ANTECEDENTS OF INTERNAL AUDIT EFFECTIVENESS AMONG DEPOSIT TAKING SACCOS IN WESTERN KENYA

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DECLARATION AND CERTIFICATION

DECLARATION

I declare that this research project is my original work prepared with no other than the indicated sources and support and has not been presented elsewhere for a degree or any other award.

Signature... Date...

Achola John

MBA/G/01-70655/2021

CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance of Masinde Muliro University of Science and Technology of a research project entitled "*Antecedents Of Internal Audit Effectiveness Among Deposit Taking Saccos In Western Kenya*."

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DEDICATION

This thesis is dedicated to my family that has stood by me at all academic steps that has enabled this success.

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First of all, I wish to acknowledge God the Almighty for giving me life, strength and opportunity to carry out this research.

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ABSTRACT

The main objective of the study was to examine antecedents of internal audit effectiveness among Deposit Taking Saccos in Western Kenya. The specific objectives were to determine the influence of management support, internal audit independence, Internal audit competence and Internal audit risk management on internal audit effectiveness of Saccos in Western Kenya. The study was founded on three theories, namely, Resource Based View (RBV), Contingency Theory and The Agency Theory. The study was conducted in Western Region, Kenya region comprising of counties of Kakamega, Vihiga, Busia and Bungoma. Descriptive survey research design was applied. The study targeted 129 internal auditors, accountants, finance officers and chief executive officers in all the 15 DT-SACCOS. Stratified random sampling was used to select 97 respondents from a target of 129. Self-administered questionnaire structured on 5-point Likert type scale will be used. Pilot test was done in 12 SACCOs which were not used in the final study. To measure the reliability, Cronbach Alpha technique was employed. The study assessed two types of validity namely; construct and content validity. Data was analyzed using both descriptive and inferential statistics, thus for descriptive mean, standard deviation and percentages were used. The data was tested for normality, multi-collinearity, and autocorrelation and homoscedastic test before regression. For inferential correlation analysis, multiple and step wise regression was used. Data was analyzed using the SPSS 26 software. The findings of the study will be of importance to the managers, Sacco's members, and government and potential investors. All ethical considerations will be observed.

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ABBREVIATIONS AND ACRONYMS

CEO	- Chief Executive Officer
GOK	- Government of Kenya
IIA	- Institute of Internal Auditors
KNAO	- Kenya National Audit Office
OECD	- Organization for Economic Co-operation and Development
PPF	- Professional Practice Framework
RMD	- Internal audit independence Department
SAS	- Statements of Auditing Standards
SPSS	- Statistical Package for Social Science
VIF	– Variance Inflation Factor

OPERATIONAL DEFINITION OF TERMS

Antecedents Refer to the factors or conditions that precede or influence the effectiveness of the internal audit function within these financial institutions. These antecedents play a crucial role in shaping the environment in which internal audit operates and can significantly impact the outcomes and contributions of the internal audit activities.

Audit Effectiveness Refers to the degree to which the internal audit function successfully fulfills its objectives and contributes to the overall governance, risk management, and control processes within the financial institution. It involves the efficient and impactful execution of internal audit activities, ensuring that the function adds value to the organization by providing credible and relevant insights, recommendations, and assurance.

Internal audit competence Refers to the collective knowledge, skills, and capabilities possessed by the internal audit function among deposit taking Saccos. It encompasses the expertise required to effectively plan, execute, and report on audit engagements, ensuring that internal auditors have the necessary qualifications and proficiency to address the complexities and challenges within the deposit taking Saccos in Kenya

Internal audit independence	Refers to the autonomy and freedom of the internal audit function among deposit taking Saccos in Kenya to carry out its responsibilities objectively and without undue influence from management or other parties. It involves the ability of internal auditors to conduct their work with impartiality, ensuring that their assessments and recommendations are based on unbiased evaluations of risks, controls, and financial processes within the o deposit taking Saccos in Kenya.
Internal audit risk management	Refers to the systematic processes and practices employed by the internal audit function among deposit taking Saccos to identify, assess, and respond to risks within the financial institution. It involves integrating risk management principles into the internal audit process, ensuring that internal auditors contribute to the overall risk management framework and assist in safeguarding the institution against potential threats and uncertainties.
Management support	Refers to the extent to which the leadership and management of these SACCOS actively endorse, facilitate, and participate in internal audit processes to enhance overall organizational performance and governance.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The modern business landscape is characterized by complexity, rapid changes, and an ever-growing emphasis on transparency and accountability. In this dynamic environment, organizations face numerous challenges, ranging from operational risks to compliance issues. To navigate these challenges successfully, businesses must have robust internal control mechanisms in place, and at the heart of these mechanisms lies the internal audit function (Nugroho, Uzliawati & Taqi, 2021). The effectiveness of the internal audit function is not merely a matter of compliance; it is a strategic necessity that contributes significantly to organizational success. The internal audit function plays a pivotal role in evaluating and improving the effectiveness of an organization's risk management, control, and governance processes. Unlike external audits, which focus on Internal audit independence, internal audits are designed to provide assurance and insights across a broader spectrum of an organization's operations. This includes assessing the efficiency of internal processes, identifying areas of potential risk, ensuring compliance with policies and regulations, and evaluating the reliability of financial information (Anh, Thi, Quang & Thi, 2020).

Effective internal audit refers to a contemporary concern for every organization because resources are scarce. The prudent use of said resources is therefore vital. Mpakaniye

(2022) observes that internal audit is regarded as a function of the financial compliance, as well as being a tool that assists in the accounting departments with a focus on safeguarding organizations' assets. Besides, Coetzee and Erasmus (2018) notes that internal audit by understanding its position, positions, duties, and contributions to major internal and external audits, it is one of the most critical aspects of the businesses. Internal auditing has expanded in recent years to include more significant organizational tasks like as risk management and participation in internal control. There is a lot of concern among company executives about how successful the internal audit departments are in strengthening governance processes, according to Afzal (2023).

In the United States, the internal audit function is increasingly recognized as an essential component of corporate governance. The Sarbanes-Oxley Act of 2002 (SOX) and other regulations have heightened the importance of internal audit, and organizations are investing more resources in this function. The dynamic nature of the U.S. business environment necessitates a comprehensive and agile approach to risk management, and internal audit functions are instrumental in ensuring that organizations can adapt to emerging risks effectively. Internal auditors in the United States are often involved in assessing and enhancing the effectiveness of internal controls, risk management processes, and ethical practices within organizations. By providing independent and objective evaluations, internal audit functions contribute to the establishment of a robust corporate governance framework, fostering trust among stakeholders (Al-Kake & Ahmed, 2019).

The effectiveness of internal audit functions in the United Kingdom is a result of a comprehensive interplay of factors, including a robust regulatory framework, emphasis on corporate governance, proactive risk management, independence, technological integration, talent development, strategic alignment, and effective communication. These factors, exemplified by real-world instances, highlight the critical role of internal audit in ensuring accountability, mitigating risks, and contributing to the overall success and sustainability of organizations in the UK. Tesco, a leading UK retailer, faced an accounting scandal in 2014. The subsequent investigation revealed weaknesses in internal controls and governance. Tesco restructured its internal audit function, emphasizing independence and objectivity to prevent similar issues in the future (Mohapatra, 2021).

In the Malaysian context, despite the fact that internal auditing has advanced rapidly in recent years, events in the recent years have revealed that in Malaysia the internal audit is still plagued by issues that jeopardize its effectiveness. Internal audit independence positively affects internal audit effectiveness as revealed by Mahmoud and Sulaiman (2018). However, the subjectivity of audit does not show up in audit effectiveness. Management support for recruiting and training skilled and trained employees is described as having a greater relationship with internal audit effectiveness. Senior management has also had a direct influence on how well the audit is conducted within the organization (Lee, 2019).

