viewed it as effective method, 26% of the respondents were neutral on the effectiveness of the method, while 5% of the respondents were of the view that it was an ineffective method and a further 5% of the respondents viewed it as inapplicable method.

Monitoring of strategies against key performance indicators as a risk management policy was viewed by 68% of respondents as an effective method whereas 16% were of a neutral opinion on its effectiveness. A further 5% of the respondents viewed it as ineffective method while 5% viewed it as inapplicable method within their firm. Setting performance benchmarks as a risk management method was viewed by 47% of the respondents as an effective method, 32% were of a neutral opinion while 11% of the respondents viewed use of performance benchmarks as ineffective method. 5% viewed it as inapplicable method in their firms. Continuous review or feedback on risk management strategies and performance was viewed as an effective method by 58% of the respondents, 21% were of a neutral opinion concerning its effectiveness while 5% of the respondents viewed it as ineffective method and a further 11% viewed it as inapplicable method. Whereas 63.2% of the respondents viewed regular reports to senior management as an effective risk management method, 16% were of a neutral opinion on its effectiveness while 5%

of the respondents viewed it as ineffective method and a further 11% were of the view that it was inapplicable method in their firms as indicated in Table 4.9 below.

Table 4.9 Organization Risk Management

Statement	Level of consideration									
	Effective		Neutral		Ineffective		Not Applicable		Not in Place	
	f	%	f	%	f	%	f	%	f	%
Executive sponsorship, support and focus	11	58	4	21	2	11	0	0	2	11
Defined and communicated policies, procedures, systems and internal controls	12	63	4	21	1	5	0	0	2	11
Line management ownership of risk management	10	53	3	16	0	0	0	0	2	11
Effective organizational culture	14	74	3	16	1	5	1	5.3	0	0
Linkage between risks and corporate aims and objectives	12	63	4	21	1	5	0	0	1	5
Level of understanding of risk and risk management	11	58	6	32	2	11	0	0	0	0
Specifications of the organizations risk environment including articulation of the organizations objectives	11	58	4	21	1	5	0	0	2	11
Linkage between risk management and individual performance appraisal	10	53	4	21	2	11	0	0	3	16
Establishment of the organizational risk appetite, risk tolerance and risk treatment measures	10	53	3	16	0	0	1	5	4	21
Establishment of the criteria for evaluating risk	11	58	4	21	1	5	0	0	3	16
Identification of risk	12	63	4	21	2	11	0	0	0	0
Recording, analysis and prioritizing risk	11	58	3	16	1	5	1	5	0	0
Development and implementation of risk management strategies	12	63	4	21	1	5	2	11	0	0
Resourcing of risk management processes and strategies	12	63	4	21	2	11	0	0	0	0
Appropriate use of risk recording tools	13	68	2	11	2	11	1	5	0	0
Development of key performance indicators against which to measure success of strategies and emerging issues	11	58	5	26	1	5	1	5	0	0
Monitoring strategies against key performance indicators	13	68	3	16	1	5	1	5	0	0
Performance benchmarks	9	47	6	32	2	11	1	5	0	0
Continuous review/feedback on risk management strategies and performance	11	58	4	21	1	5	2	11	0	0
Regular reports to senior management	12	63	3	16	1	5	2	11	0	0

Source: Author's Computation

4.2.6 Risk Management Tools

Use of value at risk as a risk management tool was viewed by 47% of the firms as an effective method, 26% were of a neutral opinion, 16% saw it as ineffective method while 5% viewed it an inapplicable tool at their firm. With regard to sensitivity analysis 63% of respondents were of the view that it was an effective method, 26% were of the view it was a neutral method while a further 5% were of the view that it was an ineffective, inapplicable and not in place at their firms.

Hedging instruments was viewed by 32% of respondents as an effective risk management tool whereas 26% and 5% of respondents viewed it as neutral and not applicable tool respectively. A further 11% did not have it in place in their firms. Respondents rated international standards as 32% effective as a risk management tool whereas 16% were of a neutral opinion concerning their effectiveness. 11% viewed them as ineffective tools and 21% of the firms did not have them in place as shown in Table 4.10

Interest rate risk management was viewed by 58% of respondents as an effective risk management tool while 5% viewed it as a neutral method. A further 5% viewed it as ineffective method while 11% viewed it as an inapplicable method. A further 11% did not have the tool in place in their firms as shown in Table 4.10

