

**EFFECT OF RISK BASED AUDIT PRACTICES ON FINANCIAL PERFORMANCE IN
SELECTED PUBLIC OWNED SUGAR COMPANIES IN KENYA**

BY

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DECLARATION

I declare that this research project is my original work and has not been submitted for a degree in any other university or institution of higher learning.

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DEDICATION

This research project is dedicated to my beloved wife Mercy Karagai Manas, my brothers Andrew Dickens and Roy Onyango and to my unborn child and also in memory of my beloved late mom Roselyne Akinyi Okwany'. I LOVE YOU ALL AND TO GOD BE THE GLORY.

ABSTRACT

Risk based internal auditing being a methodology that links internal auditing to an organization's overall risk management framework, provides risk management process, annual audit planning, internal audit capacity and internal auditing standards which improves the efficiency of the internal control system of an organization thereby improving the overall financial performance. Existing literature demonstrate that RBA has capacity of risk identification and reduction i.e. its adoption had several achievements amongst which were identification and resolving of civil servant payroll weaknesses to eliminate ghost staff thereby streamlining payments in a cost saving manner. It also increased law courts' revenue collection of between 33% and 166% in 2007. Having been implemented by public institutions, including public sugar companies in Kenya, it requires analysis of its contribution in maintaining efficiency and effectiveness. Whereas public sugar companies apply risk based auditing as a tool of internal control system and financial performance, available information reveal that a number of the sugar companies still face critical challenges with internal control system and financial performance. The purpose of this study was to analyze the effect of risk based internal auditing on financial performance in public owned sugar companies in Kenya. Specifically the study sought to establish the effect of risk management on financial performance, to determine the effect of annual risk based planning on financial performance and to analyze the effect of internal audit capacity on financial performance. Agency theory was among the theories that guided the study. This study adopted correlation research design which provides for description, correlation and regression as it's expected by the focused relations. The target population for the study constituted 50 respondents, comprising finance officers, deputy finance officers and internal auditors in the selected public owned sugar companies in Kenya. A pilot study was carried out on 5 respondents at a scale of 0.7 leaving 45 respondents for the main study and was used to test reliability of the research instrument. The study administered questionnaires to all the respondents since it was the most appropriate tool to gather information. Bi-variate correlation analysis was used to test hypothesis and regression analysis model to establish the relationship between the effects of RBIA elements on financial performance of selected 4 public owned sugar companies in Kenya. Level of association was factored i.e. independent and dependent variables in the study. The study may also be significant in that it may be a reference for other scholars interested in the general body of knowledge and form a basis for further research. The study established that risk management had a significant positive correlation (0.678, $p < 0.01$) with financial performance. The study also found out annual risk based planning had a significant positive relationship (0.597, $p < 0.01$) with financial performance. Finally, the study also established that. This was also supported by regression results which showed a significant positive influence (0.677, $p < 0.01$) between internal audit capacity and financial performance. As such the null hypothesis that there is no significant positive relationship between risk base financial audit and financial performance was rejected. The study concluded that there was a significant positive relationship between risk based financial audit and financial performance. The study recommended that other researcher should focus on non-financial factors and their relationship with financial performance

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LIST OF ABBREVIATIONS AND ACRONYMS

SCK	-	Sugar Companies of Kenya
CEO	-	Chief Executive Officer
CG	-	Corporate Governance
CR	-	Control Risk
IA	-	Internal Audit
IAC	-	Internal Audit Capacity
IIA	-	Institute of Internal Auditors
IR	-	Inherent Risk
PPF	-	Professional Practice Framework
RBA	-	Risk Based Audit
RBIA	-	Risk Based Internal Audit
RMD	-	Risk Management Department
ROA	-	Return on Asset
PPF	-	Professional Practice Framework
ROE	-	Return on Equity
ROI	-	Return on Investment
SAS	-	Statements of Auditing Standards
SOX	-	Sarbanes–Oxley Act
SPSS	-	Statistical Package for Social Science
OLS	-	Ordinary Least Squares
KNAO	-	Kenya National Audit Office
GOK	-	Government of Kenya
RBAA	-	Risk Based Auditing Approaches
PFMR	-	Public Finance Management Reform
OECD	-	Organization for Economic Co-operation and Development
FP	-	Financial Performance

DEFINITION OF TERMS

Annual Risk Based Planning: This is a process that establishes the audit universe, produce audit programmes and review the audit process.

Inherent Risk : It refers to a risk posed by an omission or error in the financial statements due to a factor other than a failure of control.

Internal Control System : This refers to a process for assuring achievement of an organization's objectives in operational effectiveness and efficiency, reliable financial reporting and compliance with laws, regulations and policies.

Control Risks : This refers to the risk that occurs due to failure of a control system.

Risk Appetite : It refers to the amount of risk that an entity (on broad level) is willing to accept within its overall Capacity.

Risk Based Auditing : This is a methodology that links internal auditing to an organization's overall risk management framework, providing risk management process, annual audit planning and internal audit capacity.

Risk Management : A process of identification, analysis and acceptance or mitigation of uncertainty in investment decisions.

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CHAPTER ONE

INTRODUCTION

This section entails previous background information from previous researches done that is relevant to the effectiveness of risk based audit on financial performance of selected sugar firms in Kenya.

1.1 Background of the Study

Over the last few years, the need to manage risks has become recognized as an essential part of good corporate governance practice. This has put organizations under increasing pressure to identify all the business risks they face and to explain how they manage them. In fact, the activities involved in managing risks have been recognized as playing a central and essential role in maintaining a sound system of internal control. While the responsibility for identifying and managing risks belongs to management, one of the key roles of internal audit is to provide assurance that those risks have been properly managed (IIA, 2015). It is for this reason that there has been a dramatic shift in the focus of internal audit over the years, from systems based auditing to process based auditing and the current emphasis is on Risk Based Internal Auditing (IIA, 2009). IIA defines Risk Based Internal Auditing (RBIA) as a methodology that links internal auditing to an organization's overall risk management framework. It allows internal audit to provide assurance to the board that risk management processes are managing risks effectively, in relation to the risk appetite. Risk-based auditing derives largely from models that assume that inherent risk (IR) and control risk (CR) are distinct concepts and that IR arises from attributes of the audit environment that are completely independent of attributes that determine the level of controlling risk. Operationalizing the distinction between IR and CR has however, proved troublesome. There appears to be little consensus building regarding attributes that may identify IR and there is little published evidence regarding how IR is considered by practitioners. Also, it is not yet clear neither does it make good logical sense to try to separate IR and CR in the manner demanded by standard setters (De Fond, Francis and Wong, 2000)

Risk Based Internal Auditing (RBIA) is defined as a methodology that links internal auditing to an organization's overall risk management framework (IIA, 2014). It allows internal audit to provide assurance to the board that risk management processes are managing risks effectively, in relation to the risk appetite. Prinsloo (2008) in his study of the development and evaluation of

risk-based Audit approaches found out that the prominent corporate failures in the United States and Europe (i.e. Enron Ltd and Worldcom Ltd), indicated the importance of an efficient and effective audit approach. The credibility crisis that followed these failures shows that the auditing profession should continue to develop and evaluate its methods and approaches (Prinsloo, 2008). The only defense auditors have against the anger (or frustration) of stakeholders in instances of corporate failures is sufficient, appropriate audit evidence that proves their innocence (*ibid*). This audit evidence will be the result of a well-planned and performed audit. An audit approach which will reduce the frustrations of the stakeholders. This study therefore was to determine the effect of annual risk based planning on financial performance in the selected public owned sugar companies in Kenya.

In Kenya RBIA was adopted in March 2004 following an Internal Audit Consultative Forum. This was in response to a joint IMF/World Bank report that highlighted the weaknesses of Kenya's internal audit function (Financial Management Anchor, 2008). The adoption had several achievements amongst which were identification and resolving of civil servant payroll weaknesses to eliminate ghost staff thereby streamlining payments in a cost saving manner. It also increased law courts' revenue collection of between 33% and 166% in 2007. Risk-based audit approach is one of the Public Finance Management Reform (PFMR) in Kenya aimed at ensuring transparency, accountability and good governance within the Central Government operations. In spite of the above achievements, the Kenya National Audit Office (KNAO) has continually raised significant issues concerning laid down financial regulations; in respect of books inaccuracies especially in public owned sugar companies in Kenya of which four of the sugar firms were rendered technically insolvent in the year 2013 according to the auditor general report (Mutai, 2014). These demonstrate less than optimal realization of RBA expectations of improved efficiency and effectiveness. Ability to manage the risk through appropriate control lead organization to achieved its objective of financial performance dominance (Shamsuddin and Johari, 2014). It is therefore important to establish the effect of risk management on financial performance.

Several studies about risk based internal auditing and financial performance have been conducted by different scholars. Ayagre (2014) found out that RBA helps organizations to focus on high

risks priority areas where as the main reasons for non-adoption of risk based internal auditing were lack of skills and resource constraints. Kasiva (2012), studied the effect of risk based auditing on financial performance of the banks in Kenya', noted that risk based auditing through risk assessment, risk management, annual risk based planning, internal auditing standards and internal auditing capacity should be enhanced. The author argued that this would enable the firm to be able to detect risks on time and concentrate on high-risk areas leading to increased transparency and accountability, hence enhancing financial performance. Lutta (2012), studying the determinants of adoption of risk based audit in public sector in Kenya established that risk based audit enhances transparency, accountability and responsiveness to public expenditure policy priorities; and it virtually covered all aspects of public financial management. From the studies it is evident that RBA is able to improve the organizations overall corporate governance and financial performance of which effective Internal Control System is a means to achievement of the organization's objectives. Being a control process designed by public sugar firms in providing reasonable assurance on the achievement of objectives in respect of effectiveness and efficiency of operations, reliability of financial reporting, compliance with applicable laws and regulations, it requires functional attention. Nyarombe *et al* (2015), on the other hand established that Risk based Audit Approach are used in Uasin Gishu County. The results indicated that RBA influence financial performance in the government departments, improves bank reconciliation statements and statement of assets and liabilities, prompt surrender of Imprests, safeguarding departmental and greater adherence to the government financial regulations.

The Treadway Commission report of 1987 recommended that public companies establish an internal audit function to be fully supported by top management and have effective reporting relationships. This was to ensure that the internal auditors' qualifications, staff, status within the company, reporting lines, and relationship with the audit committee of the board of directors must be adequate to ensure the internal audit function's effectiveness and objectivity (Treadway Commission, 1987). The report urged that the internal audit function be "staffed with an adequate number of qualified personnel appropriate to the size and the nature of the company (Treadway Commission, 1987). Being that RBA had been adopted by the public sugar firms some still experience financial challenges, the study was to analyze the effect of internal audit capacity on financial performance in the selected public owned sugar companies in Kenya.

Ayagre (2014), observed that lack of skills and resource constrains hindered the adoption of RBIA while Kasiva (2012) argued that RBIA would enable the firm to be able to detect risks on time and concentrate on high-risk areas leading to increased transparency and accountability, hence enhancing financial performance. Nyarombe *et al*, (2015) on the other hand found out that RBA influence financial performance in the government departments by improving bank reconciliation statements and statement of assets and liabilities, prompt surrender of Imprests, safeguarding departmental financial obligations and ensures greater adherence to the government financial regulations. The study was however conducted in service departments thereby leaving out manufacturing firm like those in the sugar sector. Therefore, the study was to analyze the effect of Risk Based Internal Auditing on financial performance in selected public owned sugar companies in Kenya.