Internal audit and effectiveness have also been a source of concern on the African continent. Resource constraints in the internal audit, lack of proper quality assurance, improvement programs, as well as lack of proper external quality assurance in an organization, according to Eshetu (2023) remain important for the organizations. The participants in their research had mixed feelings about the efficacy of internal audit roles. Internal auditors lack technical credentials and, as a result, have a poor status. Internal auditors face many problems that management is unaware of. In South Africa, while there have been efforts to align internal audit practices with international standards, there are challenges that hinder their effectiveness. The collapse of Steinhoff International in 2017 was partly attributed to the failure of its internal audit function to detect and prevent accounting irregularities. African Bank's near-collapse in 2014 was linked to the inadequacy of its internal audit function in identifying and addressing credit risk management failures (Dzomira, 2020).

With respect to internal auditing in Ghana SOEs, Alhassan, Erasmus, and Fred (2018) looked at respondents' perceptions of the impact of factors such as competence, scale, relationships, required management support for internal auditing functions, and the independent internal auditors' efficacy. Internal audit effectiveness is most closely associated with management support, according to the study's results. Internal audit success depends on a variety of variables, such as the size of the unit, the individual competence of auditors, the independence of the audit team, as well as the working relationship between external and internal auditors.

The practice of internal audit has undergone significant developments in response to global standards and the need for stronger corporate governance. In Uganda, the internal audit function has evolved alongside international best practices, aligning itself with frameworks such as the International Standards for the Professional Practice of Internal Auditing (IIA Standards). However, instances in Uganda have revealed inadequacies in this regard. For example, a major bank in Uganda faced severe regulatory penalties due to non-compliance with Know Your Customer (KYC) regulations. The internal audit function failed to detect and address the deficiencies in the bank's customer identification procedures, leading to reputational damage and financial losses. The challenge lies in the complexity and frequent changes in regulatory frameworks. The internal audit functions in some financial institutions struggle to keep pace with these changes, resulting in non-compliance issues.

In Kenya, a lot of concern has been expressed about internal auditing and effectiveness. There was a significant increase in the expertise of internal audit groups in Kenyan government ministries due to internal audit groups. Internal audit performance in Kenyan government departments has been significantly impacted (Maina, 2018). He carried out research on the impact of management assistance on audit quality, looked at the impact of manager autonomy on audit quality, and assessed how audit committees impacted organizational effectiveness and county performance. However, the research determined that the most important variable was staff capacity and leadership, which was followed by supportive management.

The collapse of Imperial Bank Limited in 2015 serves as a glaring example of the ineffectiveness of internal audit functions in the Kenyan financial sector. The bank's internal auditors failed to detect fraudulent activities that led to a massive financial scandal. The inadequate risk assessment and lack of independence of the internal audit function were evident in this case, highlighting systemic issues within the sector. In 2016, Chase Bank Kenya faced a crisis that resulted in its closure for a period. The failure of the internal audit function to identify and address liquidity and solvency issues played a significant role in the bank's downfall. The regulatory authorities later criticized the bank's internal controls, shedding light on the shortcomings of internal audit processes within the institution (Wairange, 2019; Matheka, 2021; Omundi, 2023).

Savings and credit co-operative societies (Saccos) have lost Sh118.1 million in the past two years to fraud, mainly driven by staff, pointing to the increased need for reinforced systems and insurance covers to protect members' billions of shillings. Sacco Societies Regulatory Authority (Sasra), which oversees 359 Saccos, has for the first time disclosed the fraud in the latest supervision report that sheds light on the operations of these entities that held Sh620.45 billion deposits at the end of 2022. The loss was reported to SASRA's investigative unit, Sacco Societies Fraud Investigations Unit, in addition to a Sh114.4 million that is also suspected to have been lost in the same period. The fraudsters are capitalizing on weak internal controls and mobile money services such as M-Pesa to carry out theft in a sector that is still waiting for the implementation of an insurance scheme to protect depositors from such losses. The regulator notes that the cases show that the main perpetrators of the fraudulent activities are internal Sacco officials (SASRA, 2023).

The Ukulima Sacco fraud scandal in 2019 is a glaring example of the ineffectiveness of internal audit functions in Kenyan DTS. The Sacco suffered significant financial losses due to fraudulent activities that went undetected by its internal audit function. The lack of independence and autonomy of the internal audit team, coupled with inadequate risk assessment, allowed the fraud to persist for an extended period, resulting in severe financial repercussions for the Sacco and its members. In another case, Tower Sacco faced challenges in its internal audit function when irregularities in the loan portfolio were discovered. The internal audit process failed to identify and address these irregularities promptly, leading to concerns about the effectiveness of the Sacco's risk management practices. This example underscores the importance of a robust internal audit function in ensuring the integrity of loan portfolios and protecting the financial well-being of Sacco members (SASRA, 2023).

Previous studies have investigated the factors with an influence on internal audit effectiveness. Firstly, internal audit effectiveness is based on the internal audit concept of IIA (Huy & Hung, 2022; Mwanza, 2022). The important objective of an internal audit is to provide an independent and objective auditing and advisory function, designed to create added value and complete organizational activities. An internal audit helps an organization to achieve its goals by adopting a systematic approach to assess and improve the effectiveness of risk management processes, control processes, and corporate governance.

It is crucial for businesses' governance, risk management, and many other controls to be strengthened via internal auditing (Faiteh & Aasri, 2022). Effective Internal Audit is based on risk management that helps in identification of risks, designing of control and governance process and to achieve this, independence, management support and experienced personnel are key (Choudhary & Trivedi, 2023). Effective internal audit may thus assist in the identification and prevention of fraud and, as a result, minimize the negative effects of public servant misappropriation and waste (Jeppesen, 2019).

Kukuiah (2019) examined factors that influence internal audit effectiveness in the Ghanaian Public Sector. The study found out that, independence of internal auditors, competence of internal auditors and control environment have significant positive influence on internal audit effectiveness in the public sector in the Central Region. However, management support does not have significant positive influence on internal audit effectiveness.

Ta and Doan (2022) investigated four factors affecting internal audit effectiveness in Vietnam, namely, independence of internal audit, the competence of internal auditors, management support for internal audit, and quality of internal audit work. The results revealed two factors (independence of internal auditor and management support for internal audit) with a positive influence on internal audit effectiveness, whereas the competence of internal auditors and quality of internal audit work did not affect internal audit effectiveness. Solomon (2019) examined the factors affecting internal audit effectiveness in the Ethiopian private commercial banks. The study found that there existed significant positive relationships between the factors (Independence and objectivity of internal auditors, Competency of internal audit staffs, Existence of audit committees) and internal audit effectiveness. However, Organizational Setting and Management support have no significant effect on internal audit effectiveness.

Kirui (2022) examined the effect of audit committee characteristics on audit effectiveness in the county government of Kericho, Kenya. The study suggested that similar study can carried on the relationship between audit characteristics and audit Effectiveness on other sectors of economy such as financial sector. Gitonga (2021) examined the effect of internal audit characteristics on audit effectiveness in semi-autonomous government agencies of Kenya. Because this research concentrated on the impact of audit independence and audit experience, further studies are suggested to identify other variables that influence the efficacy of government agencies' internal audits.

1.2. Statement of the Problem

The efficacy of internal audit is critical for every organization's success since it aids in improving performance, maximizing resources, and preventing the loss of those resources (Gitonga, 2021). The recent collapse of SACCOs in Nairobi County is alarming (Gatimu, 2022). This is majorly attributed to fraud, mismanagement and illegal activities that have drawn attention to issues of audit quality from public bodies concerned with regulations (Serem, Fwamba, & Benedict, 2020). Locally, scandals caused by financial audits have been encountered in SACCOs Subsector. It was established that there was a revocation of 7 operating licenses of SACCOS by SASRA during their operating period 2014 to 2017 (Yegon, 2021). The regulatory body also rejected annually generated financial reports of SACCOs such as Military, Idongali, Ainabkoi and Moi University with sole reason of failure attributed to compliance with International Financial Regulation Standards (IFRS).

As much as there appears better improvement in financial performance of deposit taking SACCOs in Nairobi County, the research about effectiveness of internal audit is considered scarce subject of discussion. Most of the studies done have focused on how internal audit affects performance of SACCOs. There are occasions of mixed outcome from various empirical journals addressing auditing in organizations and few or no substantial research accessed to show evidence that are conclusive enough to affirm the position of internal audits.