Table 4.10 Risk Management Tools

Statement	Level of consideration									
	Effective		Neutral		Ineffective		Not Applicable		Not in Place	
	f	%	f	%	f	%	f	%	f	%
Value at risk	9	47	5	26	3	16	1	5	0	0
Sensitivity Analysis	12	63	4	21	1	5	1	5	1	5
Hedging Instruments – swaps, forwards, futures	6	32	5	26	1	5	1	5	2	11
International Standards – Basel I, II, III.	6	32	3	16	2	11	1	5	4	21
Interest rate risk management	11	58	1	5	1	5	2	11	2	11
Relationship between risk management tool and performance of your firm	12	63	7	37						

Source: Author's Computation

4.3 The Relationship between Market Risk Management Tools and Performance of Investment Firms

Table 4.11 The Relationship between Risk Identification Tools and Financial Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Audit or Physical Inspection	1.990195	0.219254	9.077135	0.0000***
Brainstorming	0.574625	0.424979	1.352127	0.2133
Examination of Experience	0.977195	0.427157	2.287671	0.0515**
SWOT Analysis	-0.651682	0.182877	-3.563506	0.0074***
Interviews/Focus Group Discussion	1.889182	0.640453	2.949760	0.0184**
Judgment	-2.195372	0.885852	-2.478261	0.0382**
Survey/Questionnaire	0.101283	1.087478	0.093136	0.9281
Scenario Analysis	0.606061	0.497443	1.218353	0.2578
Operational Modeling	0.379512	0.463499	0.818798	0.4366
Organizational Experience	-0.671000	0.518297	-1.294625	0.2316
Process Analysis	1.143433	0.483634	2.364253	0.0457**

Note: **Significant at 5 percent level ***Significant at 1 percent level

Source: Author's Computation

The calculated coefficient of determination R^2 is 76% while the adjusted R^2 is 46 percent. This implies that the identified variables explain only 46 percent of the total variation in the performance of the firm. Therefore, the model fairly fits the data. The results in Table 4.11 show that risk identification tools such as audit, examination of experience, SWOT analysis, Interviews and Focus Groups, judgment, and process analysis have a significant influence on firm performance. However, SWOT Analysis and judgment have a strong negative influence on firm performance.

Table 4.12 The Relationship between Risk Analysis and Financial Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Use of Qualitative Methods	0.396277	0.180583	2.194438	0.0470**
Use of Quantitative Methods	-0.087258	0.193817	-0.450207	0.6600
Evaluation of Existing Controls	1.904692	0.730342	2.607947	0.0217**
Cost-Benefit Analysis	-0.324177	0.449140	-0.721772	0.4832
Risk Prioritization	-1.433801	0.692921	-2.069213	0.0590**
Risk Treatment Prioritization	0.039774	0.459901	0.086484	0.9324

Note: **Significant at 5 percent level

Source: Author's Computation

The computed coefficient of determination, R^2, is 33% while the adjusted R^2 is 7 percent. This means that the identified variables explain only 7 percent of the total variation in the performance of the firm. Therefore, the model does not fairly fit the data. The results in Table 4.12 indicate that risk analysis and assessment tools such as qualitative methods, evaluation of existing controls, and risk prioritization have a significant influence on firm performance. However, risk prioritization has a strong negative influence on firm performance.

Table 4.13 The Relationship between Risk Monitoring and Financial Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Risk Monitoring Time Horizon				
Daily	-0.454907	0.983030	-0.462760	0.6676
1 to 2 years	0.908203	0.812407	1.117915	0.3262
Over 2 years	-0.126620	0.884985	-0.143076	0.8931
Risk Monitoring Activities				
Risk Identification	0.267517	1.135546	0.235585	0.8253
Risk Handling	-0.597216	1.179820	-0.506192	0.6393
Investigation of other risks	-0.700325	1.269006	-0.551869	0.6104
Checking Operating Volumes	1.827856	1.414585	1.292151	0.2659
Risk Audits	-0.533264	1.245588	-0.428123	0.6906
Risk Monitoring Tools				
Variance and Trent Analysis	-0.319957	0.278068	-1.150642	0.3140
Work Performance Indication	-0.051295	0.488235	-0.105061	0.9214
Risk Register	-0.000287	0.207922	-0.001383	0.9990
Approved Change Requests	0.109836	0.173728	0.632229	0.5616
Risk Audits	1.466092	1.185044	1.237163	0.2837
Risk Reassessment	-0.728283	1.357964	-0.536305	0.6202

Source: Author's Computation

The coefficient of determination, R^2, is 74% while the adjusted R^2 is -11 percent. This means that the identified variables do not explain any variation in the financial performance of the firms. A negative adjusted R^2 is an indication of nonlinear relationships between the variables. Therefore, the model fits the data very well. The results in Table 4.13 show that risk monitoring has no statistically significant relationship with financial performance.