1.2 Statement of the problem

Adoptions of RBIA in organizations including public sector has potential of improving financial performance; with improved objective achievements, compliance with laws and regulations, safeguarding of business assets to timely and reliable financial reporting. The available information reveals that public sugar firms in Kenya still experience financial regulations' challenges with respect to unsupported expenditure, non-updated bank reconciliation statements, and inaccuracies in statement of assets and liabilities, pending bills, un-surrendered imprests warrants, collections of Appropriation in aid and expenditure control. This reflects less than optimal realization of RBIA(Risk Based Internal Audit) potential. It is therefore important to determine the extent of compliance of RBIA practices. Subsequently, it is critical for Institutions' to determine the Audit Risks Level to enable execution of appropriate audit strategies to reduce Audit Risk Inheritance. Studies have been conducted on risk based internal auditing on financial performance of organization. However, the studies lack clarity on how the Risk Based Internal Auditing affects financial performance in the public sugar firms and also no recommendations given thereafter. This study therefore will seek to analyze the effect of Risk Based Internal Auditing on financial performance in selected public owned sugar firms in Kenya; case of Mumias, Nzoia, South Nyanza Sugar Company and Chemelil Sugar Company.

1.3 Objective of the Study

1.3.1 General Objective

The main objective of this study will be to analyze the effect of risk-based audit practices on financial performance of selected public owned sugar firms in Kenya.

1.3.2 Specific Objectives of the Study

The study was guided by the following specific objectives

- i. To establish the effect of risk management on financial performance in public owned sugar firms.
- ii. To determine the effect of annual risk based planning on financial performance in public owned sugar firms.
- iii. To analyse the effect of internal audit capacity on financial performance in public owned sugar firms.

1.3.3 Research Hypothesis

H01: There is no significant effect of risk management on financial performance in public owned sugar firms in Kenya.

H02: There is no significant effect of internal audit planning on financial performance in public owned sugar firms in Kenya

H03: There is no significant effect of internal audit capacity on financial performance in public owned sugar firms in Kenya

1.4 Justification of the Study

Risk based auditing is a very important element in financial performance. It is essential in both public and private sectors. Sugar companies like other organizations should be interested in how risk-based auditing affects their financial performance. The importance of this is based on the assertion that auditing based on risk assessment is bound to militate against risks. Thus the findings of the current studies of other firms will assist the management of sugar factories in

Kenya in understanding the importance of risk-based auditing in light of financial performance. This will also assist them in decision making and formulating key financial strategies which can aid in mitigation of financial risks. The study may also be significant in that it may be a reference for other scholars and researchers interested in the general body of knowledge and form a basis for further research. Finally it will help policy makers in formulating business decisions that will help in ensuring financial performance in public organizations and even private sector firms.

1.5 Scope and limitation of the Study

The study was conducted in Kenya among the internal auditors and the management staffs, that is, finance officers and deputy finance officers in selected sugar firms in the country. It was carried out between December 2015 and September 2017. It was conducted within the budgetary allocation and time frame.

This study had some potential limitations. The sample for the study consisted of the Head of Departments and the Management team of the selected sugar firms that were well acquainted with organizational risks and internal auditors. This limited the generalization of the results across all public sugar firms. There were budgetary constraints witnessed due to the fact that many activities involved i.e. variations in stationary, printing paper, travelling, internet services, payment of research assistants and contingencies to the tune of positive 30% as compared to the earlier budget amounting to Kshs.33,900 more. The targeted population delayed in responding to the questionnaires which interfered with our work plan a great deal.

1.6 Conceptual framework

This study analyzed the effect of RBIA on financial performance of sugar firms in Kenya. The study focused on RBIA as the independent variable in which risk management, annual risk based planning, and internal auditing staffing or capacity was studied. The dependent variable was financial performance in which the expectations were: Financial performance i.e. profitability or Return on Assets (R.O.A.) Economic conditions and top corporate governance were considered as the intermediary variables, as shown in **Figure 1** below.

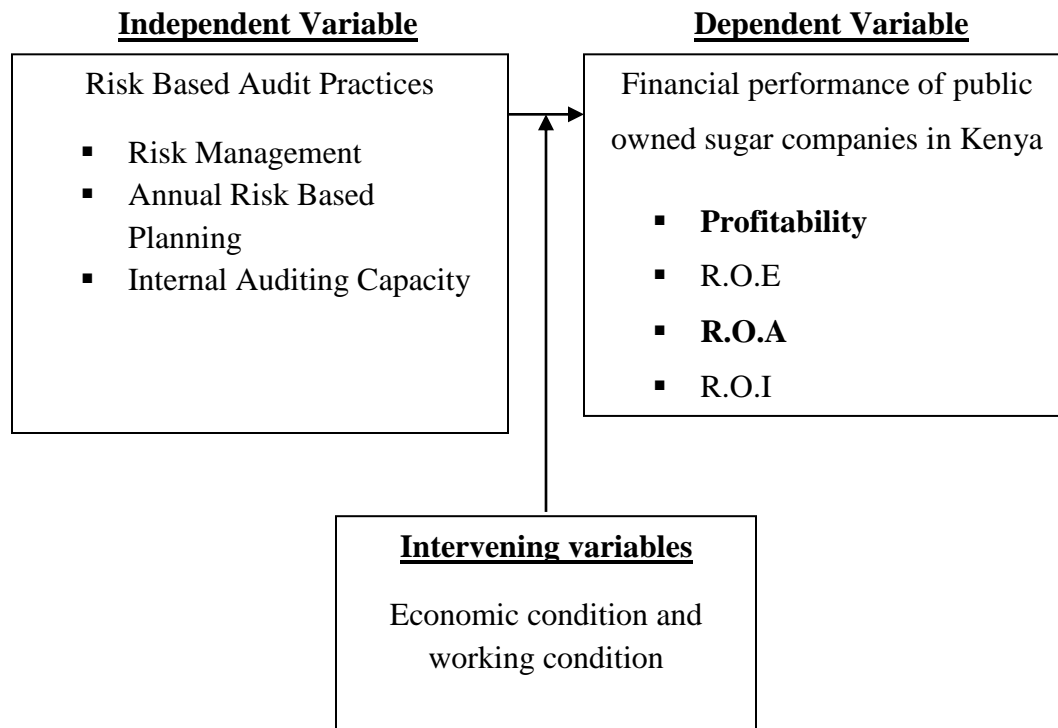


Figure 1 Effect of risk based audit on financial performance of sugar companies in Kenya

Source: Adopted and modified (2017) from Memba and Makori (2015)

The conceptual framework in this research work implies that if Risk Based Audit strategies such as; risk management, annual risk based planning, internal audit standards, and internal auditing capacity building are adopted in sugar companies, will enhance financial performance of sugar companies in Kenya. Finally, the researcher had to conceptualize that, for Risk Based Audit to enhance/influence financial performance; challenges encountered should be addressed ranging from improving the capacity of the employees to adopt the RBA, proper communication on financial planning, and establishment of clear structure and processes for financial performance. These independent variables will influence financial performance of sugar companies in Kenya.

Economic conditions are dictated by government policies, changes in legislation, litigations, changes in technology, monopoly of board members, short and long term plans, manipulation of sale rates, credit control measures, credit debt ratios, levy of tax on interest, careful control of expenditure, timely payment of loans, geographical spread of factories, structural changes, the increasing competition in the national and international sugar markets and changes towards trade

unions-COMESA. How the economic conditions affects financial performance is as shown in Table 1.6 next

Table 1.6 Effect of economic Conditions on Financial Performance

Economic Condition elements	Effects on financial performance
Changes in technology	Efficiency and effectiveness of operations
Monopoly of board members	Conflict of interest i.e. awarding themselves unfairly
Short and long term plans	Requires huge capital outlay ,investment i.e. crashing higher tonnage of sugar cane as compared to previous
Manipulation of sale rates	Affects profit and loss
Credit control measures	Written off debt or payment of debts by debtors
Levy of tax on interest	Higher tax levies reduces profits realised
Careful control of expenditure	Ensures wastages minimised
Timely payment of loans	Ensures no penalties levied by credit institutions
Geographical spread of companies	Reduces competition and boosts sales volume
Structural changes	Laying off employees or hiring experts to boost production and performance
Changes towards trade unions -COMESA	Increases competition thus reduced sales volume

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews relevant existing literature from other researchers who have carried out their research in the same field of study. Specific emphasis has been put on the major issues in risk based audit practices on financial performance of selected public owned sugar companies in Kenya.

2.1 Theoretical review

Various theories have been formulated to explain the pertinent issues influencing financial performance in organizations. This research study was based on three theories namely the agency theory, transaction cost economics (TCE) and auditing theory.

2.1.1 Agency Theory

The Agency theory is the best known and most used theory in justifying demand and use of internal and external auditing services. According to the agency theory a company consists of contracts between the owners of economic resources (the principals) and managers (the agents) who are charged with using and controlling those resources, Jensen and Meckling, (1976). Agency theory assumes that agents have more information than principals and that this information asymmetry adversely affects the principals' ability to monitor whether or not their interests are being properly served by agents. Furthermore, an assumption of agency theory is that principals and agents act rationally to maximize their own wealth. A consequence of this assumption may be the "moral hazard" problem Jensen and Meckling, (1976). Agents may face the dilemma of acting against the interests of their principals. Since principals do not have access to all available information at the time a decision is being made by an agent, they are unable to determine whether the agent's actions are in the best interest of the firm. To reduce the likelihood of this problem, principals and agents engage in contracting to achieve optimality, including the establishment of monitoring processes such as internal auditing Adams (1994). Specifically, internal auditing is considered a bonding cost borne by agents to satisfy the principals' demands for accountability, Sherer and Kent, (1983).

Fama (1980) used agency theory to examine the hierarchical relationships in large, multi-division companies. In this context, the company's top management is viewed as the principal who delegates responsibility and authority to subordinate managers (agents) for effective utilization of a portion of the firm's resources, leading to the possibility of moral hazard problems between divisions and top management. Top management tries to mitigate this problem by instituting organizational controls, including internal auditing, Miguel, Shank and Darajan,(1977).This argument suggests that there is more need for internal auditing in large multidivisional companies than in smaller ones. It is more difficult for top management in larger firms to oversee the firm, which creates a greater demand for internal auditing to compensate for the loss of control, Khalik (1993). For this reason the internal auditor should ensure that it adopts an approach which will help improve Internal Control Efficiency.