Saputra, Winarningsih and Puspitasari (2020) examined and measure how much influence the factors that affect the effectiveness of internal audit in the public sector in Indonesia. However, top management support directly does not have a significant effect on the effectiveness of internal audit. Setyaningrum and Kuntadi (2019) examined the effect of competence and independence on internal audit effectiveness. Independence in this study does not affect the effectiveness of the internal audit, because independence is fact is main requirement when conducting audit. Similarly. Abdullah and Mustafa

(2020) found insignificant relationship between independence of the internal audit and internal audit effectiveness.

Nyaga, Kiragu and Riro (2018) examined the influence of internal audit independence on internal audit effectiveness in the Kirinyaga county government, Kenya. The researcher suggests further studies focusing on other factors that affect internal audit effectiveness in the County to be carried out. Therefore, the study will seek to examine influence of management support, internal audit independent, internal audit competence, and internal audit risk management on internal audit effectiveness of Saccos in Western Kenya.

1.3 Objectives of the Study

The main objective of the study will be to examine antecedents of internal audit effectiveness among Deposit Taking Saccos in Western Kenya.

This study will be guided by the following objectives: -

i. To determine the influence of management support on internal audit effectiveness of Saccos in Western Kenya

ii. To analyze the influence of internal audit independence on internal audit effectiveness of Saccos in Western Kenya

iii. To analyze the influence of Internal audit competence on internal audit effectiveness of Saccos in Western Kenya

iv. To analyze the influence of Internal audit risk management on internal audit effectiveness of Saccos in Western Kenya

1.4 Research Hypotheses

i. $H_{01:}$ Management support has no significant influence on internal audit effectiveness of Saccos in Western Kenya.

ii. $H_{02:}$ Internal audit independence has no significant influence on internal audit effectiveness of Saccos in Western Kenya

iii. $H_{03:}$ Internal audit competence has no significant influence on internal audit effectiveness of Saccos in Western Kenya

iv. $H_{03:}$ Internal audit risk management has no significant influence on internal audit effectiveness of Saccos in Western Kenya

1.5 Significance of the Study

This study would be useful to the following stakeholders:

1.5.1 Policy Markers

The parties making polices have the chance to benefit from this analysis considering that once recommendations are provided at the end of this exercise for implementation purposes, it would help in facilitating proper ways through which management may make proper choice regarding desirable qualities among the auditors. Because of this, it would be advantageous for organizations particularly the Sacco to promote accountability needed on financial audited reports.

The research work would be considered important to the National government especially State Department for Co-operatives and SASRA. The goal of the Authority is to safeguard its citizens from extreme exploitation and bad practices from people entrusted with coming up with financial reports. In most instances, the authority is compelled to intervene sometimes on purchaser rights and protection. From the research the authority is expected to identify the successful enforcement of regulations in audit and also establish deficiencies in the external auditing systems so that they can develop solutions directed towards improved level of effective audits in SACCOS to fulfill the public expectations.

1.5.2 Other Financial Institutions

This analysis would be of great importance to the directors of other financial institutions. Therefore, through consolidating numerous opinion and contribution from the respondents, their contribution would help provide knowledge on proper ways they believe auditors could be selected when they are expected to provide significant audit reports.

1.5.3 Sacco Management

The findings would assist managers and accountants in formulating accounting procedures that are accurate and consistent, with the end goal being their acceptance by the industry. The study would provide critical information that would be going to help management to appreciate the challenges faced by internal audit function to effectively play its role in the organization and help solve them. This would thus enable the management to be better stewards in safeguarding not only the shareholders’ interests but also protecting deposits made by customers.

1.5.4 Investors

Investors have faith on the audited financial statements. The research would help the investors to assess the strength of financial reports from SACCOS for the purpose of making reasoned decision in investments. The findings would also be of value also to the shareholders as it would enable them to know whether their investment is properly safeguarded and enable them seek further ways of safeguarding their investments

1.5.5 Academician and Scholars

The study would focus on important literature that would address components associated with audit effectiveness. As a result, other scholars stand an opportunity to access wide literature coverage on the subject of audit effectiveness. For that case, aspects that have not been addressed in this exercise would give other researchers a chance to continue undertaking additional research over the current study being undertaken.

1.6 Scope of the Study

This study was confined to 15 Deposit taking Saccos in Western Kenya since these Saccos are regulated by SASRA. They include Invest and Grow Sacco, Wevasity Sacco, Afya Sacco, Police Sacco, Ukulima, Mwalimu National, Kussco sacco, Mudete Sacco in Kakamega County; Vihiga County Farmers Sacc and Vihiga County Sacco in Vihiga County; Faridi Sacco and Elimu Sacco in Busia County; Ng'arisha Sacco, Metropolitant Sacco, Stawisha Sacco in Bungoma County. It covered the antecedents of internal audit effectiveness. Internal audit effectiveness was the dependent variable. On the other hand, the antecedents which include management support, internal audit independence, internal audit competence and internal audit risk management were the independent variables. The study was conducted between December 2023 and December 2024.

1.7 Limitation of the Study

The researcher noted lack of cooperation from the respondents were not willing to spend time answering questionnaires. Some respondents may have not appreciated the importance or significance of the study and hence could ignore the questionnaires altogether. To control such possibilities the researcher took time explaining to the respondents on the importance of the research, design an anonymous questionnaire and gave assurance that information would only be meant for study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter summarizes the relevant theory, research, conceptual framework, previous investigations, and literature review, as well as identifies the gaps in our understanding.

2.2 Theoretical Review

2.2.1 Resource Based View Theory

The Resource Based View (RBV) theory can be traced back to the work of Birger Wernerfelt who developed an article titled “A Resource-Based View of the Firm” in 1984 (Dionysus & Arifin, 2020). However, elements of the RBV theory can be found in earlier research work by authors such as Coase in 1937, Selznick in 1957, Penrose in 1959, Stigler in 1961, Chandler in 1962 and Williamson in 1975 where emphasis was put on the importance of firm resources and its implications for firm performance (Chatterjee, Chaudhuri, Vrontis & Thrassou, 2023). The RBV theory argues that organizations should not try to achieve strategic fit with the external environment but aim to maximize their internal resources to create and dominate future opportunities (Lubis, 2022). The theory’s central proposition is that if a firm is to achieve a state of sustained competitive advantage, it must acquire and control valuable, rare, inimitable and non-substitutable resources and capabilities (Nagano, 2019). Within this theory people are viewed as an investment and not a cost and learning, knowledge sharing, innovation and experimentation are encouraged with employees being involved in decision making (Miller, 2019).

Resource-based theory (RBT) can be applied to internal audit effectiveness in several ways. RBT is a management theory that suggests that firms can achieve competitive advantage by developing and leveraging their unique resources and capabilities. In the context of internal audit, RBT suggests that internal audit departments can enhance their effectiveness by identifying and developing their own unique resources and capabilities (Freeman, Dmytriyev & Phillips, 2021). Internal audit departments have a number of unique resources that can be valuable to the organization, such as their expertise in risk assessment, control evaluation, and governance. By identifying and developing these resources, internal audit can enhance its ability to add value to the organization. Internal audit has a number of unique capabilities that can be used to improve organizational performance, such as its ability to identify and assess risks, evaluate the effectiveness of controls, and provide independent assurance to the audit committee and management. By leveraging these capabilities, internal audit can help the organization to achieve its objectives (Zahra, 2021).

Critiques of this theory argue that the effectiveness of the resource-based approach is inextricably linked to the external context of the firm and that the resource-based approach provides more value when the external environment is less predictable (Gibson, Gibson & Webster, 2021). Other critiques have argued that the theory’s valuable, rare, inimitable, and non-substitutable proposition is neither necessary nor sufficient for a firm's sustained competitive advantage (Beamish & Chakravarty, 2021). In light of internal audit function, this theory was relevant to the current study given that a competent internal audit workforce can be a valuable resource to an organization's performance particularly in areas of business risk management, regulatory compliance and general governance.