Table 4.14 The Relationship between Risk Management Components and Financial Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Sponsorship	0.230426	0.282452	0.815806	0.4274
Ownership of risk management	-0.049975	0.368030	-0.135790	0.8938
Organizational risk culture	-1.256294	0.947760	-1.325539	0.2048
Effective communication	-0.075680	0.716654	-0.105601	0.9173
Link with mission and objectives	1.300930	0.869013	1.497020	0.1551
Understanding of risk management	0.537730	0.616389	0.872387	0.3967
Specification of risk environment	-0.363478	0.508932	-0.714197	0.4861
Determining the risk appetite	0.471507	0.338525	1.392828	0.1840
Selecting risk evaluation criteria	0.274746	0.690067	0.398144	0.6961
Effective risk management	-0.131026	0.304180	-0.430750	0.6721
Linking risk management and strategic objectives	0.629246	0.333578	1.886356	0.0764

Source: Author's Computation

The computed coefficient of determination, R^2, is 98% while the adjusted R^2 is 97 percent. This means that the identified variables explain almost all the variation in the financial performance of the firms. Therefore, the model fits the data very well. The results in Table 4.14 show that risk management has a statistically significant relationship with financial performance. This is indicated by organizational culture, the link between risk management and organizational mission and objectives, determining the risk appetite, risk tolerance and risk treatment measures and linking risk management and strategic objectives. The remaining components of risk management were not significant at 20 percent level.

Table 4.15 The Relationship between Risk Management Tools and Financial Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Value at Risk	0.324421	0.334077	0.971097	0.3507
Sensitivity analysis	0.030896	0.406384	0.076026	0.9407
Hedging (with derivatives)	0.184518	0.185118	0.996757	0.3386
International standards (Basel I, II, and III)	-0.054910	0.255557	-0.214864	0.8335
Interest rate risk management	-0.088471	0.168336	-0.525560	0.6088
Usefulness of risk management information	-0.202282	0.678937	-0.297940	0.7708
Relationship between tools and performance	0.310281	0.627743	0.494281	0.6300

Source: Author's Computation

The results of the coefficient of determination, R^2, are 18% while the adjusted R^2 is -22 percent. This means that the identified variables do not explain any variation in the financial performance of the firms. A negative adjusted R^2 is an indication of nonlinear relationships between the variables. Therefore, the model does not fit the data very well. The results in Table 4.15 show that risk management tools have no statistically significant relationship with financial performance.

Table 4.16 Relationship between Level of Risk Management and Financial Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Chief Executive Officer	0.698068	0.618655	1.128363	0.2812
Board/Executive Management Team	1.963768	0.493916	3.975919	0.0018***
Director of Finance	-2.967391	0.933226	-3.179713	0.0079***
Internal Auditor	0.955314	0.216548	4.411554	0.0008***
Risk Manager	1.446860	0.447865	3.230570	0.0072***
Line Manager	0.951691	0.795734	1.195991	0.2548
All Staff	2.333333	0.547036	4.265410	0.0011***

Note: ***Significant at 1 percent level

Source: Author's Computation

The computed R^2 is 26% while the adjusted R^2 is -11 percent. This means that the identified variables do not explain any variation in the financial performance of the firms. However, a negative adjusted R^2 is an indication of nonlinear relationships between the variables. Therefore, the model does not fit the data very well. The results in Table 4.16 show that the level of risk management has a statistically significant relationship with financial performance. This relationship is strongest when all staff members in the firm are involved in risk management than when only the CEO or line managers are engaged in risk management.

Table 4.17 Relationship between Risk Management and Financial Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Role of the Board	0.541818	0.483382	1.120890	0.2826
Role of the Internal Auditor	0.369991	0.215978	1.713096	0.1104
Role of the Risk Manager	0.703381	0.405422	1.734934	0.1064*
SWOT Analysis	-0.517648	0.229075	-2.259734	0.0417*
Evaluation of Existing Controls	1.178509	0.670317	1.758138	0.1022*
Prioritizing and Active Management	-0.797320	0.659527	-1.208927	0.2482

Note: *Significant at 10 percent level

Source: Author's Computation

The computed R^2 is 30 percent while the adjusted R^2 is 3.5 percent. This means that the identified variables explain 4 percent of variation in the financial performance of the firms. Therefore, the model does not fit the data very well. The results in Table 4.16 show that the level of risk management has a statistically significant relationship with financial performance. Specifically, risk identification (especially the role of the Risk manager and the performance of the SWOT Analysis) and risk analysis and assessment (especially the evaluation of existing controls and risk management responses) significantly affect the financial performance of the

firm. This relationship is strongest and negative when SWOT analysis is applied in risk management.