2.1.2 Transaction Cost Economics Theory (TCE)

The TCE attempts to bring out the concept of cost of doing business in a very wide perspective and looks at how to monitor them. One of the ways proposed by this theory for monitoring internal costs of doing business is use of internal monitoring. The objective of TCE is to explain different forms of organization based on the differences in transaction costs. Firm is seen as a governance structure, rather than as a production function, Williamson, (1996). The firm is not seen as a black box as in neoclassical economics. It is described as an organizational construct in different hierarchies, market, hybrids, Williamson (1981). In addition, TCE tries to identify and mitigate contractual hazards, Williamson, (1996) and links the possible hazards to behavioral assumptions. The first assumption relates to bounded rationality, Simon, (1976), the notion that decision makers' capabilities are bounded in terms of formulating and solving problems and processing all information during the decision-making process. The second assumption deals with opportunism or possible conflicts because individuals are promoting their own self-interest. Opportunism is a variety of self-interest seeking, but extends simple self-interest seeking to include self-interest seeking with guile. It is not necessary that all agents be regarded as opportunistic in identical degree. It suffices that those who are less opportunistic than others are difficult to ascertain and that, even among the less opportunistic, most have their price, Williamson, (1979). These behavioral assumptions lead to incomplete contracting and as a consequence, monitoring of the contract is required to prevent or to handle conflicts. Governance is the economizing response to infuse order and to realize mutual gains, (ibid).Transaction cost

economics provides a basis for describing a contractual or transactional relationship between parties, in which each party expects something from the other Speklé, (2001). This can be a relationship within the organization, but also between organizations. The choice of mechanism depends on a comparative analysis of the transaction costs characteristics like asset specificity, uncertainty and frequency, Williamson, (1996). The key characteristic asset relates to opportunity losses due to investments in alternative sources. Asset characteristics may take the form of physical, human, site-specific, dedicated assets or investments and brand name capital. Uncertainty or risk indicates the predictability of the environment and sight on possible disturbances to which transactions are subject. Uncertainty also has a behavioral component, in the sense of potential non-disclosure, manipulation of information. Frequency denotes the recurrence of transactions. Depending on these characteristics, TCE analyses the most economic, value preserving governance structure to infuse order, thereby to mitigate conflict and realize mutual gain, Williamson, (2002). Within a firm there is more administrative control to govern transactions than within a market. Also, within a firm the disputes about incomplete contracts will first be solved within a firm, while in the market any disputes need to be taken to court. Williamson argues that an internal monitor has an advantage over external monitors, as he has greater freedom of action, a wider scope, understands the language of the firm and can rely on less formal evidence, Williamson, (1975). With that TCE seems to imply an advantage of the internal auditor over the external auditor.

2.1.3 Auditing Theory

Auditing theory helps to explain why auditing is needed in organizations. It also reveals certain laws that govern the audit process and its activities. Auditing theory enhances the understanding of the relationships and interrelationships between different parties of an organization. It also enhances the detection of fraud in financial statements (Hayes et al., 2005). A sub-theory of auditing theory is the policeman theory.

2.1.3.1 Policeman Theory

According to this theory, the auditor is responsible for searching, discovering and preventing fraud. Recently, the main focus of the auditors has been to provide reasonable assurance and verify the truth and fairness of the financial statements. The detection of fraud is, nevertheless, still a crucial topic in the debate on the auditor's responsibility, and typically after events where

financial statement frauds have been revealed, the pressure increases the responsibilities of auditors in detecting fraud (Hayes et al., 2005).

2.1.4 Measures of Financial Performance

Measurement of financial performance by ratio analysis helps identify organisational strengths and weaknesses by detecting financial anomalies and focusing attention on issues of organisational importance. Given that the mission of a profit organisation is the reason for its existence, it is appropriate to focus on financial resources in their relationship to mission. The key to analysis and measurement of the financial and operational control and impact is related to the central question.

Their model reflects the interrelationship between a series of questions about the mission and the financial resourcing and control of the organisation. They suggest that such a framework provides an appropriate analysis for past performance which will help an organisation move towards its future direction. The profitability analysis is achieved on a set of indicators to measure the financial performances of institutions. The indicators result/arise from the accounting dates, which illustrate the reference periods in the most synthetic expressions of balance sheet and the profit and loss account.

Profitability of sugar companies is affected by a number of factors. Some of these are endogenous, some are exogenous and yet structural. Changes in policies made by Risk Based Auditing are exogenous to the system. This includes changes in sugar industry policy, changes in quantitative credit control like changes in Credit Risk Regulatory, Short and long-term plans, manipulation of sale rates, qualitative credit controls like selective credit control measures, Credit/Debt ratio, levy of tax on interest. Various other factors like careful control of expenditure, timely repayment of loans are endogenous. Various structural factors include geographical spread of sugar factories, decentralization in the management and structural changes.

Return on Equity or profit to equity, is the most significant indicator for profit, which measures the sugar industry's management in all its dimensions, and offers an image over the way to use the capital brought by shareholders, the effect of their retainer in the industry's activity. The indicator is determined (Blair, 1996)

2.1.5 Return on Equity (ROE)

The return on equity ratio (ROE) measures how much the shareholders earned for their investment in the company. The higher the ratio percentage, the more efficient management is in utilizing its equity base and the better return is to investors.

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Average Shareholder's Equity}}$$

Return on Equity (ROE) and liquidity state indicate the financial performance of sugar factories and computed as the ratio of Liability to assets. A study on Sri Lankan Microfinance Institutions was carried out to ascertain the significant determinants of Return on Equity in Sri Lankan Microfinance Institutions (hereafter MFIs). Within the period of 2005-2011 the researcher evaluated 11 MFIs exists in Sri Lanka. Under this study, efficiency and productivity were measured by operating expense ratio, personal productivity ratio and cost per borrower ratio. Financing structure was measured by debt/equity ratio. Meanwhile, Profitability was measured by return on equity ratio. The research concluded stating that the Cost per Borrower and Debt/Equity ratios was statistically significant predictor variables in determining return on equity in a MFI. Most notably, the result on relative debt/equity was supported by empirical verifications as well.

Cost recovery and the elimination of subsidies would only force MFIs to shed the poorest from their portfolios of borrowers because they were precisely the most difficult and costly to attend, Hulme et al (2000). These findings were circuitously related with the return on equity as net income was considered in return on equity excluding grants or donations. Whereas, MFIs generated lower return on equity compared to commercial banks in developing countries, a fact which they explained as being “due to their very low levels of leverage”, Christen and McDonald (2001). The return on equity was an inevitable measure of profitability, Zeynep Ugur (2006). Finally supporting evidence to Zeynep Ugur (2006) can be found in Befekadu B. Kereta's (2007) studies. Stating, MFIs are operational sustainable measured by return on equity and the industry's profit performance was improving over time. Meanwhile, Michael Tucker and Gerard Miles declared stating, there was a possibility that self sufficient MFIs with positive return on equity may be attaining those results by reducing levels of services to the poorest of the poor, those with the greater needs.

2.1.6 Return on Investment (ROI)

The other measure of financial performance in the sugar company is return on investment. Return on Investment (ROI) analysis is one of several commonly used financial metrics for evaluating the financial consequences of business investments, decisions, or actions. ROI analysis compares the magnitude and timing of investment gains directly with the magnitude and timing of investment costs. A high ROI means that investment gains compare favorably to investment costs.

$$\text{Return on Investment} = \frac{\text{Gain} - \text{Investment Cost}}{\text{Investment Cost}}$$

2.1.7 Return on Assets (ROA)

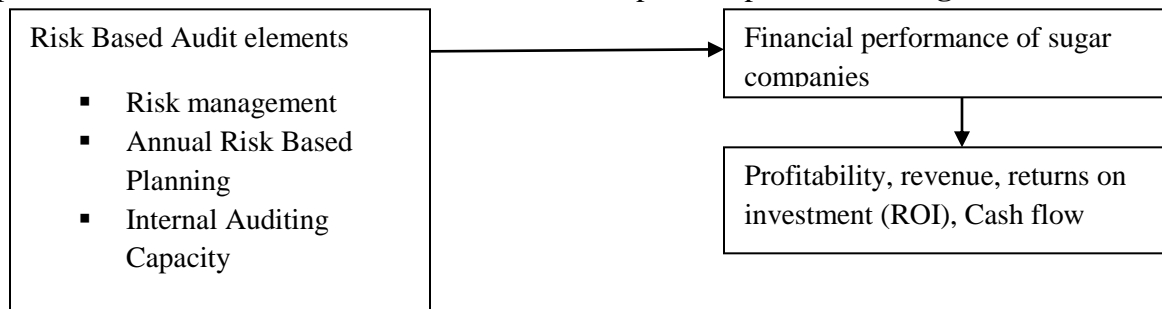
Return on Assets is an indicator of how profitable a sugar company is relative to its total assets.

$$\text{Return on Asset} = \frac{\text{Net Income}}{\text{Total Assets}}$$

ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA will be displayed as a percentage. Using ROA as a comparative measure is best to compare it against a company's previous ROA numbers or the ROA of a similar company thus this study will make use of ROA.

2.2 Conceptual Framework framework

Recent literature suggests various antecedents or factors influencing financial performance in organizations (Daud, & Yazid, 2009). Framework defines important risk based audit practices, and proposes a common risk management language, and provides clear course and direction for risk based audit practices' management process. Based on the review of literature and research problem, a theoretical framework has been developed and presented in **Fig. 2.1** as shown below.



Source: Adopted and modified (2017) from Memba and Makori (2015)

2.3 Concept of Risk Based Audit

Traditional audits focus primarily on compliance with rules and procedures, and their recommendations may not give management enough information about the achievement of organizational goals. RBA involves high-level risk profiling of the audit portfolio over time; thus it facilitates strategic use of scarce audit resources, aligns audit efforts with management objectives, facilitates institutional development and reduces risk exposure by focusing attention on areas of weakness. RBA is therefore a process, an approach, a methodology and an attitude of mind rolled into one. The simplest way to think about RBA conceptually is to audit the things that really matter to your organizations (Griffith 1999). RBA therefore is a term derived from the Institute of International Audit (IIA); a research foundation based in the USA (IIA, 2004). The institution's conclusion reveals that a significant gap existed between available guidance and current practice of internal auditing, and that a new framework was needed to carry the profession into the 21st century (IIA, 2004). Ideally, in pre-audit, management abdicated their responsibilities to internal audits; there were no audit reports and no review of the system by management. On the other hand, systems audit was passive and reactive control based audit with no involvement of management in audit planning. Therefore, for internal audit to be effective and efficient, RBA was introduced (IIA, 2004).

Institute of Internal Auditors (IIA) defines Risk Based Auditing as an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes (IIA, 2003). This definition is designed to embrace the expanding role of risk based audit which in recent years has evolved from a narrow focus on control to include risk based audit practices such as risk management, annual risk based planning, internal auditing standards, internal auditing capacity and corporate governance (Brody and Lowe, 2000). This definition is used as a framework to develop hypotheses or research questions concerning the characteristics of companies that use risk based audit, while there is considerable overlap between the areas of risk management, control and governance (Colbert, 2002). In Kenyan sugar industry not much has been done on risk based audit especially on the risk based audit practices mentioned earlier which cascades to good corporate governance but have opted to remain in only

a narrow focus on control living out a systematic disciplined approach on evaluation and improvement of effective risk management and good governance. When risk based audit practices are lacking in an organization then objective assurance is tampered with and the company wouldn't be in a position to deliver on its mandate.

Every organization is different, with a different attitude to risk, different structure, different processes and different language. RBA seeks at every stage to reinforce the responsibilities of management and the board for managing risk. If the risk management framework is not very strong or does not exist, the organization is not ready for RBA. More importantly, it means that the organization's system of internal control is poor. Internal auditors in such an organization should promote good risk management practice to improve the system of internal control (Lutta 2012). Risk Based Internal auditing basically involves execution of an audit plan which is developed with inputs from strategic analysis and risk assessment. Risk based internal auditing is a kind of auditing approach based on determining and evaluating organization's risk characteristics, through strategic analysis and risk assessment and designing the auditing process in line with risk matrix (Ayvaz a & Pehlivanli, 2010).

2.4 Risk Based Audit and Financial Performance

Empirical research has investigated the existence or extent of risk based auditing from risk or governance perspectives. Goodwin-Stewart and Kent (2006) use an agency framework to explore firm characteristics associated with the existence of risk based audit function from risk based audit practices, control and governance perspectives influences accountability and enhance provision of financial statement thereby influencing financial performance in financial institutions (CBK.2010).