2.2.2 Contingency Theory

The theory models the behavior of an organization. The theory was established by Max Weber and Taylor in 1958 (Shonhadji & Maulidi, 2022). It explains how factor situational like culture, technology and the environment in which an organization operates especially external one affects the plan and functioning of a firm. The main supposition of this theory is that, there is no single one type structure of an organization which is correspondingly appropriate to each and every organization. Instead, effectiveness of a firm depends on how fit an organization matches the technology type, volatility of environmental, the organizational size, organizational structure features and information system (Kiplangat & Theuri, 2021).

This theory is applied to demonstrate the connection in between the setting and the internal audit structure as well as organizational performance, and is generally linked to the reliability of Internal audit independence of an entity. The need for internal control measures varies and it is according to the organization's characteristics. This concurs with the contingency theory that claims that every firm selects control system which is suitable and appropriate through the consideration of contingent features. A study conducted by Ahmed and Muhammed (2018) showed that internal auditors who are dedicated to internal audit function are more likely to ensure that there is effectiveness in internal control and that the organization receives benefit from the same effectiveness which is earned the efficiency of the internal control of an entity. They identified technology, strategy and national culture, structure, size and control environment as some of the factors which affect management control systems of an organization.

The scopes of design and control incorporate activities structures and authority structure such as rules and regulation and procedures determining the power of an individual. In this model of contingency, authority which is decentralized becomes ultimately suitable where uncertain environment exists. On the other hand, in an authority that is centralized, it is more suitable if an environment is certain (Mustapha & Dahiru, 2022). The knowledge of this theory is that the choice and the application of risk-based auditing in an organization are dependent on a number of factors which are both internal and external. However, it is clear that, the determining aspects which include external environment, strategy, structure, technology, firm size, and culture affects the control system of the organization (Rikhardsson, Rohde, Christensen & Batt, 2021).

Contingency theory is a useful framework to understand how various factors (contingencies) influence organizational effectiveness, including the effectiveness of internal audit functions. According to contingency theory, the size and complexity of an organization can impact the effectiveness of internal audit functions (Rikhardsson, *et al*, 2021). The level of technological integration and information systems within SACCOS can influence how internal audits are conducted and monitored. SACCOS operating in stringent regulatory environments may need stronger internal controls and audit procedures to meet regulatory expectations and safeguard stakeholders' interests (Nagano, 2019). Effective risk management frameworks provide clear guidance for internal auditors to prioritize audits, assess risks, and recommend mitigating actions to protect organizational assets and stakeholders.

When applied to internal audit function, the contingency theory holds the view that the design and use of internal control system is contingent upon the context of the organizational setting in which the controls operate (Shonhadji & Maulidi, 2022). This theory thus advances the notion that the top management support function can vary considerably, depending on the area of the organization under audit, the identified scope of the audit and the organization’s business/operation model. Thus, auditors must carefully manage their inspections and take various variables into account to get the job done (Shohihah, Djamhuri & Purwanti, 2018). This theory will therefore relevant to the current study given that it recognizes that the effective operation of the internal audit function is dependent on contingent factors including the competence and independence of the internal audit team as well as internal audit independence.

2.2.3 The Agency Theory

Agency theory was first written by Alchian and Demsetz (1972) and further developed by Jensen and Meckling (1976) as cited by Al-Kake and Ahmed (2019). Agency theory addresses the relationship where in a contract one or more persons (the principal) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent (Aikins, Mensah & Kumi-Kyereme, 2022). Agency theory is concerned with resolving problems that can exist in agency relationships; that is, between principals such as shareholders and agents of the principals for example, company executives. Agency theory addresses the problems that arise when the desires or goals of the principal and agent are in conflict, and the principal is unable to verify what the agent is actually doing and the problems that arise when the principal and agent have different attitudes towards risk (Raimo, Vitolla, Marrone & Rubino, 2021).

Przybylska and Kańduła (2019) considered internal auditors as agents and monitors for a variety of internal audit users that include the board, audit committee, and senior management. Agency problems could occur when the board or its audit committee is inefficient, and hence, the senior management is likely to be a powerful influence over the internal audit. Internal auditors often are employed by senior management, but at the same time, they are also agents of the board and audit committee who trust in the internal auditors' ability to evaluate senior management's works (Suleiman et al., 2021). However, internal auditors may have varying motives to act against the board of directors' interests and its audit committee and these motives include financial rewards from managers, personal relationships with them, and the power of senior management in shaping the future position of internal auditors and their salaries (Khalid, Hussin, Sarea & Shaarani, 2021). In such a work environment, internal auditors as agents may have an incentive to be biased in information flows, which leads to new concerns of the board and audit committee about their trust in the internal auditors' objectivity, and preventing such threats of objectivity becomes necessary for the board and its audit committee.

Internal auditors as agents must perform audit processes at the professional level requiring education and professional certifications, experience, and other competencies needed to perform their responsibilities perfectly (Singh, Ravindran, Ganesan, Abbasi & Haron, 2021). Having internal auditors with such requirements and the existence of training programs for internal auditors would increase the confidence level of the board and audit committee in the internal auditor competence (Huong, Thai & Binh, 2022). At the same time, internal auditors, by proving their duties at the professional level, can refute charges of neglecting their duties.

The internal audit department works are achieved under the supervision of the chief audit executive who is the main responsible individual for putting the internal audit plan, reporting internal audit findings, and following up on internal audit recommendations (Fossung, Mukah, Berthelo & Nsai, 2022). The organization members are required to evaluate the internal control system and to achieve this requirement they depend on the internal audit department (Jachi & Yona, 2019). During this evaluation, internal auditors should collect sufficient and reliable evidence that will support their assessment of the internal control system (Madawaki, Ahmi & Ahmad, 2022). The existence of such evidence will increase the confidence level of organization members on the work performed by the internal audit. Hence, internal audit department performance is a crucial requirement for organization members to consider internal auditors as agents.

Internal auditors, as agents of the organization members, need their support. The existence of an effective audit committee in the organization enhances internal audit independence and also, reduces senior management interferences either in internal audit scope or its performance. For example, the problem related to the ability of senior management's influence the future employment and salaries of internal auditors will be resolved by having an audit committee as the absolute authority for the appointment and removal of the chief audit executive (Al Matari & Mgammal, 2019). Another clear example of organization members' support occurs when senior management asks all departments to accomplish the internal audit recommendations.

2.3 Conceptual Review

2.3.1 Management support

Management support is a critical factor in determining the effectiveness of an internal audit function. It encompasses the actions and attitudes of senior management that foster and enable the internal audit department to carry out its responsibilities effectively. Strong management support is essential for the internal audit function to obtain the resources necessary to conduct audits effectively, gain access to the information and records needed to conduct audits, be able to communicate audit findings and recommendations to management and other stakeholders, implement audit recommendations and achieve improvements in the organization (Poltak, Sudarma & Purwanti, 2019).

ISPPIA highlights the importance of the relationship between internal audit and senior management and how management can support internal audit. The management support is almost crucial to the operation and internal audit; because all other determinants of IA effectiveness derive from the support of top management, given that hiring proficient IA staff, developing career channels for IA staff, and providing organizational independence for IA work are the results of decisions made by top management (Gamayuni, 2018). The commitment by management to use audit recommendations and its support in strengthening internal audit is key to internal audit effectiveness (Eshetu, 2023)

Management support and commitment have also been evidenced to impact IA effectiveness. In fact, successful IA function depends on the support demonstrated by the management on the process of auditing. It is important that managers acknowledge the fact that IA is a crucial process and activity like any other activities performed within the organization. IA audit process is likely to fail with resource (money and time) wasted without management commitment (Gamayuni, 2018).

Existing study have associated management support with allocation of resources. Allocating sufficient budgetary resources ensures smooth operation and enables hiring and retaining qualified auditors (Olowoyo, 2023). Investing in training programs for internal auditors in skills like risk management and data analysis enhances their effectiveness (Nyapengera & Nyanjom, 2020). Equipping the internal audit department with appropriate software and hardware optimizes processes and improves efficiency (Akhigbe & Anyanwu, 2020).