4.3.1 Test of Model Goodness of Fit

A goodness-of-fit test is used to test the hypothesis that an observed frequency distribution fits (or conforms to) some claimed distribution.

4.3.2 Regression Model for Testing the Relationship between Risk Management Tools and Performance of Investment Firms

Table 4.18 Results of Model's Goodness of Fit Test

Parameters	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.883[a]	.780	.621	1.391

Source: Author's Computation

The R^2 is a measure of the goodness of fit of the risk management variables in explaining the variations in performance of investment firms. The model shows that the predictor variables (Risk Management tools, Risk Monitoring, Risk analysis and assessment, Risk Identification) explain 78% of the variation in the performance of investment firms as seen in the R square value (0.78). This means that other variable not included in the study account for a 22% variability in the performance. Thus these variables collectively, are good explanatory variables of the performance of investment firms in Kenya.

4.3.3 ANOVA

Table 4.19 ANOVA for the Influence of Value Proposition Parameters on the Components of Business Model

Parameters	Sum of Squares	df	Mean Square	F	Sig.
Regression	59.540	1	59.540	5.027	.021[a]
Residual	347.710	6	11.843		
Total	407.249	7			

Source: Author's Computation

The significance value obtained was .021 which is less than 0.025 at 5% level in a 2-tailed test. This therefore indicates that the model is statistically significant in predicting the relationship between risk management tools and performance of investment firms. Findings also indicate that the calculated F value is 5.027 which is greater than the F critical at 5% level of significance (3.23). Thus, this shows that the overall model was statistically significant.

4.4 Discussion of Results

The regression analysis shows that risk-specific factors are not only related to the profitability of firms, but they also influence the profitability of investment firms in Kenya significantly. The analysis revealed that risk identification is the most robust and important factor influencing performance in the sector. The results showed that a 1% increase in risk identification could result in 0.550% increase in profitability. This was statistically significant at 5% confidence level. These results are consistent with studies that indicate that risk managers have an important role in the implementation of risk management in institutions. Liebenberg and Hoyt (2003) studied the determinants of ERM as evidenced by the appointment of a Chief Risk Officer and observed that though there was an absent explicit disclosure for ERM implementation, the appointment of a CRO can be taken as a strong signal of ERM implementation in the companies. Beasley et al (2005) also investigated whether the presence of a CRO is positively associated with the deployment of ERM. The study finds that the presence of a CRO/Risk champion in senior management significantly increases the entity's stage in ERM implementation.

In investigating whether risk management has an impact on performance of firms, this study found that proper risk management generates a significant positive contribution to the value of the firm. The results showed that a 1% increase in risk management could result in 0.636% increase in profitability. This was statistically significant at 5% confidence level. The findings contradict studies undertaken by Modigliani and Miller (1958), Sharpe (1964), Lintner (1965), Nain (2004), Lookman (2004) and Jin and Jorion (2005). This studies concluded that implementation of risk management strategies is irrelevant to the firms value. However, the research findings in this study are consistent with literature reviewed, that indicates that there is a significant relationship between the level of ERM implementation and value of the company (Hoyt et al 2008; Beasley et al, 2005; Kleffner et al, 2003). This is evidenced by the results from

the regression model with a positive and statistically significant coefficient for the level of ERM implementation. Lam and Kawamoto (1997) and Meulbroek (2002) also found that Enterprise Risk management makes risk management part of the company's overall strategy and enables companies to make better risk adjusted decisions that maximizes shareholder value. As discussed by Hoyte et al (2008), firms that engage in ERM are able to better understand the aggregate risk inherent in different business activities. The findings of this study suggest that companies that have their primary focus on adding shareholder wealth should implement ERM as it does contribute to the company's market value.

Risk monitoring also showed a positive relationship to the performance of firms. The results showed that a 1% increase in risk monitoring could result in 0.136% increase in profitability. This was statistically significant at 5% confidence level. The results are consistent with studies that show that risk monitoring helps in checking whether risk identification, evaluation and assessment have been successful (Hermann, 1996, p.48). This phase is crucial for taking appropriate measures in time in case deviations between the actual and planned risk situation are identified (Henschel, 2008, p.54). The monitoring should therefore include developments of the risk positions and measures to control them (Form, 2005, p.126). Moreover the overall risk situation of the company should be compared to the plan and the risk strategy and deviations should be documented (Liekweg & Weber, 2000, p.290).When identifying differences, management should ensure that the risk management process starts all over again. Risk monitoring can thus be used to ensure that risk management practices are in line and hence help firm management discover mistake at an early stage.