The empirical findings by Al-Tamimi (2002) and Al-Mazrooei (2007) highlighted that UAE banks are efficient in risk based auditing. They later found out that Bank Administration Risk based audit Survey showed that large banks in the US had made substantial progress in their financial performance. Comprehensive risk based auditing influence effective financial reporting activities and influencing profit and loss sharing in the source of funds especially investment

account holders. He concludes that the application of risk based audit in organizations is equally important.

There is a generally accepted relationship between risk and return, that is, the higher the risk the higher the expected return. Therefore, traditional measures of bank performance have measured both risks and returns. The increasing competition in the national and international sugar markets, the change over towards trade unions such as comesa and the new technological innovations herald major changes in sugar industry environment, and challenge all sugar companies to make timely preparations in order to enter into new competitive financial environment. Spathis, and Doumpos, (2002) investigated the effectiveness of commercial banks based on their assets size. The study proposal seeks to establish the relationship between effects of risk based audit and financial performance in sugar companies in Kenya.

2.5 Internal Control Systems (ICS).

Internal Control Systems comprises those elements of an organization (including its resources, systems, processes, culture and structure) that support people in the achievement of the organization's objectives. They facilitate the effective and efficient operation of companies by enabling them to respond appropriately to significant business, operational, financial, compliance and other risks. (COSO Framework (1992) and The Tumbull Report (1999). This includes safeguarding assets from inappropriate use or from loss and fraud, and ensuring that liabilities are identified and managed. Furthermore, internal controls help ensure the quality of internal and external reporting which also includes procedures for reporting immediately to appropriate levels of management any significant control failings or weaknesses that are identified together with details of corrective action. Finally, internal controls help ensure compliance with applicable laws, regulations and internal policies. It is important to note that a sound system of internal control provides reasonable, but not absolute, assurance that a company will not be hindered in achieving its business objectives by circumstances which may reasonably be foreseen.

International guidelines state that boards are ultimately responsible for the system of internal control. The board should, at least annually conduct a review of the effectiveness of the system of internal control, a responsibility that is often delegated to the audit committee. The Turnbull

Report (1999) states that effective systems of internal control are embedded into a company's operations, form part of the corporate culture and are capable of adapting to evolving risks arising from changes within the company and in the business environment. Many national corporate governance reports and reforms include recommendations for internal controls and reporting on internal controls.

Risks are circumstances which threaten objectives, ICS are processes which manage risks, it is therefore the duty of internal auditors therefore to provide opinions on management of risks by the ICS to acceptable levels (Griffith, 2006) It is for this reason that there has been a dramatic shift in the focus of internal audit over the years, from systems based auditing to process based auditing and the current emphasis is on Risk Based Auditing (IIA UK and IRELAND., 2003). Risk-based internal auditing (RBA) is all about providing an opinion as to whether the internal controls are managing risks to an acceptable level. Traditional audits focus primarily on compliance with rules and procedures, and their recommendations were not giving management enough information about the achievement of organizational goals. RBA involves high-level risk profiling of the audit portfolio over time; thus it facilitates strategic use of scarce audit resources, aligns audit efforts with management objectives, facilitates institutional development and reduces risk exposure by focusing attention on areas of weakness. This impliedly means that it is the duty of the Internal Auditors to adopt an audit approach which will improve the effectiveness of the internal control systems. An audit approach, currently a risk-based audit approach, is therefore a crucial component in the performance of an audit (Prinsloo, 2008).

2.6 Risk Based Audit Practices

2.6.1 Risk Management

Stakeholders now compete to participate in corporate governance to seek power in organizations by asserting their own conceptions of risk and how it should be managed, and a focus on risk management has become central to this competition since it defines the accountability of the management of the organization (Spira and Page 2003). This is consistent with Hay and Knechels' (2004) argument that the demand for any type of auditing is a function of the set of

risks faced by individual stakeholders in an organization and the set of control mechanisms available for mitigating those risks. Therefore, risk based audit practice's risk management orientation has given the audit function increased credibility across the enterprise and greater acceptance by management (Beumer 2006). Much as Kenyan public sugar companies have internal audit department, but little is known about them adopting the risk based audit practices such as risk management. Often times we have perceived through mass media the sector reporting significant losses attributed to high operational costs outweighing investment capital. Also there is a lot of political interference in management ending up engineering bad business policies which may be detrimental to the organization. In light of all these opportunities are lost/wasted meant for expansion, further investment and curbing financial linkages in the sugar sector.

Through Risk based audit sound risk management strategies which are forward looking and helps to improve business decisions (Fatemi and Glaum. 2000). It is not just about avoiding or minimizing losses, but about dealing positively with opportunities. It is a powerful tool for public sector managers (Drzik, 2000). Good risk management is based on a well-planned, logical, comprehensive and documented strategy. This strategy provides general policy guidance, and plans and procedures that can be used as part of the organization's everyday work to manage risk (OECD, 2005).

The Risk Based Internal Auditing (RBIA) approach involves management to a far greater extent. The risks to be covered in audits will exist in all parts of the organization and audits will therefore involve managers in departments never visited before (Millichamp. 2002). Many risks will be very significant to the organization and the discussion of their controls will involve more senior managers and directors than might be involved in traditional finance orientated audits (Al-Tamimi, 2002). RBIA emphasizes management's responsibility for managing risks. Audits will involve more discussion with managers about their risks and their responses to them. There will be an initial meeting with managers, possibly involving a risk workshop to examine risks in greater depth, and contact throughout the audit to discuss issues (Schnatterly, 2001).

The objective of RBIA is to provide independent assurance to the board that there is a sound of risk management framework within the organization, and risks that may affect the organisation's business objectives and strategies are been identified, managed and reduced to a level that is acceptable to the board (IIA 2003). One indication of risk management framework is the existence of a separate committee or group, comprised of directors and managers (Goodwin-Stewart and Kent 2006) to develop risk management development policy. Furthermore, the following IA major roles are required in risk management: determining processes and their objectives identify risks that hinder the processes with management, test and controls mitigating the risks, reporting where risks are not sufficiently mitigated by controls and assure management that risks are mitigated to an acceptable level. This has been made easy with adoption of RBIA in the public sector (Millichamp, 2002). Through enhanced capacity building for internal audit staff to update their knowledge and competency in dealing with modern trends in risk management and also establishment of audit and risk committees are some of the measures that have been put in place to contain and manage risks (Schnatterly, 2001). Through RBA, the audit activity provides useful and relevant information to the organization for managing its risks.

2.6.2 Annual Risk Based Planning

Planning is generally considered a vital risk based audit activity and it includes preparing a strategic plan, annual plans and programs for individual risk based audit assignments. The operational standard of the risk based audit, is dealing with the planning aspects of the internal audit, requires the preparation of a strategic plan - usually a five-year plan, a periodic (annual) plan and plans for individual audit assignments (Karapetrovic, 1999). Most organizations' of which sugar companies are involved internal audit offices do not develop a strategic plan, the exercise which would have enabled the audit staff to evaluate risk and identify high-risk areas that deserve audit attention. It could also have been an exercise by which the head of internal audit ensures the appropriateness of resources by projecting requirements in a timely fashion thus enhancing good governance.

The Internal Audit Office of many institutions prepares annual plans for their operations. Nonetheless, an annual plan prepared as a subset of a strategic plan is more useful (Sanda,

Milkailu and Garba, 2005). An effective risk based audit function requires the head of the internal audit office to periodically report to senior management on the internal audit activity's purpose, authority, responsibility and performance relative to its plan. In some situations where there is poor governance, there is no such practice and the Internal Audit Office communicates with top management only via annual audit plans and the reports on individual audit assignments (Wade, 2002).

Proper planning enables accomplishment of a large number of audits in a given period by improving efficiency. In some cases the numbers of the audit engagements are completed in the budgeted time and the number of actual audits performed in a period is usually less than the number of audits stated in the annual audit plan (Sanda, Milkailu and Garba. 2005). This is usually caused by adhoc audit assignments by the management and urgent requests by external parties. Adhoc audit assignments signify the relevance of internal audit to management (Van Gansberghe, 2005), and reflect positively on audit effectiveness and also in good governance but not in entirety because risk based audit plan isn't adhered to. The supply side argument suggests that during the audit planning stage, auditors assess corporate governance risk and plan procedures or charge risk premiums based on their assessment (Karapetrovic, 1999) of which some institutional auditors don't do.

In planning the engagement and determining its scope, the external auditor's main objective is to gather evidence to support giving an opinion on the financial statements. Secondly, and as a product of the audit, the composition of the governance body and what matters are to be communicated to it are considered. When planning the engagement, the internal auditor is not required to design procedures specifically to gather information to report to the governance body (Karapetrovic, 1999). Rather, matters to be communicated are those which come to the auditor's attention in the course of the engagement and which the auditor deems to be significant and relevant to the governance body. To make clear the scope of the work and their responsibilities regarding communication, the internal auditors may elect to include this information in an engagement letter.

According to Davidson et al. (2005), an auditor's duty is to give a fair and truthful view of a client's set of company accounts, but auditors cannot guarantee that the company accounts are entirely free of errors and irregularities. Therefore, in their audit planning, auditors must identify and assess the risk that they need to discover. If an item is discovered, auditors must consider the context and presentation of the item and then decide whether it affects the true and fair view of the company accounts. The Statements of Auditing Standards, SAS 220, states that 'Auditors should consider materiality and its relationship with audit risk when conducting an audit' (O'Regan, 2002). However, in pre-audit, management abdicated their responsibilities to internal audits; there were no audit reports and no review of the system by management. On the other hand, systems audit was passive and reactive control based audit with no involvement of management in audit planning (Seddon, 2000). Therefore, for internal audit to be effective and efficient, Risk Based Audit (RBA) was introduced.

2.6.3 Internal Auditing Capacity

Events since mid 1970s to 2006 have contributed to the growth of risk based auditing. The foreign Corrupt Practices Act of 1977 mandated public companies to establish and maintain effective risk based practices/controls to provide reasonable assurance that assets are safeguarded and that transactions are properly authorized and recorded. To accomplish this, many companies established risk based audit functions, increased internal audit staffing, and strengthened risk based audit independence. Beasley et al. (2000) show that these investments in internal auditing have been effective, as companies with internal audit staffs are less prone to financial fraud than companies without internal auditing. Also, Coram et al. (2008) find that organizations with internal audit staffs are more likely than those without internal auditing to detect and self-report occurrences of fraud. The number and magnitude of errors requiring adjustment by the external auditors have been found to be substantially lower for entities that had an internal audit department that is risk based compared to those that did not have an internal audit department, (Wallace and Kreutzfeldt, 1991). The risk based audit function is important because it adds much value and therefore reduces detected errors (Goodwin and Kent, 2004) as compared to normal traditional audit practice.