Organizational Commitment has also been associated with management support. Demonstrating a strong commitment to ethical conduct and good governance by setting a clear tone (Adediran & Ajagbe, 2022). integrating internal audit findings into decision-making (Ogboi & Okoye, 2021) and providing timely and constructive feedback via engaging in open communication with the internal audit team fosters mutual understanding and improvement (Atuobi & Esenwosu, 2023).

Another aspect of top management support is fostering a positive audit culture. Encouraging open communication between all levels of staff and the internal audit team facilitates reporting of issues and concerns (Nyapengera & Nyanjom, 2020). Implementing reward systems for ethical behavior and whistle-blowing encourages transparency and risk identification (Atuobi & Esenwosu, 2023). Regularly assessing the internal audit function and implementing improvements based on feedback promotes ongoing effectiveness (Adediran & Ajagbe, 2022).

A number of previous studies found that without management approval, support, and encouragement, the IA audit process is likely to face failure and worse time and money wasted (Abdullah & Mustafa, 2020). Suleiman, Hamad and Yussuf (2021) examined the factors influencing effectiveness of internal audit services at the Ministry of finance Zanzibar. Findings of the study indicated that management support to internal auditing have influencing the effectiveness of internal audit services at the Ministry of finance Zanzibar. Joshi and Marthandan (2023) assessed the empirical evidence on the critical determinants of internal audit (IA) effectiveness in Indian Nifty500 companies. From the factor analysis and multiple regression models, the following critical determinants were established: 'interaction between internal auditor and audit committee'; 'risk-based planning and guidelines'; 'moderating role of management support with Big Data Analytics' for IA effectiveness in Indian context.

Abrar (2020) analyzed assessment of internal audit effectiveness in Ethiopian shipping and logistics service enterprise. The Internal Audit effectiveness of the organization will be augmented when there was the existence of more supports from the management, have independence of internal auditor and the commitment of the management should be improved as it is evaluated and needed to be above the average range. Inyang, Francis and Florence (2021) assessed those attributes that influence internal audit effectiveness in the Nigerian public health sector. The results reveal that management support (funding, response to audit finding and staff training) are key factors affecting internal audit effectiveness.

Sheriff (2021) intended to assess management supports towards the internal audit system. The study was conducted in Bo District Council located in the Southern Region of Sierra Leone. Bo District Council consists of 16 Chiefdoms, 25 Councilors, 3 Paramount Chiefs, 25 Wards, 16 Committees, 11 Constituencies, and 13 Core Staff Members. The study employed descriptive design and results discussed in qualitative and quantitative methods. The key findings of the study include: Lack of full support to the audit committee; lack of independence of the internal audit system; insufficient allocation of budget.

Dyhati and Wahyudi (2022) assessed management support and its impact on service delivery of internal audit in the Malawi Police Service (MPS). The Malawi Government has several institutions across the country. This study has adopted both quantitative and qualitative methods so as to provide insight into management support services and its impact on the effectiveness of internal audit. The study revealed that Management support has a direct impact on effectiveness of internal audit. An audit department that is not adequately supported by management to carry out all its annual planned activities may not succeed on its own. It is upon this understanding that Management of the Malawi Police Service created strategies that promote a positive impact in its service delivery including the audit function.

Mohammed and Mohammed (2021) investigated into how top management support and regulatory regime impact the effectiveness of internal audit function of tertiary institutions in the Northern Region of Ghana. The study deployed the quantitative method of research through the use of questionnaires to collect data from a sample of 70 respondents. The study revealed that top management support contributes insignificantly towards internal audit effectiveness. The study also revealed that the current regulatory framework in Ghana is ineffective towards helping internal auditors in discharging their duties.

Saputra, Winarningsih and Puspitasari (2020) examined and measure how much influence the factors that affect the effectiveness of internal audit in the public sector in Indonesia. The population in this study were all internal audits of local government in Indonesia. The data collected in this study were 55 internal audits of local government throughout Indonesia. The top management support indirectly had a significant effect on the effectiveness of internal audit through competence and independence. However, top management support directly does not have a significant effect on the effectiveness of internal audit. This research also revealed that with the support of top management to the competence and independence of internal audit, it will be able to encourage a more effective internal audit in carrying out its duties and functions.

2.3.2 Internal Audit Independence

The standard (IPPF, 2017) defines internal audit independence as “freedom from circumstances that could jeopardize internal auditors’ capacity to impartially execute their mandate or as a condition whereby threats to auditors’ objectivity are sufficiently avoided” (Addaraini, 2020). This factor allows the audit activity to be conducted without interference by the entity under audit. Coupled with objectivity, organizational independence contributes to the accuracy of the auditors’ work and the ability to rely on reported results.

The International Standards for the Professional Practice of Internal Auditing (ISPPIA) Standard 1100 requires that the internal audit department must be independent and internal auditors must be objective in achieving their work to add value to the organization. ISPPIA and the IIA suggest that such independence can be gained by means of reporting to levels within the organization that allow the internal audit department to perform its responsibilities free from interference; avoiding conflict of interests; having direct contact with the board and senior management; having unrestricted access to records, employees and departments; the appointment and removal of the head of internal audit not being under the direct control of executive management and not performing non-audit work (Yusof, Haron, Ismail & Chye, 2019).

One of the factors that may influence effective audit activities is independence and objective of auditors as this would enable the completion of auditing without interference. Independence and objectivity of internal auditing in terms of assurance services and consultations are both importance and are closely linked to the freedom from interference on objectivity and compromise while auditing (Anggraini, 2020). The independence and objectivity are key elements of the effectiveness of IA (Hermawan, 2022; Gaol, 2022; Mertsola, 2022).

Internal audit independence, is best described as ‘operational independence’, assists in ensuring that internal audit acts in an objective, impartial manner free from any conflict of interest, inherent bias or undue external influence and it provides a service to management, reports to the Audit Committee and is ultimately accountable to the Chief Executive or the Board for the achievement of its objectives and the use of its resources. Internal audit independence is reinforced by specifying these arrangements in an internal audit charter. Objectivity is a required attitude for the delivery of internal audit services (Nugraha, Yazid & Bastian, 2022).

It is a condition that allows internal auditors to judge matters on the evidence without the influence of personal considerations. Objectivity is reinforced by the rigorous application of professional standards and by the vigilance of the Head of Internal Audit and individual internal auditors (Kurniawati & Karunia, 2018). ISPPIA (Standard 1100) requires that the internal audit department must be independent and internal auditors must be objective in achieving their work to add value to the organization. For instance, the assurance services provided by auditors derive their value and credibility from the fundamental assumptions of independence of mind and independence in appearance (Muslikan; Masengi, Elvira & Rahman, 2022). In addition, Kusumah and Pranoto (2023) also confirm that increasing weight is now being placed on the need for internal auditors to be independent and objective, even though they are normally employees of organizations. They stated lack of independence as the main obstacle to satisfactory internal audit performance in a number of developing countries (Aidi, Sayuthi, Susanto, Junaidi & Abdurohim, 2022).

Moreover, internal audit independence according to prior studies (Njagi, 2023; Addaraini, 2020; Setyaningrum & Kuntadi, 2019), definitely relates with perceived effectiveness of IA. Regardless of its importance, independence of IA has received minimal attention from researchers. Accordingly, this study enhances the findings of the earlier studies as it looks into the association between internal auditor independence and

IA effectiveness. The few researchers that have examined this issue have found that the greater the independence and objectivity of internal audit department, the greater the internal auditor's effectiveness. Nyaga, Kiragu and Riro (2018) conducted a study on the "Influence of internal audit independence on internal audit effectiveness in the Kirinyaga county government, Kenya". Regression analysis revealed that internal audit independence had positive and significant effect on internal audit effectiveness at 5% significant level. The study concluded that internal audit independence was an important predictor of the effectiveness of the audit function in the Kirinyaga County Government.

Pelser, Mensah and Ngwenya (2020) examined the impact of independence of internal auditors as the antecedents of the effectiveness of an internal auditing function. The results reveal that, independence of the internal auditing staff have impact on the effectiveness of internal auditing. Alqudah, Amran, Alessa and Almaiah (2023) aimed at probing the influence of the empowerments on the internal auditors' effectiveness. According to the Resource-Based View (RBV), the findings show independence, and extrinsic rewards all have a significant influence on the effectiveness of internal auditor.