Risk analysis, assessment also showed a positive relationship with the performance of investment firms. The results showed that a 1% increase in risk monitoring could result in 0.145% increase in profitability. This was statistically significant at 5% confidence. The results are consistent with the works of Hermann, 1996, p.42; Liekweg & Weber, 2000, p.285 who state that the aim of the risk evaluation is to determine the degree of the identified risks and quantify their financial impact on the company. It is therefore necessary to analyse in which way the risk could affect the business. Management should thus cluster/categorise the identified risk based on the field of risk for example whether it is market or financial risks. The clustering allows the company to later analyse whether some of the risks are related and whether some offset each

other (e.g. in and outflows in a foreign currency). Furthermore the clustering will assist to identify the main risks of business, which is of help for future analysis and focus of risk management (Nassauer & Pausenberger, 2000, p.269).

Next the influence of the different risks and their potential harm to the company needs to be evaluated. This will require an identification of the costs to the company in case the risk occurs as well as the probability of occurrence (Scheve, 2005, p.46). With the help of those values the expected damages of the risk positions can be calculated and the single risks can be evaluated (Hermann, 1996, p.43; Scheve, 2005, p.74). Management should thereafter assess the impact of the risk which should be compared with the maximum tolerated loss and be defined in the risk strategy. At least those positions exceeding the tolerated loss or threaten business continuity need to be assessed in the third phase of risk management (Wesel, 2010, p.295). Management should lastly look at measures to handle the risk. These measures range from risk avoidance or prevention, over risk reduction, to transfer of risks and finally acceptance of the risk (Henschel, 2008, p.7).

4.5 Summary

From the findings, the study established that Risk Identification is positively significant in influencing the performance of Investment Firms in Kenya. The study also established that it is useful to classify the different risks according to the amount of damage they can possibly cause thus the study concludes that risk analysis and assessment has a positive effect on performance of Investment Firms in Kenya.

The study revealed that risk monitoring can be used to make sure that risk management practices are in line and proper risk monitoring also helps firm management to discover mistake at early stage thus the study concludes that risk monitoring has a positive impact on performance of Investment Firms in Kenya.

The study further ascertained that determining strategy first will ensure that responses are aimed at the same goal, and avoid nugatory effort thus the study concludes that risk planning had a positive impact on performance of Investment Firms in Kenya.

The results of the study largely confirm what has appeared in previous literature. Waweru and Kisaka (2011) examined the state of ERM in Kenya and found out that there was positive relationship between firm's size on ERM and financial performance of listed firms in Kenya.

Finally the study highlighted the pre-eminent role that organizational culture, monitoring and executive sponsorship, support and focus plays in the risk management function of firms.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter is organized into four parts. Section 5.2 gives a summary of the study. Section 5.3 provides conclusions drawn from the study. Section 5.4 highlights limitations experienced in the study and Section 5.5 provides recommendations for further research.

5.2 Summary of the Study

This study was undertaken with the aim of investigating the relationship between risk management tools and performance of investment firms in Kenya. It targeted a sample of 26 investment firms from which 19 were able to give response while 7 were not able making a response rate of 73%. Of the firms studied, 37% had an asset base of over 5 billion, 37% had an asset base of less than 1 billion and 21% had an asset base of 1 to 5 billion.

The study found out that, 38% of the firms have charged their risk manager with the task of identifying risks within the firm, 21% use all their employees to identify risk. Also, 17% of the firms relied on the internal auditor to identify risks, 13% relied on the board to identify risk, 8% relied on the line managers to identify risk and 4% relied on the CEO to identify risk. Findings as well indicated that 95% of the firms have a documented risk management policy while those who had no documented risk management policy represented 5% of the studied firms.

During risk identification, 90% of the firms used audits to identify risks in their operations, 21% used brainstorming, 16% used examination of local and overseas experience and use of interviews and 26% relied on SWOT analysis, Judgment and past organizational experience to identify risks. Operational modeling was used by 21% of the firms and 32% relied on scenario analysis and process analysis to identify the risks facing the firms while 5% of the firms relied on surveys to identify risks.