In 1987, a report by the Treadway Commission recommended that public companies establish an internal audit function to be fully supported by top management and have effective reporting

relationships. This means that the internal auditors' qualifications, staff, status within the company, reporting lines, and relationship with the audit committee of the board of directors must be adequate to ensure the internal audit function's effectiveness and objectivity (Treadway Commission, 1987). The report urged that the internal audit function be "staffed with an adequate number of qualified personnel appropriate to the size and the nature of the company (Treadway Commission, 1987,). The New York Stock Exchange enacted a requirement in 2003 that all listed companies must have an internal audit function, either in-house or outsourced. This requirement was approved by the Securities and Exchange Commission (SEC) later in that year. Relying on internal auditing can avoid unnecessarily duplicating audit procedures. It also can benefit external auditors because internal auditors have certain advantages. The internal auditors generally have more knowledge about the company's procedures, policies, and business environment than do the external auditors. However, external auditors must reconcile the advantages of relying on internal auditing with the need to maintain both the appearance and reality of independence as defined for external auditors (Gramling et al,2004), According to Norman Marks (2007), emerging request from boards is that internal auditors review and comment on the organization's governance policies, processes, and practices. The IIA recognizes this in its International Standards for the Professional Practice of Internal Auditing (Standards). Standard 2100 states (emphasis added).The internal audit activity should evaluate and contribute to the improvement of risk management, control, and governance processes using a systematic and disciplined approach." Internal audit quality, which is determined by the internal audit department's capability to provide useful findings and recommendations, is central to audit effectiveness. Internal audit has to prove that it is of value to the organization and earn a reputation in the organization. Internal audit has to evaluate its performance and continually improve its service. According to Ziegenfus, (2000), audit quality is a function of the level of staff expertise, the scope of services provided and the extent to which audits are properly planned, executed and communicated. The IIA's standard, 1210 on proficiency of the auditor require that the internal auditors possess the knowledge, skills and other competencies needed to perform their responsibilities (IIA, 1999). The auditors' should be interested in attending courses for the purpose of gaining professional qualification, such as for certification as an internal auditors and the employer can provide financial support. Since, internal audit work requires knowledge and experience on a wide range of systems and operations, it is imperative to deploy

auditors with extensive professional skills and to upgrade their skills through continuing professional training and development. Given the high level of staffing with temporary employees, the difficulty of recruitment and retention of auditors with the right technical proficiency is evident. Krishnan (2005) revealed that the auditors view the office as given insufficient attention in terms of staffing. Continuous skill upgrading is another dimension that deserves attention so as to achieve a high level of technical proficiency. Therefore, audit quality is arguably a function of extensive staff expertise; reasonableness of the scope of service; and effective planning, execution and communication of internal audits. The audit activity needs a professional staff that collectively has the necessary qualifications and competence to conduct the full range of audits required by its mandate. In order to ensure good governance, auditors must comply with minimum continuing education requirements established by their relevant professional organizations and standards. The head of the audit activity must be able to effectively recruit, retain, and manage highly skilled staff. Moreover, the chief audit executive should be an articulate public spokesperson for the audit activity (Kunkel, 2004).

Quality risk based audit, which is determined by the internal audit department's capability to provide useful findings and recommendations, is central to risk based audit effectiveness. It has to prove that it is of value to the organization and earn a reputation in the organization. Internal audit which is risk based has to evaluate its performance and continually improve its service. According to Ziegenfus, (2000), audit quality is a function of the level of staff expertise, the scope of services provided and the extent to which audits are properly planned, executed and communicated.

2.7 Empirical Review

This section will look at research already done to evaluate RBIA on the effectiveness of financial performance of selected public sugar companies in Kenya. The section will also look at research already done that brings out the evidence of the effect of risk based internal auditing and risk management on the effectiveness of internal audit. Kiptoo and Muthoni (2013), of Mount Kenya University carried out a study to evaluate the internal audit functions' role in financial reporting in Eldoret municipal council in 2012. The study was published in the Journal of Emerging Trends in Economics and Management Services in September 2013. The study used a questionnaire to

survey 197 employees of the municipality. The study concluded that internal audit played an effective role in financial risk management in the municipal

Kasava (2012), in the study project for the MBA degree of the university of Nairobi titled, “The effect of risk based auditing on financial performance of the banks in Kenya “it was concluded that risk based auditing through risk assessment, risk management, annual risk based planning, internal auditing standards and internal auditing should be enhanced. The author argued that this would enable the firm to be able to detect risks on time and concentrate on high risk areas leading to increased transparency and accountability, hence enhancing financial performance. The author further argued that proper planning improves efficiency, accuracy, completeness, timeliness, convenience and clarity. The study found that credible audit reports, auditor independence to identify and rectify audit errors, effective implementation of audit recommendations, financial management and compliance with accepted audit standards, effective internal audit staff and independent audit committee influence financial performance in commercial banks. From the findings, the study recommended that management in commercial banks in Kenya should adopt effective risk based audit practices such as risk assessment, risk management, annual risk based planning, internal auditing standards and internal auditing staffing to enhance effective and efficient financial performance.

Internal Auditing Capacity

Wery and Lambin (2012) carried out a study titled ‘enhancing the internal audit function through the internal audit maturity model’. The study was sponsored by PWC and was undertaken in Luxembourg using secondary data from available literature. They explained that the internal audit maturity model is based on the level of documentation, planning and risk management capabilities. They suggested that level one maturity is when auditing is adhoc; the role of internal audit is not documented in an audit charter and current practice is not adopted immediately. Level five maturities is the opposite and in between are other levels. The authors argued that a mature internal audit function will add value to the organization. This study suggested that mature internal audit functions are more effective than immature internal audit functions. Onger and Okionga (2011) carried out a study to assess the effectiveness of internal audit systems in management of decentralized funds in Kisii Local Authority in 2011. The study surveyed 124 upper and middle cadre employees and councilors. The study concluded that

internal audit effectiveness was average due to lack of professional proficiency on the part of internal auditors, lack of independence where internal audit reported to another department which was one of the auditees and poor supervision of internal auditors.

Cohen and Sayag (2010) carried out a study titled the Effectiveness of Internal Auditing: An Empirical Examination of its Determinants in Israeli organizations. The target population for this study was managers and internal auditors from all Israeli organizations that conduct internal audits. Questionnaires were mailed to 292 organizations that met this criterion, based on a list compiled by the Institute of Internal Auditors in Israel. Each organization received two questionnaires, one for the general manager and one for the internal auditor. The data collection process took about nine months, with numerous reminders sent to each of the organizations. At the end of the collection process, 108 organizations' general managers and internal auditors had both responded to the questionnaires. The study found that there were very high correlations between perceptions of top management support and the auditing effectiveness. No significant correlations were found between professional proficiency and career advancement and auditing effectiveness.

Annual Risk Based Planning

Lutta, (2012) carried out the study on the determinants of adoption of risk based audit in public sector in Kenya. The study focused on five determinants:-Role of Internal Audit Function, Top Management Commitment, Training, Policy Framework and Communication process. Findings showed that Risk based audit enhances transparency, accountability and responsiveness to public expenditure policy priorities and it virtually covered all aspects of public financial management. Perception on the role of internal audit function was seen to affect the adoption of RBA to a great extent. The Internal Audit function was expected to ensure that proper audit procedures were followed. For RBA to be adopted successfully, top management had a great role to play as they had to ensure that resources were available for the internal audit function. Their support was essential as they are the drivers of the RBA process.

Risk Management

Nyarombe, Musau, Kawai and kipyegon (2015) studied the effect of Risk Based Audit Approach on internal control systems in government departments in Uasin Gishu County. The objectives of the study was to establish the Risk Based Audit Approach strategies used in implementing internal control activities in government departments in Uasin Gishu County, to examine the extent to which RBAA has influenced the implementation of internal control activities in government departments in Uasin Gishu County and finally to establish the challenges encountered by RBAA in implementing internal control activities in government departments in Uasin Gishu County. The research design used was a case study on the effect of RBAA on internal control systems in government departments in Uasin Gishu County. The research findings indicated that Risk based Audit Approach are used in Uasin Gishu County Government departments, the strategies adopted are; use of risk register, definition of RBAA in the Audit Charter, formulation of annual audit plan, reporting to the committees on department risk exposures, and allocation of resources to internal audit activities. The results indicated that RBAA influence internal control systems in the government departments, it was found that; bank reconciliation statements are up to date, Statement of assets and liabilities are reflective of the true position, Imprests are surrendered promptly, departmental assets properly safeguarded, greater adherence to the laid down government financial regulations, Internal auditors can help to identify and evaluate risks and internal auditors use methods of identifying risks in the department which are easy to understand challenges encountered in implementation of Risk based Audit approach in implementation of internal control systems are; Lack of relevant knowledge, lack of experience, Lack of proper tools to identify risks and lack of relevant principle or guidelines as the main challenges encountered in implementing RBAA

In conclusion, the determinants of the effectiveness of internal audit have been proposed as the support from executive management, the ability of internal audit to plan and carry out audits, report results and follow up on the implementation of audit recommendations and the independence of internal audit among others. Stakeholders in internal auditing all over the world have supported RBIA as a method that can significantly improve the ability of internal audit to plan well, focus on critical areas, report on the most important issue and spare time to follow up on implementation of internal audit recommendations. RBIA has been advanced as the best

method of internal auditing by many authorities, chief among them the institute of internal auditors. There exists a gap in empirical research and in theory as to how RBA affects the financial performance in the public institutions in Kenya. Most studies evaluate the extent of adoption of RBA or the factors associated with effective internal audit departments. Not much has been done on the effects of RBIA on different functions of Audit, financial performance on sugar firms in Kenya being one of them. The study therefore seeks to determine the effect of RBIA on the financial performance in the public institutions i.e. sugar firms in Kenya.

2.8 Summary of the Literature

This research proposal seeks to establish the impact of RBA on financial performance of sugar companies in Kenya. To understand the impact of RBA on financial performance of the sugar factories, this research proposal will examine whether the use of RBA practices such as risk management, risk assessment, annual risk based planning, internal auditing standards and audit staffing affects financial performance of the sugar companies. RBA is seen as the process and structure used to direct and manage the business affairs of the firms towards enhancing prosperity and corporate accountability with the ultimate objective of realizing long-term shareholder value, whilst taking into account the interest of other stakeholders. Claessens et al. (2002) maintain that better corporate frameworks benefit firms through greater access to financing, lower cost of capital, better performance and more favourable treatment of all stakeholders. RBA could help in defining the relation between the sugar companies and its market environment, the social and political systems in which it operates. The research proposal therefore seeks to investigate the effect of RBA on financial performance in sugar companies in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

The chapter presents the research design and methodology that was used to carry out the research study. It presents the research design, the population, sampling, data collection and data analysis.

3.1 Research Design

Research design refers to the way the study is designed, that is the method used to carry out the research (Mugenda and Mugenda (2003). This study adopted correlation research design which provides for description, correlation and regression as it's expected by the focused relations and also is a non probability research design. Questionnaires were used to collect data from members of the population and helped the researcher to get the existing descriptive phenomena by asking individuals about their perception, attitudes, behavior or values. A descriptive study describes characteristics associated with the subject of study. A cross sectional and descriptive survey attempts to describe or define a subject often by creating a profile of a group of problems, people or events through the collection of data and tabulation of the frequencies on research variables or their interaction.

3.2 Study Area

This study was conducted in selected sugar firms in Kenya; Mumias, Nzoia, Chemelil and South Nyanza Sugar Company. All of which are public owned which had their financial statements for the year 2012-2013 qualified by the Auditor General. The specific areas where the sugar firms are situated are as per their names i.e. Mumias Sugar company in Mumias center in Kenya.

The **Table 3.2** below shows production statistics and financial performance for public owned sugar companies operating in Kenya for the year ended June 2016

Table 3.2 Production statistics and financial performance for public owned sugar companies

Company	Region	Cane crushed Tons	Molasses produced Tons	Sugar produced Tons	Market share	Revenue shs'000	Loss/profit for the year shs'000
Mumias	Western	1,392,438	45,927	116,735	20%	13,075,912	(2,706,595)
Nzoia	Western	707,302	24,480	64,214	11%	3,190,925	(2,065,934)
South Nyanza	South Nyanza	633,182	19,454	60,387	10%	5,343,801	(409,417)
Chemelil	Nyando	466,670	17,285	37,709	6%	2,501,489	(359,472)
TOTAL						24,112,127	(5,541,418)

Source: Kenya Year Book of Sugar Statistics (2016)

From the Table 1 above the financial performance of sugar companies is wanting as it is negative. All the selected sugar firms don't realize profits despite the fact that they crush significant amount of tonnage every year, the molasses tonnage and final production of sugar included. The revenues gotten from the sugar firms under case study are high with high losses due to lack of monitoring system ending up in such losses. A proper monitoring system should be put in place to ensure improved revenues and less production costs thus improved financial performance.