Pham and Nguyen (2021) provided empirical evidence on factors of internal audit (IA) characteristics affecting the internal audit effectiveness in steel enterprises in Vietnam. Results reveal that internal audit effectiveness in steel enterprises in Vietnam is influenced by various internal factors, including the independence of internal auditor, and the operational bases and methods of internal audit. Ahmet (2021) examine the factors that have an impact on internal audit effectiveness (IAE) in Turkey. The results supported those specifications of internal audit had a direct impact on IAE. The results of study showed that the factors that have an impact on IAE are independence, participation in risk management activities and cooperation with external auditor, respectively.

Nyaga, Kiragu & Riro (2018) explored the relationship between internal audit independence and internal audit effectiveness in the Kirinyaga County Government. A descriptive research design was adopted. The target population of the study consisted of all the forty six (46) staff members from the Directorate of Internal Audit of Kirinyaga County Government. Primary data was collected through a self-administered questionnaire composed of closed ended questions. The findings indicated that the audit function was less than independent in evidence analyzed. Regression analysis revealed that internal audit independence had positive and significant effect on internal audit effectiveness at p value ≤ 0.05. The study concluded that internal audit independence was an important predictor of the effectiveness of the audit function in the county government.

Yusof, Haron, Ismail and Chye (2019) In their study, the Internal Audit Capability Model (IACM) was used to measure the capability while the independence of the internal audit is studied as one of the factors influencing it. Questionnaires were sent to head of internal auditors which list obtained from National Audit Department. It was found that independence of the internal audit unit has a positive and significant influence on the overall internal audit capability level. Lack of independence results in lack of quality internal audit unit thus gives an impact on the capability level. IACM used in this study could provide the organization with a road map to enhance its capability.

2.3.3 Internal Audit Competence

Staff competence is an important key to the effectiveness of the internal audit activities (Gaol, 2022). The International Standards for the Professional Practice of Internal Auditing (ISPPIA) highlights the importance of internal audit team who possesses the knowledge, skills, and other competencies necessary to perform their responsibilities (ISPPIA, Standard 1210). Indeed, internal auditors must collectively have the necessary education, professional qualifications, experience and training to be able to add value and improve the organization's operations (Hermawan, 2022). Internal audit team must have a competence to enable them to provide the high-quality services. Besides that, they should have qualified internal audit from certificated agencies. Based on Shofia (2020), both technical competence and continuous training are considered essential for internal audit effectiveness. Audit communication is the factors that can influence competence of internal audit departmental (Kadim, Khdair & Shaltag, 2021). Other studies suggest that lack of competence of internal auditors is an obstacle to the effectiveness of IA in a number of African countries as Ethiopia, Ghana and Kenya (Ali, 2018).

Afzal (2023) examined the factors that affect internal audit quality in Pakistani commercial banks. Internal audit quality evaluated through potential factors such as competence, objectivity, performance, board audit committee support, and independence. Findings show that performance, competence, and objectivity factors are statistically positively significant that influenced internal audit quality to improve it. This research helps improve the internal audit quality in Pakistani commercial banks. Mpakaniye (2022) assessed the effect of competency of internal audit staff on internal audit effectiveness in Rwanda's public organizations. The correlation coefficient, which shows the relationship between the study variables, from the findings showed that there was a strong positive relationship between the competency of internal auditors and internal audit effectiveness.

Ali (2018) investigated the factors influencing internal auditing and its relationship with organizational performance. The result showed that the There are a significant relationship between competence of Internal Audit department audit and organizational performance. Lihuan (2022) examined the factors that influence the effectiveness of internal auditing of unlisted SMEs in China. The findings show that competence of internal auditors have significant positive impact on internal audit effectiveness.

Sulanjana and Puspitasari (2018) investigated and analyze the effect of competence has on the quality of internal audit performance in banking sector especially syariah or islamic bank. It employs survey in the form of interview and questionaire, studies on documents, as well as literary studies. All the data were obtained from the head office of BJB Syariah bank. To analyze the data, the study multiple linear regression analysis. From both simultaneous partial hypothesis test show that competence and independence have a significant impact on the quality of internal audit performance result at the head office of BJB Syariah bank with the coefficient value of R Square as much as 93%.

Widagdo (2018) examine the effect of individual factors on internal audit effectiveness of regional inspectorates. In addition, this study also intends to examine whether group cohesiveness mediates relationship between auditor independence and internal audit effectiveness. Population of this study is regional inspectorates located in some regencies/municipalities in Central Java Province and East Java Province, Indonesia. Method of analysis of this study is structural equation modeling by using SmartPLS. The results indicate that, as predicted, auditor independence has a positive and significant relationship with internal audit effectiveness.

Setyaningrum and Kuntadi (2019) examined the effect of competence on internal audit effectiveness. This research is still relevant due to lacking in internal audit function as there are still many corruption cases, especially in the Ministries/Agencies. This is quantitative research using questionnaires distributed to the auditors in Inspectorate General of the Ministry of Transportation as respondents. Inspectorate General of the Ministry of Transportation is one of the institutions with IACM level 3 (integrated) in Indonesia. It showed that competence, communication, and audit work have positive effect on internal audit effectiveness, while independence has no effect on internal audit effectiveness. It implies that the auditors should be equipped with the audit technical competence as well as non-technical competencies relevant with their audit area. Audit work from planning, implementation and post-audit should always comply with audit standard. Effective oral and written communication between the auditor and the auditee should also be enhanced in form of audit reports to the follow-up of audit recommendations. Independence in this study does not affect the effectiveness of the internal audit, because independence is fact is main requirement when conducting audit. Siregar, Rizki and Siregar (2022) analyzed the influence of competence and integrity on the quality of the results of the internal audit of the Medan City Inspectorate. The location research will be conducted at the Medan City Inspectorate having its address at Jl. Captain Maulana Lubis 2 Medan City, while the research period is from January to December 2022. Based on the results of hypothesis testing, it shows that competence has no effect on the quality of internal audit results at the Medan City Inspectorate. This means that in this study the influence of competence which can be interpreted as competence does not have an important role in improving the quality of audit results at the Medan City Inspectorate. This is due to the lack of knowledge of the auditor in understanding the entity being audited, then the lack of the auditor's ability to analyze problems.

Menaty and Zaman (2020) investigated effects of some basic elements on effectiveness of IAF. The sample consists of 131 internal auditors of firms with an active IAF. From one hand, the level of IAF effectiveness is measured through participants (using 29 sub factors), and from the other hand, it is questioned through the information related to IAF characteristics. Then, the relation between IAF characteristics (independent variables) and the level of IAF effectiveness (dependent variable) is tested. The results from the analysis of collected data show that competence has a positive and significant effect on the IAF effectiveness.

2.3.4 Internal Risk Management

Internal audit is a function that serves organization. IAE is a risk-based concept that contributes to organization's achievement of its purposes by improving corporate governance quality. An effective internal audit function is expected to review key risk areas to contribute to organization's purposes (Ta & Doan, 2022). Corporate governance is included in definition of internal audit as an umbrella concept that covers risk management and internal control. Corporate management and risk management saddle internal audit function with a responsibility of being a part of their activities to ensure its organization achieves its purposes. IIA's position reports and current COSO Enterprise Risk Management Framework require a risk-based internal audit. IAE in today's complex business environment is associated with ability to assume these responsibilities. The effectiveness of internal audit function becomes possible only when audit activities are conducted on a risk-based basis. As a result, success level of internal audit function's contribution to organization is directly related to its impact on enterprise risk management.