In most of the firms, the information sought on the tools used for identifying risk were significant as this was found to be the case in 78.9% of the firms studied. Whereas in 10.5% of the firms, the information was found to be somewhat useful. Findings also indicated that the investment firms in Kenya widely used qualitative analyze to assess the levels of risk within the

firm. Also, regarding the usage of quantitative analysis in assessing the levels of risk, the firms were found to be always in use of quantitative analysis in assessing their levels of risk.

On the effectiveness of the existing controls and risk responses, findings illustrated that the existing controls and risk management responses were effective. Findings as well illustrated that, the costs and benefits of addressing risks in risk analysis were significant. The firms have policies on prioritizing of risk treatment at times of resource constraints. 42% of the firms reviewed their risks based on the current risk, 32% reviewed risks spanning beyond 2 years while 26% reviewed their risk based on 1-2 years' time period.

The results indicated 74% of the firms relied on identification of risks as soon as possible, 63% relied on risk audits in their risk monitoring, 53% relied on checking operating volumes, 47% on investigating other risks and 32% decided on where and how to handle risk as a method of risk monitoring. On the tools used for risk monitoring, 42% of the firms relied on variance and trend analysis always, while 53% used variance and trend analysis to a moderate extent. With regard to work performance indication as a tool of risk monitoring, 42% of the studied firms reported that they had put in use of this technique always in their operations. Also, findings showed that 63% of the firms had applied the usage of risk register. 53% of the firms as well were found to have had put in place the use of approved change requests as a tool of risk monitoring always. With regard to risk audits was at all times used in 79% of the studied firms. 90% of the firms as well had risk assessment as the risk monitoring technique applied in their place.

The study findings further revealed that majority of the firms studied viewed executive sponsorship, support and focus as an effective risk management method in their organizational operation. Also, 63% of the firms had defined and communicated policies, procedures, systems and internal controls effectively. On the effectiveness of line management ownership of risk management, 53% of the firms viewed it as an effective method of dealing with risks. 74 % of the firms studied viewed the usage of effective organizational culture as an effective risk management method. The findings as well showed that, 63% of the firms referred to the linkage between risks and corporate claims and the objectives of firm as an effective method in dealing with risk management. Also, firms viewed the use of the level of understanding of risk and risk management, the linkage between risk management and individual performance appraisal as well

as the specification of the organization risk environment including articulation of the objectives as effective risk management methods.

The findings as well revealed that the establishment of the organizational risk appetite, risk tolerance and risk treatment measures as well as the establishing of a criteria for evaluating risk are also effective methods of dealing with risk. As well, findings indicated the development and implementation of risk management strategies as an effective method of handling risks.

The results further showed that effectiveness of resourcing risk management processes and strategies was viewed by3.2% of the firms as an effective method of addressing risks in the organizations. Also, appropriate use of risk recording tools, development of key performance indicators against which to measure success of strategies and emerging issues were found to be effective methods in risk management. The use of monitoring of strategies against key performance indicators, performance benchmarks, continuous review or feedback and the regular reports to senior management were as well revealed to be effective risk management methods in the studied organizations.

Findings as well revealed that, the use of value, sensitivity analysis, use of hedging instruments and the international standards were in place in the studied organizations which were as well referred to as effective methods of dealing with risks in the firms. Further, the use of interest rate in risk management was found to be an effective method in addressing risks in the firms studied.

The results reveal that risk management has a statistically significant relationship with financial performance. This is indicated by organizational culture, the link between risk management and organizational mission and objectives, determining the risk appetite, risk tolerance and risk treatment measures and linking risk management and strategic objectives. The study results also show that risk management tools have no statistically significant relationship with financial performance.

5.3 Conclusions

From the findings of the study, the following three conclusions can be draw. First, Risk Management tools (Organizational risk management, Risk Identification, Risk Analysis and Assessment and Risk Monitoring) results in 0.78 increase in performance of investment firms. Thus it can be said that proper risk management within an organizational enhances the

performance of that firm. It can also be noted that gradually incorporating a risk management policy within the organizations controls will enhance the same organization performance. It can also be noted that organizations with a structured responsibility chain with regard to risk management will enhance their overall performance. This is supported by the respondents who identified that their organizations have more than one individual in charge of risk identification and management.

Secondly, prioritization and actively selection of risks that need active management was also identified as crucial for firms as this impacts positively (0.709) on the performance as indicated by the strong relationship between the risk analysis and assessment element and the performance of investment firms. Similarly firms should strengthen their qualitative analysis measures in risk analysis and assessment owing to the strong relationship (0.716) between qualitative analysis and the performance of investment firms.