3.3 Target Population

The target population was 50 people consisting of 38 Internal Audit Staff, 4 Finance Officers and 8 Deputy Finance Officers out of which 5 were used in the pilot study leaving 45 for the study. A census was conducted on all the remaining portion of the target population elements because a census survey collects complete information from all participants in the population targeted. General criteria of a census survey include establishing and maintaining a complete list of the primary sampling unit components and to validate (used to correct for missing and misreported data) - (from Wikipedia, the free encyclopedia)

Source: Survey Data (2017)

3.4 Sampling Size and Techniques

A sample is a subsection of population that will be chosen in such a way that their characteristics reflect those of a group from which they were chosen (Henn, Weinstein and Ford, 2006). Purposive sampling was applied and resulted in selection of respondents who include; internal audit staff, finance officer and deputy finance officers. This is because they form part of senior management that own risk management processes in public sector organizations. They are also involved in both audit planning as well as in implementation of audit findings and are in a position to respond effectively and provide relevant information for this study.

I used purposive sampling which is also known as judgment, selective and subjective sampling because it allowed me to use my own judgment when choosing members of population to participate in the study. This helped me save time and money. Alternatively, purposive sampling method proved to be effective because I used only limited numbers of people as primary data sources due to nature of the research design and aims and objectives. I used total population sampling as a subset of purposive sampling because in it I could choose to examine the entire population i.e. 50 that have a particular set of characteristic e.g. specific experience ,knowledge and skills. I chose the entire population because size of the target population (50) that has the particular set of characteristics that I was interested in was very small as required. Reference from Wikipedia in the internet.

The researcher used 4 public owned sugar companies in Kenya instead of all public owned because according to the Kenya Sugar Board statistics the four sugar companies under study registered dismal financial performances as regards Table 3.1 on production statistics and financial performance above.

Table 3.3: Summary of the targeted population

	Mumias Sugar Ltd	Nzoia Sugar Ltd	Chemelil Sugar Ltd	South Nyanza Sugar C. Ltd	Total
Internal Audit staff	14	10	8	6	38
Finance Officers	1	1	1	1	4
Deputy Finance Officers	2	2	2	2	8
TOTAL					50

Source: Survey Data(2017)

3.5 Data Collection Methods

Both primary and secondary data was used for the study. Primary data which consist of a collection of original data collected by the researcher were collected through semi structured questionnaires. Secondary data comprising of information that has been collected for a purpose other than the current research project was obtained from records of the organizations. These data were obtained from audit reports and other relevant records available within the sugar firms and supplemented with internal and government circulars.

I used both closed ended and open ended questionnaires in the study. Closed ended questions limit the respondent to the set of alternatives being offered, while open ended questions allow the respondent to express an opinion without being influenced by the researcher (Foddy, 1993). These had several impacts to the quality of survey data which was positive on the overall. The reasons I used open ended questions included discovering the responses that the individual respondents gave spontaneously and thus avoiding the bias that may have resulted from suggesting responses to individuals, a bias which could have occurred in the case of close ended questions while the reasons for closed ended questions was that it was easier and quicker for the

respondents to answer ,the answers of different respondents were easier to compare, answers were easier to code, and key and sensitive topics of the study were responded to and finally replication was easier.

3.5.1 Data Collection Procedures

The questionnaires were administered using drop and pick method. The questionnaires were used because it allowed the respondents who were auditors, finance officers and their deputies to give their responses in a free environment. Secondary data consisting of the internal and external circulars, audit reports and financial statements were collected using data schedules.

I used drop and collect method because it allowed me as the researcher to gather data from a large representative sample of respondents at relatively low cost per datum, all respondents get the same questions with a self-administered questionnaire as there is no worry about interviewer bias, and finally you can ask abit more key, complex and sensitive questions with self-administered paper questionnaire which I did. All these reasons came from the pilot study I administered before I commenced the research study.

3.5.2 Data Analysis and Presentation

The raw data obtained from the field was first coded into categories to hasten analysis and thereafter analyzed using SPSS to generate frequency tables, one way ANOVA to test the hypotheses and multivariate regression analysis model to establish the relationship between the effects of Auditing Based Internal elements on financial performance of selected public owned sugar firms.

3.6 Validity of Research Instruments

According to Mugenda and Mugenda (1999), validity is the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the variables of the study. There are three types of validity test which include content, criterion and related construct validity. The researcher looked into the content and construct validity of the research instrument. The researchers assessed the content and construct validity of the research instruments. Content validity showed whether the

questions and statements fully represented every element of the research questions and objectives of the study. This study also used content validity because it measures the degree to which the sample of the items represents the content that the test is designed to measure. Construct validity on the other hand ensured that the questions and statements were correctly and clearly stated. To further ensure validity, the researcher shared the details and structure of the research instruments with the supervisor for analysis, for the supervisor to cross-check and affirms that indeed the research instruments captured the full concept of the study. Thereafter, the researcher had to make the necessary changes needed. The outcome of the validity testing was 100% showing that indeed the questionnaire was representative of the objectives under study.

3.7 Reliability of the Research Instrument

Reliability is defined as the measure of the degree to which a research instrument yields consistent and coefficient results on data in another given similar situation according to (Mugenda and Mugenda (2003). Reliability test was done through Cronbach's alpha tests. Reliability of instrument was done to ensure that there was consistency across all given variables (Mugenda and Mugenda, 1999). Internal consistency reliability was used to measure the instrument's reliability.

The firms where piloting was done included Muhoroni Sugar Company, West Kenya Sugar Company and Butali Sugar Company. I used Cronbach's alpha test/SPSS which refers to a measure of internal consistency i.e. how closely related a set of items are as a group .It is considered to be a measure of scale reliability .Cronbach's alpha is not a statistical test but a coefficient of reliability (or consistency).It can be written as a function of the number of test items and the average inter-correlation among the items .Below for conceptual purposes, I showed the formula for the standardized Cronbach's alpha.

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N - 1) \cdot \bar{c}}$$

Here:

N=number of items /units /people/respondents

$C=\bar{C}$ is the average inter-item covariance among the items

V =the average variance

One can see from this formula that if you increase the number of items, you increase Cronbach's alpha. Additionally if the average inter-item correlation increases Cronbach's alpha increases as well (holding the number of items constant). (Note that a reliability coefficient of .70 or higher is considered "acceptable" in most social science research situations and that is what was used. All the responses, repetitions, ambiguities and clarity issues on the questionnaire were rectified at the pilot stage by use of construct and content validity.

3.7.1 Reliability Analysis

The researcher sought to establish the reliability of the data for analysis. A pilot study was conducted using 5 out of a sample size of 50 were used in the for reliability test. As such SPSS was used to calculate Chronbach's Alpha and the results were presented in Table 4.1 as shown below.

Table 4.1 Reliability Coefficients

Scale	Chronbach's Alpha	No. of Items
Risk Management	0.812	4
Annual Risk Based Planning	0.779	2
Internal Audit Capacity	0.808	4

Source: Research Data (2017)

According to results in Table 4.1, risk management had the highest reliability ($\alpha=0.812$) while annual risk based planning had the lowest reliability ($\alpha=0.779$) in the listing of the analysis output. Additionally, internal audit capacity had the second highest reliability ($\alpha=0.808$) in the same listing. This was a clear demonstration that the reliability of the variables were above 0.7 which was necessary for the data to be deemed as reliability. The researcher was consequently

convinced that the data was reliable for analysis to ensue. According to Cooper and Schindler (2003), a reliability coefficient of 0.7 is an acceptable reliability for a study.

3.7.2 Model Specification

To test the relationship between the RBIA practices and financial performance, multivariate regression model was used in data analysis, which is a regression technique suited to analyze limited (censored) dependent variables (Kutner, Nachtsheim, Neter, & Li 2014). Prior research has examined the effect RBIA on financial performance using linear regression models (Kasiva, 2012). The relationship equation is represented in the linear equation below.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \epsilon_i$$

Where

β_0 –Is the constant or intercept

β_i ($i=1,2,3$)-Are the regression coefficients or change induced in Y by each X_i

X_1 - risk management

X_2 - annual risk based planning

X_3 - internal audit capacity

Y- financial performance

ϵ - Is the error component.

Return on Assets is an indicator of how profitable a sugar company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA would be displayed as a percentage. Using ROA as a comparative measure is best to compare it against a company's previous ROA numbers or the ROA of a similar company. This indicates how effective RBA practices lead to profitability on the sugar companies in Kenya.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

This chapter presents study findings which have been analyzed, presented, interpreted, and discussed in line with study objectives. The purpose of this study was to examine the effect of risk based financial audit on financial performance in selected public sugar firms in Kenya. The main themes under this section include demographic characteristics of respondents; the effect of risk management on financial performance in public owned sugar firms; the effect of annual risk based planning on financial performance in public owned sugar firms; and the effect of internal audit capacity on financial performance in public owned sugar firms. Descriptive and inferential statistics were used to analyze the data. The researcher administered 45 questionnaires and all were successfully filled and returned, which accordingly represented a 100% response rate. According to Mugenda and Mugenda (2003), a response rate of 70% and over is excellent. The response rate for the current study was therefore considered excellent.

4.1 Demographic Distribution of Respondents

To further ascertain the quality of data the researcher sought to establish the demographic characteristics of respondents. The specific categories which were looked at were: gender of the respondents; level of education; and work experience.

4.1.1 Gender of Respondents

The gender of respondents is important in ascertaining the quality of data obtained from the field. This helps the researcher to put the opinions of every gender into context and to avoid bias. The gender of the respondents was established and was put in figure 4.1 as shown next.

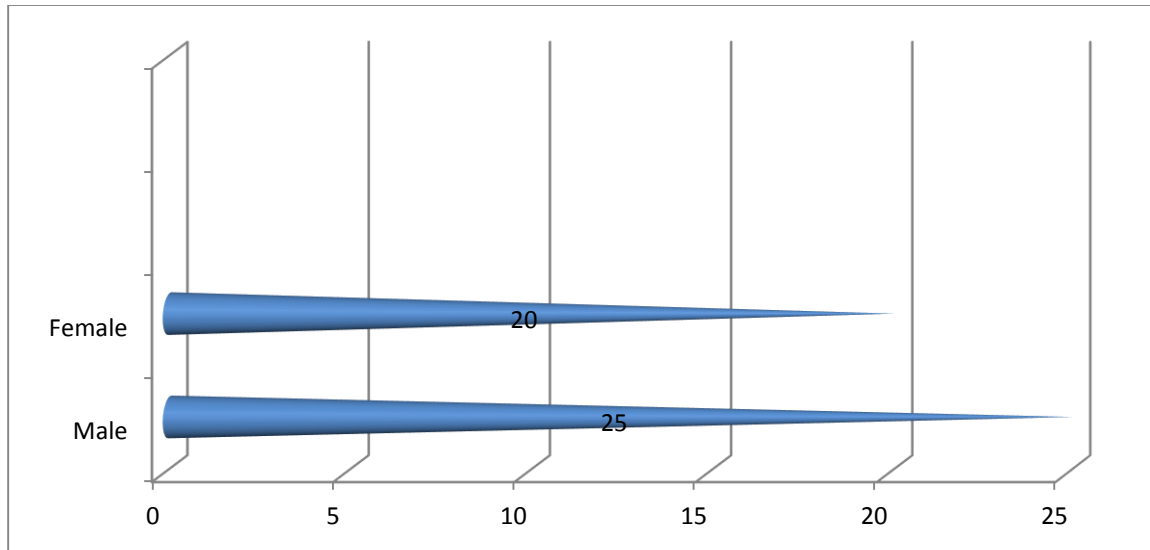


Figure 4.1: Gender of the respondents

Source: Research data (2017)

Figure 4.1 clearly demonstrate the gender distribution of respondents. Male respondents were 25 representing 55.6% of respondents while female respondents were 20 representing 44.4% of the total respondents whose questionnaires were filled and returned successfully. This means that the difference between genders among the respondents was not huge and as such it can be said that the researcher was not bias in terms of gender representation in the study. It concludes that the data was reliable enough for analysis given that there was no significant bias in gender of respondents. This finding compares favorably with the findings of Goodwin-Stewart (2006) who established that the study results were more reliable upon factoring in the level of agreement of both gender.