Modern internal audit activities must be carried out on a risk-based basis. Internal audit should be at center of potential threats and problems facing its organization. It is supported by the literature that being a part of enterprise risk management and that internal audit activities focus on more risky and prominent issues has a positive effect on its effectiveness (Were, Warui & Kariuki, 2023). ElHaddad, ElHaddad and Alfadhli (2020) reported that risk-based internal audit activities increased effectiveness of internal audit function in qualitative study they conducted on Belgian and American companies. Participants of their study stated that internal auditors are worried about effectiveness of internal audit in cases where internal auditors are not able to participate adequately with increase of their enterprise risk management activities. Castanheira et al. (2019) stated that lack of risk-oriented conduct of internal audit activities in many private sector enterprises caused negative results. It can be said that more internal audit function contributes to control of primary risks to which organization is exposed, more it increases its effectiveness.

Yudianto, Mulyani, Fahmi and Winarningsih (2021) examined the influence of the enterprise risk management implementation and internal audit quality toward the performance of State-Owned Universities-Legal Entity and State-Owned Universities-Public Service Agency in Indonesia. Researchers use explanatory study and questionnaire instruments to collect data. The study concludes that the enterprise risk management implementation and the internal audit quality have a positive and significant influence on the Performance of State-Owned Universities-Legal Entity and State-Owned Universities-Public Service Agency in Indonesia. Improving university performance requires an effective enterprise risk management implementation and internal audit quality.

Čular, Slapničar and Vuko (2020) examined external auditors' decisions to use the evidence or direct assistance of internal auditors when those auditors engage in consulting on enterprise risk management. The study analyzed these hypotheses using a 2×2 between-subjects design with 92 certified external auditors. Confirming the hypotheses, we find that external auditors' reliance on the internal audit function is highest when the latter provides risk management consulting under the supervision of a strong audit committee. It is lower if the internal audit function provides only assurance (under either a weak or strong audit committee) and lowest if it provides consulting under a weak audit committee. The mediation analysis shows that the effect of audit committee effectiveness on the reliance decision is mediated by external auditors' perception of internal auditors' objectivity.

Yusoff (2018) attempted to explore the extent of implementation of risk-based approach in Malaysian public sector, particularly in ministries and federal department. The study used a convenient sampling method by circulation of a survey questionnaire to all ministries and federal department under the purview of Ministry of Finance, as well as selected statutory bodies. The findings of this study revealed that the risk-based approach was not extensively and consistently implemented by the public sector organizations under review. The mixed approach at macro level and compliance-based auditing at micro level are more preferable rather than risk-based approach. In addition, the adoption of risk-based approach at macro level was not statistically significantly affects the internal audit effectiveness and efficiency. But the adoption of risk-based approach at micro level does contribute a significant impact.

Tamimi (2021) aimed to identify the role of internal audit function in risk management from the perspective of risk managers in banks operating in Palestine, with a review of the concept, importance, objectives, and principles of internal audit and its role in risk management for banks. The target population is the risk managers in the banks operating in Palestine. The major findings in the presented paper. First, the main factor in risk management is the risk manager's efficiency, and the internal auditing focuses on evaluating the risk management department and ensuring the efficiency of risk management practices in dealing with these risks. Second, the internal audit departments in the banks operating in Palestine participate in providing advice, suggestions and recommendations for the risk management department. Based on the results, the board of directors and senior management in these banks should continue to pay attention to the risk management department, and the need for coordination between these departments to achieve the best results at the banking and economic levels.

ElHaddad, ElHaddad and Alfadhli (2020) aimed to identify the role of internal audit in contributing to the reduction of risks to the operations of higher education institutions in the Libyan state. The descriptive analytical method was adopted and the questionnaire was used as a tool for collecting and analyzing data related to the study using SPSS. This paper concluded that the internal audit offices and departments of the Libyan universities carry out their activities related to risk management evaluation and add value to the work of the department. In addition, internal audit offices and departments develop, record and communicate reports on the results of their work.

Nyerere (2022) focused on the effect of risk-based internal audit on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya. The study used a descriptive research design and was anchored on three theories namely: fraud triangle theory, audit theory, and risk management theory. The research conducted a census of 43 DT-SACCOs in Nairobi Metropolis, Kenya, and collected primary data from respondents consisting of one audit manager per DT-SACCO. Secondary data was also collected to validate data on financial performance. Regression models were used to test hypotheses where risk assignment and risk-based audit planning proved affirmative to having a statistically significance effect on the financial performance of DT-SACCOs. The research established that corporate governance has a controlling effect on the association between risk-based audit and financial performance of DT-SACCOs.

Were, Warui and Kariuki (2023) sought to determine the effects of the risk-based internal audit approaches (Cybercrime security controls, data analytics, and disaster recovery controls) on the financial performance of insurance firms listed at the NSE, Kenya. Positivist research philosophy and causal research design were adopted where 6 Insurance firms licensed to trade at the NSE, Kenya were surveyed. Both primary and secondary data were used and were analyzed using both descriptive and inferential statistics and presented using graphs, statistical tables, and pie charts. The study found that Cybercrime security controls, data analytics controls, and disaster recovery controls had a statistically significant positive effect on the financial performance of Insurance firms listed at the NSE, Kenya. On the contrary, firm size was found not to have a statistically significant moderation effect on the risk-based internal audit approaches.

The study concluded that firms that had Cybercrime security controls, data analytics, and disaster recovery controls in place were noted to have an increased operational efficiency that ultimately drove financial performance.

2.3.5 Internal Audit Effectiveness

The word effectiveness has been defined by different researchers, for instance Alsabti and Khalid (2022) view effectiveness as the ability toward the achievement of the objectives and goals. Nugroho Uzliawati and Taqi (2021) defined internal audit effectiveness as “the extent to which an internal audit office meets its supposed objective or the extent to which it meets the intended outcome.” Yanti, Sari, Ghazali and Astrina (2022) defined effectiveness “as the capacity to obtain results that are consistent with targets objective.” In addition, IIA (2010) defined internal audit effectiveness “as the degree (including quality) to which established objectives are achieved.” This means internal audit effectiveness is the ability of internal auditor to achieve established objectives within the organization (Temesgen & Estifanos, 2018). Previous studies have used different approaches to investigate internal audit effectiveness, as effective internal audit is influenced by series of factors.

The other issue that has emerged, relative to internal audit effectiveness, is what are proper and sound measures of the department’s effectiveness. In establishing the measurement for internal audit effectiveness, Joshi (2020) reveal that the percentage of recommendations implemented by the auditee is the most appropriate measure for internal audit effectiveness. Similarly, Barkhordar, Nazemi and Namazi (2021) asserted that audit findings and recommendations would not serve mush purpose unless management is committed to implement them. While, Hamza Mohammad (2020) give their own definition which is in line with the ability of the internal auditor intervention in prevention and correction of deficiencies and they finally defined internal audit effectiveness as “the number and scope of deficiencies corrected following the auditing process.”

In the IIA Practice Guide ‘Measuring Internal Audit Effectiveness and Efficiency’ issued in December 2010, Effectiveness and efficiency measurements can be quantitative and qualitative. In addition to compliance with the IIA’s International Standards for the Professional Practice of Internal Auditing (Standards), audit activity performance measures may include: Level of contribution to the improvement of risk management, control, and governance processes; Achievement of key goals and objectives; Evaluation of progress against audit activity plan; Improvement in staff productivity; Increase in efficiency of the audit process; Increase in number of action plans for process improvements; Adequacy of engagement planning and supervision; Effectiveness in meeting stakeholders’ needs; Results of quality assurance assessments and internal audit activity’s quality improvement programs; Effectiveness in conducting the audit; Clarity of communications with the audit client (auditee) and the board (Ganji, Hosayni & Nami, 2023).

The report of the Institute of Internal Auditors published in 2015 shows the practical side of various models of effective internal audit in the private sector in the UK and

Ireland. The study of various organizational systems of internal audit showed an increase in added value to organizations as well as raising the skills and qualifications of auditors. The study has identified elements of effective internal audit: Excellent knowledge of the organization and the specifics of the sector in which it operates; Experience and expertise allowing to increase the scope of functions in the areas of finance, IT, project management, customer relations (knowledge of regulations, national and international regulations, current standards and best practices); Flexibility and ability to respond quickly to new risks and threats; Confidence and trust on the part of management; Independence and objectivity; Planning risk-oriented internal audit with transparent audit methodology; Preparation of recommendations and acting as an advisory oriented at the objectives of the organization; High level of quality of services provided; Coordination and cooperation with other departments that perform control and assurance functions; Effective teamwork; Career development opportunities; Continuous improvement of qualifications and the duty to conscientiously perform the audit work (Ahmed & Sarea, 2019).