Thirdly, risk identification plays a key role in enhancing the performance of investment firms as identified by majority of the respondents. Hence, risk identification can essentially be said to be the key starting point of any risk management program as firms cannot manage what is unknown. On the other hand, once identified, risks must be prioritized, actively managed and the firm using this knowledge for future avoidance of risk.

The study also concludes that operating a risk register within a firm is key to improving the risk management undertakings of the firm and ultimately the performance of the overall firm. A good risk register will support the firm's staff in undertaking efficient risks audits which are key to the identification and management of risks facing the firm.

5.4 Limitations of the study

Key limitation experienced during the study was unresponsive firms. Some firms did not respond to the questionnaire sighting various company prohibitions that restricted potential respondents from responding to the questionnaire. However, 19 firms representing a 73% response rate responded to the questionnaire hence the results can be said to be representative of the population of sampled firms.

5.5 Recommendations from the study

The study done has implications for policy as highlighted below. The study also helped identify areas for future and further research as highlighted below.

5.5.1 Recommendations for Policy

The study noted with dismay that most investments firms do not incorporate international standards as part of their risk management strategies. With the recent financial crises, it is imperative that investment firms incorporate new and existing regulations especially the Basel accord to protect investor's wealth and incorporate proper risk management ideals in the processes and practices. Thus this study recommends that the firms need to make adjustments to their structures to incorporate the Basel requirements since they help to cushion firms during turbulent economic times and can thus, act as a risk management tool.

The study also recommends that Capital Markets Authority ensures that all players in the market align their risk management policy to their organizational culture to ensure all employees are aware of the risk management policies.

The study further recommends that N.S.E and C.MA impress upon market players to have active teams within their structures to support the risk identification functions, which will be key to developing and implementing an essential risk management policy. Further the study recommends the setting up of key performance indicators by firms which can be used to gauge the performance of risk management policies owing to the effectiveness of key performance indicators in enhancing the performance of investment firms.

5.5.2 Recommendations for Further Study

Given the importance of risk management in firms today and limitations experienced in the research, further studies should focus on effectiveness of the ERM framework in the Kenyan context, Public bodies and how they engage in risk management to enhance performance, the influence of a firms performance on the choice of risk management tools and the relationship between human resource capacity and the risk management effectiveness within firms listed with the capital markets authority

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APPENDIX I: QUESTIONNAIRE

Dear Respondent: My name is Ben Musomi. I am a finalist Master of Business Administration (MBA) degree student at University of Nairobi. In partial fulfillment of the requirement of this course, I am conducting an academic research entitled 'The Relationship between Risk Management Tools and Performance of Investment Firms in Kenya'. The University has permitted me to carry out this research and I will treat your opinions confidentially. Your honesty is both critical and paramount when you respond to the questionnaire. Please tick (√) as appropriate.

PART A: Risk Identification

1. What is the Asset base of your organization?
    - Below 1 billion 1
    - Between 1 billion and 5 billion 2
    - Above 5 billion 3
2. Who is responsible for identifying risks facing your organization? (check all that apply)
    - Chief Executive Officer 1
    - Board/Executive Management Team 2
    - Director of Finance 3
    - Internal Auditor 4
    - Risk Manager 5
    - Line Manager 6
    - All staff 7
    - Other (please specify)……..

3. Does your organization have a documented risk management policy? Yes No
   1 2
4. What tools does your organization use for identifying risks (check all that apply)
    - Audits or physical inspection 1
    - Brainstorming 2
    - Examination of local/overseas experience 3

- SWOT Analysis 4
- Interviews/Focus group discussions 5
- Judgment 6
- Survey/Questionnaire 7
- Scenario Analysis 8
- Operational Modelling 9
- Past organizational experience 10
- Process Analysis 11
- Other (please specify)……..

5. To what extent do you find the above information useful?

Not at all		Somewhat		Significant
1	2	3	4	5

PART B: Risk Analysis and Assessment

6. To what extent are the organization's risk assessed using:

	Not at all		Somewhat		Always
• Qualitative analysis methods (e.g. high, medium, low)	1	2	3	4	5
• Quantitative analysis methods i.e. identification of a precise level (e.g. an event which will happen atleast once a year with an impact greater than Ksh 1,000,000	1	2	3	4	5

7. Your organization's response to analyzed risk include:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
• An evaluation of the effectiveness of existing controls and risk management responses	1	2	3	4	5
• An assessment of the costs and	1	2	3	4	5

benefits of addressing risks

• Prioritising of risks and selecting those that need active management	1	2	3	4	5
• Prioritising risk treatment where there are resource constraints on risk treatment implementation	1	2	3	4	5

PART C: Risk Monitoring

8. In your organizations, risk management reviews consider: Please Select

- Risk today 1
- Risk over the next 1 – 2 years 2
- Risk beyond 2 years 3

9. What does risk monitoring in your organization entail? (check all that apply)

- Identifying new risks as sons as possible 1
- Decide where and how to handle the risk 2
- Investigating other risks that might be reduced or eliminated and no longer need coverage 3
- Checking operating volumes 4
- Risk audits 5
- Others (please specify)……..