4.1.2 Level of Education

In order to further ascertain the quality of responses given by the respondents of the study, the researcher sought to establish level of education of respondents. In such regard, the specific levels of education looked at were tertiary, University undergraduate and University post graduate. The results were as shown in figure 4.2 next.

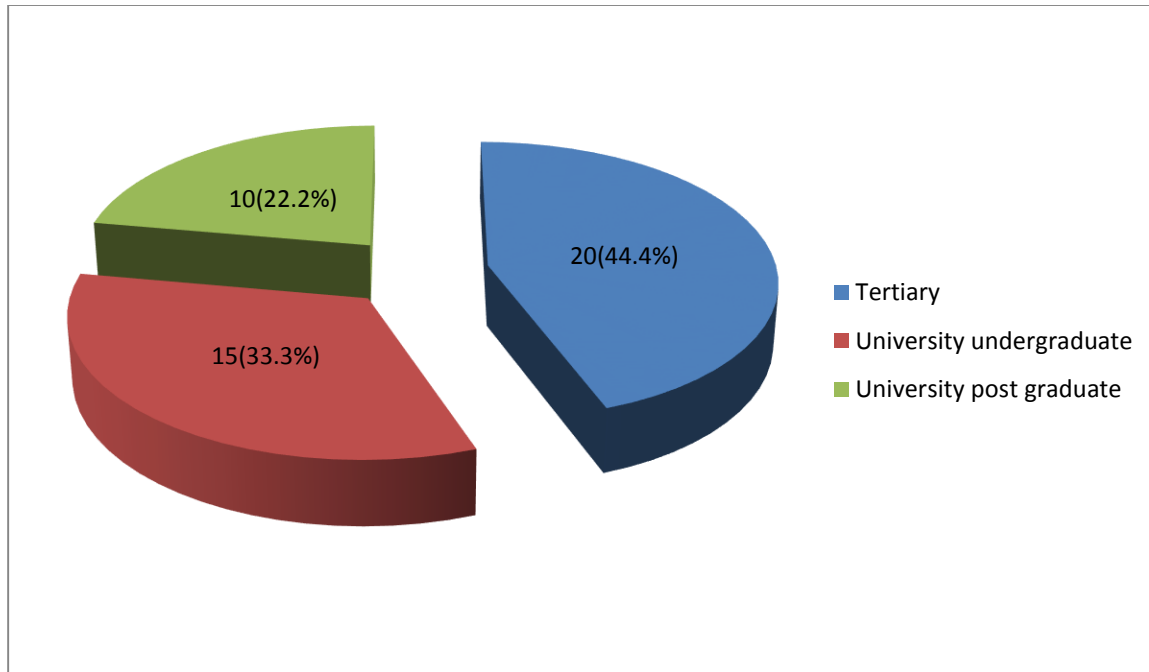


Figure 4.2: Level of Education of Respondents

Source: Research Data (2017)

According to figure 4.2, Majority of respondents 20 (44.4%) had attained tertiary education level while minority 10 (22.2%) had University post graduate education as their highest level of education. On the other hand, 15 respondents representing 33.3% had University undergraduate as their highest level of education. It is therefore clear that all respondents had attained college education. As such educated respondents have the ability to read and internalize the data instrument and hence give quality responses. It concludes that the quality of responses could be relied upon given that they were answered by educated respondents. The finding is consistent with the finding of Ziegenfus (2000) who also established that knowledgeable respondents gave quality responses that were relied upon for reliable generalization.

4.1.3 Work Experience of Respondents

Job experience is related to quality of responses since the more work experience, the more respondent is able to comprehend the subject matter of the job and the more quality of the responses such employee can give. As such, the researcher sought to establish the job experience of the respondents before data analysis of the objectives started. The results were as in figure 4.3 next.

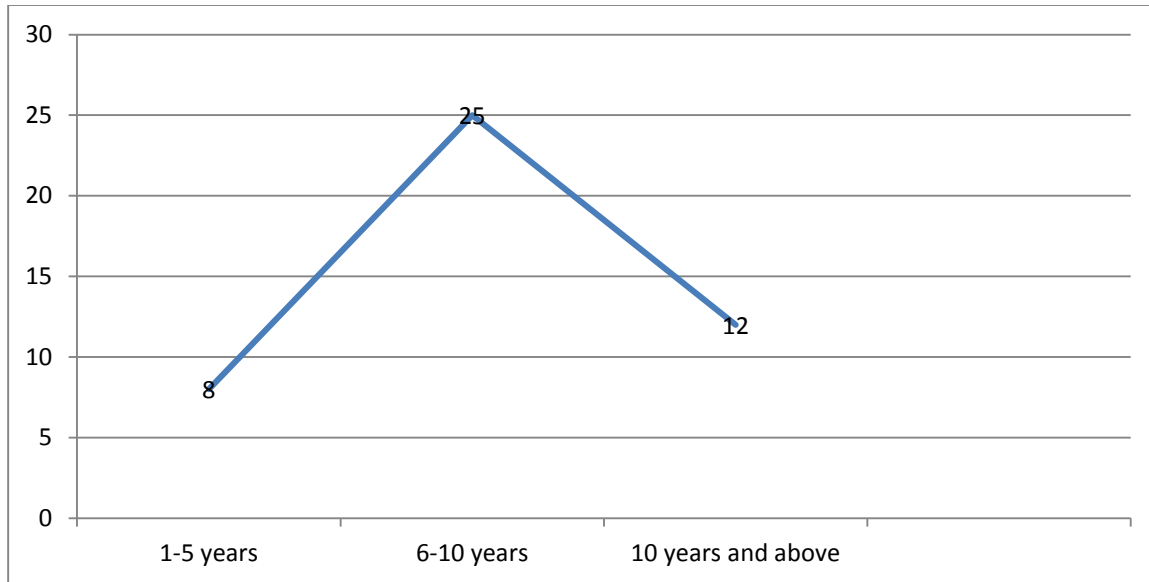


Figure 4.3: Work experience of respondents

Source: Research data (2017)

The results in figure 4.3 reveals that majority of respondents 25 representing 55.6% had between 6 and 10 years work experience in the organization while only 8 representing 17.7% of respondents had between 1 and 5 years work experience. Simultaneously, 12 representing 26.7% of respondents had more than ten years job experience. Such data could not be clearer that more than 80% of respondents had more than 6 years job experience. As such, respondents were experienced enough to understand the subject matter of the study. It concludes that all the respondents had some experience in their jobs and were thus able to give quality responses for reliable generalization. The study finding is supported by the study conducted by Schnatterly (2001) which established that respondents who had more than one year job experience gave quality responses that were relied upon for reliable generalization.

4.2 Descriptive Analysis

This sub-section presents descriptive analysis of objectives. The objectives were analyzed using mean and standard deviation and presented in tables. The focus was particularly on the three objectives of the study namely: risk management on financial performance; annual risk based planning on financial performance; and finally, internal audit capacity on financial performance.

4.2.1 Effect of Risk Management on Financial Performance

Risk management forecasts and evaluates financial risks by identifying systems and procedures to mitigate them. If done well, risk management can help auditors to contribute to organization financial performance by mitigating risks. The researcher therefore sought to establish the effect of risk management on financial performance in public owned sugar firms. The results were displayed on Table 4.2 as shown next.

Table 4.2 Effect of Risk Management on Financial Performance

Statement for response	Mean	Std. Deviation
Auditors' understanding of company's risks	4.12	0.624
Auditors' consideration of risk assessment in detection of errors	4.0	0.555
Management's involvement in risk evaluation process	3.94	0.871
There is possibility of company risk assessment	4.17	0.423
Implementation of necessary changes to mitigate risk	4.22	0.624
Grand Mean	4.09	0.619

Source: Research data (2017)

Key: Strongly agree =5 Agree =4 Neutral = 3 Disagree =2 Strongly disagree =1

According to Table 4.2, auditors' understanding of company risk had a mean of 4.12 and a standard deviation of 0.624 while auditors' consideration of risk assessment in detection of errors had a mean of 4.0 and a standard deviation of 0.555 in the same listing. Simultaneously, management involvement in risk evaluation process had a mean of 3.94 and a standard deviation of 0.871 of the analyzed data. Additionally, possibility of risk assessment in the companies had 4.17 and 0.423 as mean and standard deviation respectively. Finally, implementation of necessary changes for risk management had 4.22 and 0.624 as mean and standard deviation respectively. This implies that the companies have robust risk management in place which

contributes to the mitigation of the companies' financial loss and hence return on assets. It concludes that risk management contributes to financial performance. The study lends credence to the study conducted by Memba (2015) who established that proper risk management strategies contributed to overall organization performance.

4.2.2 Effect of Annual Risk Based Planning on Performance

Annual risk based planning involve all the measures put in place by the organization to mitigate financial risk and hence contribute to financial performance of such organizations. The researcher sought to determine the effects of annual risk based planning on financial performance in selected public owned sugar firms. The results were put in Table 4.3 as shown next.

Table 4.3 Effect of Annual Risk Based Planning on Financial Performance

Statement for response	Mean	Std. Deviation
Preparation of annual risk based plans in consultation with management	3.17	0.612
Carrying out of annual assessment of risks improves financial performance	4.52	0.673
Doing annual staffing plan for finance and audit employees in consultation with human resource department	3.14	0.724
Implementation of strategies agreed upon aimed at reducing risk factors annually after discussion with management	3.70	0.521
Following annual procurement plan in the organization	3.12	0.521
Grand Mean	3.53	0.610

Source: Research data (2017)

Key: Strongly agree =5 Agree =4 Neutral = 3 Disagree =2 Strongly disagree =1

According to the results in Table 4.3, preparation of annual risk based plans in consultation with management had 3.17 and 0.612 as mean and standard deviation respectively. On the other hand, carrying out annual assessment risk had a mean of 4.52 and 0.673 as standard deviation. Additionally, doing annual staffing plan for finance and audit employees in consultation with human resource department had a mean of 3.14 and 0.724 as standard deviation. At the same time, discussing annual risk factors with management and implementing strategies agreed upon had 3.70 and 0.521 as mean and standard deviation respectively. Finally, availability of annual procurement planning that the companies follow had a mean of 3.12 and 0.521 as standard deviation. Such finding mean that annual risk based planning is integral in financial performance of sugar companies. It follows that annual risk based planning contributes favorably to financial performance of the public owned sugar firms. The finding is in consonance with finding of Millichamp (2002) who established that failure to implement financial risk strategies contributed to underwhelming performance of organizations.

4.2.3 Effects of Internal Audit Capacity on Financial Performance

The researcher sought to establish the effects of internal audit capacity on financial performance. The results of the finding were put in Table 4.4 as shown next.

Table 4.4 Effect of Internal audit capacity on Performance

Statement for response	Mean	Std. Deviation
Auditors' technical and professional skills	4.31	0.641
Auditors' readiness to embrace change that improves capacity	4.45	0.751
Auditors' preparation of quality audit reports	3.90	0.612
Availability of criteria to measure internal audit performance	3.21	0.481
Auditors' compliance with accepted audit standards	3.21	0.512
Grand Mean	3.82	0.599

Source: Research data (2017)

Key: Strongly agree =5 Agree =4, Neutral = 3 Disagree =2 Strongly disagree =1

The results in Table 4.4 reveals that possession of technical and professional skills by auditors had mean of 4.31 and 0.641 as standard deviation while readiness to embrace change that improves capacity by auditors had 4.45 and 0.751 as mean and standard deviation respectively. Simultaneously, preparation of quality audit reports by auditors had a mean of 3.90 and a standard deviation of 0.612 in the list of findings. Additionally, availability of criteria to measure internal audit performance had 3.21 and 0.481 as mean and standard deviation respectively. Finally, compliance with accepted audit standards by auditors had 3.21 and 0.512 as mean and standard deviation respectively. This was a clear indication that public owned sugar firms selected for the study had internal audit capacity for risk based financial audit. It concludes that internal audit capacity reduces related financial risks and as such more return on asset hence performance. The findings compare favorably with the findings of Fatemi and Glaum (2000) who established that robust internal audit capacity contributed to performance of German firms.

4.3 Inferential Statistics Analysis

Inferential statistics was also used to analyze data in which case multiple regression was deployed. The model specification of regression analyze used was as follows:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \epsilon_i$$

Where

β_0 –Is the constant or intercept

β_i (i=1,2,3)-Are the regression coefficients or change induced in Y by each X_i

X_1 - risk management

X_2 - annual risk based planning

X_3 - internal audit capacity

Y- financial performance

ϵ - Is the error component.

Relationship between Risk based Financial Audit and Financial Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	1.084	.257		4.215	.000	.574	1.593
Risk Management Mean score	.366	.117	.335	3.120	.002	.134	.598
Internal Audit Capacity	.280	.090	.333	3.117	.002	.102	.458
Annual Risk Based Planning	.108	.087	.120	1.231	.221	-.065	.281

Table 4.5: Regression Coefficients

a. Dependent Variable: financial performance mean score

Source: Research data (2017)

Results in Table 4.6 reveals that the β indicated that risk management ($\beta= 0.366, p<0.05$) had the most influence followed by Internal Audit Capacity which was at ($\beta= 0.280, p<0.05$) and finally, annual risk based planning with the lowest influence in the model at ($\beta=0.108, p>0.05$). The coefficient of the constant term is at 1.084 with t-statistics of 4.215 showing a high level of significance. As such, the regression shows that there was a statistically significance (effect) correlation between risk based internal audit and financial performance. The regression results confirms the alternative hypothesis that there is a positive significant relationship between risk based internal audit practices and financial performance in public owned sugar firms

Table 4.6: Model Summary for Regression

Model	R	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
				R Square Change	F Change	df1	df2	Sig. F Change	
1	.724a	.525	.513	.620283	.525	43.449	3	118	.000

a. Predictors: (Constant), risk management mean score, annual risk based planning mean score, internal audit capacity mean score

b. Dependent Variable: Financial performances mean score

Source: Research data (2017)

Table 4.5 above shows that the model explained 52.5% ($R^2=0.525, p<0.05$) of variation of the public owned sugar firms financial performance. The difference between R square (0.525) and adjusted R square (0.513) is 0.012, which show that the suggested model can be used to generalize quite well as the adjusted R square is too close to R square. This further confirms the goodness of the validity of the model as this shrinkage of 0.012 is well below the recommended shrinkage cut off value of 0.5 according to Field (2005).

The regression model 2 of the form $Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \epsilon_i$ was substituted into:

$$Y = 1.084 + .366X_{1i} + 0.280X_{2i} + .108X_{3i}$$

$$t = (4.215) (3.120) (3.117) (1.231) \quad R^2 = 0.525$$

Table 4.7 Results of Bi-variate Correlation Analysis

	Annual risk			
	Risk Management Mean score	Internal audit capacity mean score	basedCoordinated planningPerformance mean score	
Risk Management Mean score	1			
Internal Audit Capacity	.772**	1		
Annual Risk Based Planning	.716**	.712**	1	
Financial Performance mean score	.678**	.677**	.597**	1

** . Correlation is significant at 0.01 level (2-tailed).

Source: Research data (2017)

According to Table 4.7, strongest correlation was observed between financial performance and risk management at (0.678, $p < 0.01$) and was closely followed by Internal audit capacity at (0.677, $p < 0.01$) and finally the lowest correlations was observed between financial performance and annual risk based planning at (0.597, $p < 0.01$). The results of correlation analysis also confirmed the hypothesis: there is a statistically significant positive relationship between the dependent and the independent variables. Therefore, the null hypothesis that there is no significant positive relationship between risks based internal audit practices and financial performance is rejected. The findings conform to the study findings conducted by Al-Tamim (2002) who established that risk mitigation contributed to organization performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This section presents summary of major findings in line with the objectives of the study. It also presents conclusions in line with the study findings. The section also presents recommendations in accordance with findings and conclusions. The purpose of the study was to examine the effect of risk based internal audit on financial performance.

5.1 Summary of Findings

The study sought investigate the three objectives of the study namely: the effect of risk management on financial performance; the effect of annual based risk based planning on financial performance; and the effect of internal audit capacity on financial performance. In regard to the effect of risk management on financial performance, the study found out that risk management contributes to financial performance with a grand mean of 4.09 and a standard deviation of less than 1 which meant that the respondents were consistent in their responses. Furthermore, regression results showed that risk management had a significant positive correlation (0.678, $p < 0.01$) with financial performance

In regard to annual risk based planning on financial performance, the study established that annual risk based planning contributed to financial performance with a grand mean of 3.53 and a standard deviation of less than 1 which implied that the respondents were consistent in their responses. Additionally, regression results showed that annual risk based planning had a significant positive relationship (0.597, $p < 0.01$) with financial performance

Finally, the researcher also sought to analyze the effect of internal audit capacity on financial performance. The study established that internal audit capacity had a positive influence on financial performance with a grand mean of 3.82. This was also supported by regression results which showed a significant positive influence (0.677, $p < 0.01$) between internal audit capacity and financial performance. As such the null hypothesis that there is no significant positive relationship between risk base financial audit and financial performance was rejected.

5.2 Conclusions

The study concludes that whereas risk based internal audit practices have a significant positive correlation with financial performance, there could be other factors other than risk based internal audit for which the financial performance in public owned sugar firms are dismal. Put differently, public owned sugar firms have financial problems but risk based internal audit practices is not to blame since there is abundance of skilled labor within the companies.

5.3 Recommendations

The study recommends that to ensure effective and efficient financial performance in public owned sugar companies, the management should not only continue with risk based internal audit practices but also look at other financial and non-financial related factors. This is because financial related audit and no-financial related factors must work together to ensure robust financial performance.

5.4 Limitation of the Study

The study was limited to selected public owned sugar companies thereby leaving out other sugar companies in the country, both public and private. Although the finding may have significant implication to other sugar companies, it would have been much better to include all the sugar companies for a broader generalization.

5.5 Suggestion for Further Study

That a single research cannot cover every scope of the subject matter is universally conceded. As such the research recommends that other researchers should explore more about the influence of non-financial related factors and their implication on financial performance in public owned sugar firms.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

SECTION A: DEMOGRAPHIC DISTRIBUTION OF RESPONDENTS (*please tick as appropriate*)

Respondents Profile:

1 Gender

- Male []
- Female []

2 Level of education

- Tertiary []
- University undergraduate []
- University post graduate []
- Others (specify).....

3 Number of Years Worked In Company

- 0- 1 year []
- 1-5 years []
- 6- 10 years []
- Above 10 years []

SECTION B: EFFECT OF RISK MANAGEMENT ON FINANCIAL PERFORMANCE OF PUBLIC OWNED SUGAR FIRMS (*Kindly indicate your opinion on the following questions*)

Strongly Agree (SA), AGREE (A), Neutral (N) Disagree (DA), Strongly Disagree (SD)

4. Indicate you level of agreement on the effect of risk management on financial performance (FP) in regard to the following					
Statement for response	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Auditors understand company risks contribute to financial performance	5	4	3	2	1
Auditors consideration of risk assessment in detection of errors contribute to FP	5	4	3	2	1
Involvement of management in risk evaluation process contribute to FP	5	4	3	2	1
there is possibility of risk assessment in the company which contribute to FP	5	4	3	2	1
Implementation of necessary changes for risk management contribute to FP	5	4	3	2	1

SECTION B: EFFECT OF ANNUAL RISK BASED PLANNING ON FINANCIAL PERFORMANCE OF PUBLIC OWNED SUGAR FIRMS (*Kindly indicate your opinion on the following questions*)

Strongly Agree (**SA**), AGREE (**A**), Neutral (**N**) Disagree (**DA**), Strongly Disagree (**SD**)

5. Indicate you level of agreement on the effect of annual risk based planning on financial performance (FP) in regard to the following					
Statement for response	Strongly Agree	Agree	Neutra l	Disagr ee	Strongly disagree
Preparation of annual risk based plans in consultation with management improves FP	5	4	3	2	1
Carrying out of annual assessment of risks improves financial performance	5	4	3	2	1
Doing annual staffing plan for finance and audit employees in consultation with human resource department	5	4	3	2	1
Implementation of strategies agreed upon aimed at reducing risk factors annually after discussion with management	5	4	3	2	1
Following annual procurement plan in the organization improves FP	5	4	3	2	1

SECTION B: EFFECT OF INNTERNAL AUDIT CAPACITY ON FINANCIAL PERFORMANCE OF PUBLIC OWNED SUGAR FIRMS (*Kindly indicate your opinion on the following questions*)

Strongly Agree (**SA**), AGREE (**A**), Neutral (**N**) Disagree (**DA**), Strongly Disagree (**SD**)

4. Indicate you level of agreement on internal audit capacity on financial performance (FP) in
--

regard to the following					
Statement for response	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Auditors understand company risks contribute to financial performance	5	4	3	2	1
Auditors consideration of risk assessment in detection of errors contribute to FP	5	4	3	2	1
Involvement of management in risk evaluation process contribute to FP	5	4	3	2	1
there is possibility of risk assessment in the company which contribute to FP	5	4	3	2	1
Implementation of necessary changes for risk management contribute to FP	5	4	3	2	1

END

THANK YOU FOR YOUR TIME

APPENDIX II

OTHER ATTACHMENTS

Government owned sugar manufacturers

1. Mumias Sugar Company
2. Nzoia Sugar Company
3. South Nyanza Sugar Company
4. Muhoroni Sugar Company
5. Chemelil Sugar Company

Private Sugar Manufacturers

6. West Kenya Sugar Company
7. Kibos Sugar and Allied Industries Limited
8. Butali Sugar Mills
9. Transmara Sugar Company
10. Kwale International Sugar Company Limited
11. Soin Sugar Firm
12. Sukari Industries Limited
13. Kisii Sugar Company
14. Obtain Sugar Millers

Listed sugar companies in Kenya

Mumias Sugar Company

Source: Kenya Sugar Board (2012)