10. To what extent does your organization use the following tools for risk monitoring purposes?

	Not at all		Somewhat		Always
• Variance and trend analysis	1	2	3	4	5
• Work performance indication	1	2	3	4	5
• Risk register	1	2	3	4	5
• Approved change requests	1	2	3	4	5
• Risk audits	1	2	3	4	5

- Risk re-assessment 1 2 3 4 5
- Other (please specify)……..

PART D: Organization Risk Management

11. Which of the following components of risk management are effective in your organization?

	Effective	Neutral	Ineffective	N/A	Not in place
• Executive sponsorship, support and focus	1	2	3	4	5
• Line management ownership of risk management	1	2	3	4	5
• Effective organizational culture	1	2	3	4	5
• Defined and communicated policies, procedures, systems and internal controls	1	2	3	4	5
• Linkage between risks and corporate aims and objectives	1	2	3	4	5
• Level of understanding of risk and risk management across the organization	1	2	3	4	5
• Specification of the organization's risk environment including articulation of the organization's objectives	1	2	3	4	5
• Linkage between risk management and individual performance appraisal	1	2	3	4	5
• Establishment of the organization's risk appetite, risk tolerance and risk treatment measures	1	2	3	4	5
• Establishment of the criteria for evaluating risk	1	2	3	4	5
• Identification of risk	1	2	3	4	5
• Recording, analysis and prioritizing risk	1	2	3	4	5

- Development and implementation of risk Management strategies 1 2 3 4 5
- Resourcing of risk management processes and strategies 1 2 3 4 5
- Appropriate use of risk recording tools 1 2 3 4 5
- Development of key performance indicators against which to measure success of strategies and emerging issues 1 2 3 4 5
- Monitoring strategies against key performance indicators 1 2 3 4 5
- Performance benchmarks 1 2 3 4 5
- Continuous review/feedback on risk Management strategies and performance 1 2 3 4 5
- Regular reports to senior management 1 2 3 4 5

12. How important is effective risk management to the achievement of your organizations objectives?

Not at all		Somewhat		Very Important
1	2	3	4	5

13. To what extent has your organization developed close links between its strategic objectives and management of risk?

Not at all		Somewhat		Significant
1	2	3	4	5

PART E: Risk Management Tools

14. To what extent do you find the following tools for risk management relevant to your organization for risk management purposes? (check all that apply)

	Not at all		Somewhat		Significant
• Value at Risk	1	2	3	4	5
• Sensitivity Analysis	1	2	3	4	5

- Hedging Instruments (Swaps, Forward, Futures etc)

  1 2 3 4 5

- International Standards (Basel I,II and III)

  1 2 3 4 5

- Interest rate risk management (e.g. gap analysis and duration analysis)

  1 2 3 4 5

- Others (please specify)……

15. To what extent do you find the information generated from use of the above tools useful?

Not at all		Somewhat		Significant
1	2	3	4	5

16. In your opinion is there a relationship between the risk management tool applied by your organization and the performance of the organization?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Thank you for responding to the questions.

APPENDIX II: POPULATION LIST

1. ABC Capital Limited.
2. African Alliance Kenya Investment Bank.
3. Afrika Investment Bank.
4. Apex Africa Capital Limited.
5. CBA Capital Limited.
6. Centum Investment Company Limited.
7. Dyer and Blair Investment Bank.
8. Equity Investment Bank Limited.
9. Faida Investment Bank.
10. Francis Drummond and Company Limited.
11. Genghis Capital Limited.
12. Home Afrika Limited.
13. Kestrel Capital (EA) Limited.
14. Kenya Commercial Bank Capital.
15. Kingdom Securities Limited.
16. Kurwitu Ventures Limited
17. Nairobi Securities Exchange.
18. NIC Securities Limited.
19. Old Mutual Securities Limited.
20. Olympia Capital Holdings.
21. Renaissance Capital (Kenya) Limited.
22. SBG Securities Limited.

23. Standard Investment Bank.

24. Sterling Capital Limited.

25. Suntra Investment Bank.

26. Trans-Century Limited.