John Bendermacher, Chair of IIA Netherlands forward his view on Measuring the Effectiveness of the Internal Audit Function Practical tools for internal auditors (2016). “When can an IAF be considered effective? Cannot give a definitive answer to that question it depends on many factors such as: in what sector do you work, how has your mission statement been worded, and how do you collaborate with the Executive Board, Supervisory Board and external auditor” Thus, it can be assumed that the effectiveness of IA is still understudied (Alqudah, Amran & Hassan, 2019).

Internal audit effectiveness is the measurement to evaluate whether the internal audit function is able to achieve the goal of that function (Solomon, 2019). Even though, the degree of internal audit effectiveness tends to vary within organizational levels as well as country (Ta & Doan, 2022). The management of organizations should have a clear objective for internal auditors to achieve, given the available resources and other means that might aid the achievement of such objectives. It is argued that the effectiveness of an internal audit unit depends on the expectations of relevant stakeholders even though systematic and generally valid measures can be used to gauge IA effectiveness (Poltak, Sudarma & Purwanti, 2019).

2.4 Empirical Review

Singh, Ravindran, Ganesan and Haron (2021) investigated factors that are associated with internal audit effectiveness. Additionally, this paper also investigates the relationship between internal audit effectiveness and internal audit quality. A total of 102 questionnaires were collected from internal auditors and chief audit executives of 12 multinational companies in Malaysia. The data was analyzed through structuralinvoic equation modeling by using SmartPLS Software 3.0. The findings reveal that management support, interdepartmental coordination and the support and acceptance of auditees were associated with internal audit effectiveness. Conversely, the findings also revealed that independence, objectivity and competence (the three building blocks of internal audit effectiveness) were also related to internal audit quality. The study confirmed the significance of interdepartmental coordination and the support and acceptance of auditees towards internal audit effectiveness, the exploration of which remains limited in current literature.

Sarhan, Ntim and Al-Najjar (2019) investigated the effect of firm- and country-level governance quality on audit quality, as measured by (i) auditor choice and (ii) audit fees. Our findings are three-fold. First, our evidence suggests that board independence is positively related to engaging a Big 4 auditor, while family shareholdings show a negative association with hiring a Big 4 auditor. Second, board size, board independence and director shareholdings are positively related to audit fees, while government shareholdings and family shareholdings show a negative relationship with audit fees. Third, higher country-level governance quality is positively associated with hiring a Big 4 auditor and paying higher audit fees. Overall, we provide evidence that external audit quality in Middle Eastern and North African (MENA) countries is affected by firm- and country-level governance quality, which suggests that governance quality and external audit quality seem to be complements in protecting stakeholders interests through securing higher audit quality. Our results are robust to controlling for alternative measures and endogeneities.

Mpakaniye and Delphine (2022) assessed the factors affecting the effectiveness of internal audit functions in Rwandan public organizations; a case study of RSSB. The Specific objectives which guided the study were: To determine the level of internal audit effectiveness in RSSB, to assess the determinants of internal audit effectiveness in RSSB, and to examine the challenges encountered by the internal audit function in

RSSB. The study population was comprised of 305 employees of RSSB from which by using a purposive sampling technique. The study found that financial audit and performance audit is 100% the determinant of the effectiveness of internal audit function in RSSB followed by compliance audit as indicated by 92.6% of respondents while a risk assessment is also one of the determinants of the effectiveness of internal audit practice in RSSB as confirmed by 85.2% of respondents. The study also found that the increase of assets and profitability is considered to be the main measure of the effectiveness of RSSB as indicated by100% followed by 85.2% which indicated solvency as a measure of effectiveness. The results furthermore indicate that customer satisfaction is another measure of RSSB performance as indicated by 77.8%; as also internal audit helps in the protection of organizational assets as indicated by 100% this was followed by profit maximization and it read to proper decision making as indicated by 92.6% while increasing performance management and improve the employee's effectiveness have 88.9 and 85.2 respectively. Moreover, the study by using the Pearson moment Correlation coefficient found that there is a positive relationship between internal audit function and effectiveness of RSSB.

Alsabti and Khalid (2022) investigated the factors influencing internal audit effectiveness (IAE) in the companies listed in Muscat Securities Market (MSM). The selected accounting information system (AIS) factors were reliability, relevance, flexibility and integration. A quantitative approach using structural equation modelling (SEM) was utilised as the main research design. The data was collected from a group of respondents comprising financial\accounts manager, accountant, internal auditor, audit committee member through simple random sampling. The actual survey questionnaire was distributed to 397 respondents, and the data were analysed using SEM to determine the factors influencing IAE in the companies listed in MSM. The study results indicated that AIS factors have a significant influence on IAE.

Abdullah and Mustafa (2020) investigated the factors impact on internal audit effectiveness (IAE) in Kurdistan Iraq. Data were collected from 15 directors of colleges and 15 internal audit managers at University of Duhok. The relationship between IAE and three principle factors has been examined using multiple regression analysis. Findings reflect that management support for IAE perceived effectiveness of internal audit from both directors of colleges and internal auditor’s perspective. Management support is related to occupy experienced and trained staff, providing sufficient resources. However, this study found insignificant relationship between independence of the internal audit and internal audit effectiveness

Nugroho Uzliawati and Taqi (2021) sought to determine the effect of audit quality, the size of the internal audit, and the competency of auditors with management support as moderating variables on the effectiveness of internal audit. The theory used was institutional theory where internal audit as part of the company will try to adapt and equate itself with the values and culture around it (homogenization). The research population was internal auditors who worked in State-Owned Enterprises (SOE) in the Finance and Insurance Sector. The data used was primary data with a sample of 62 respondents with the snowball method of data collection. The results of the study show that audit quality and auditor competency have a positive effect and management support moderate the effect of audit quality on internal audit effectiveness.

Yanti, Sari, Ghazali and Astrina (2022) examined Effect of Management Support, Competence, Organizational Culture and Professional Ethics on the Effectiveness of Internal Audit (Case Study on State-Owned Enterprises (BUMN) in Palembang City). The type of research used is associative research. The data used are primary data. The population in this study is the internal audit in the State-Owned Enterprises (BUMN) in Palembang City as many as 32 respondents. Data collection techniques are using interviews and questionnaires. The data analysis method used in this research is quantitative analysis. The results of this study show that management support, competence, organizational culture and professional ethics significantly influence the effectiveness of internal audit.
Ratmono and Darsono (2022) examined the factors influencing (determinants) the effectiveness of the internal audit function in Indonesian local government organizations. The research samples were 137 respondents. This study used primary data in the form of a questionnaire. The results of statistical tests showed that independence, competence, and management support could increase the effectiveness of the internal audit function. However, this cooperative relationship does not moderate the influence of competence and management support on the effectiveness of internal audit.

Temesgen and Estifanos (2018) aimed at identifying main determinants of internal audit effectiveness in Gurage zone local Administrations. Hence, descriptive and explanatory research design was considered. The survey includes 60 respondents; using simple random sampling Woredas were selected and all units of each selected were included. The researcher collected data from primary sources. The primary data has been collected by distributing five scale likert scale questioner to the sampled respondent. A total of five explanatory variables were included in the regression and the results of the model show that quality of internal audit, independency of internal audit and proficiency of internal auditors are positively affect internal audit effectiveness. Based on the finding the study recommends that the Office of Finance and Economic development has to maintain the investigative and reporting independence of internal auditors. Besides, the internal audit offices have to do for the development of internal auditors through continuous education and short term training so as to enhance the level of internal audit effectiveness

Musah (2018) examined factors that determine internal audit effectiveness among SOEs in Ghana. The study was conducted in response to various scandals among Ghanaian SOEs and the lack of empirical studies on determinants of internal audit effectiveness that can deal with these problems. The study specifically examined the respondent's perception about the impact of factors such as; competence of internal audit unit, size of internal audit unit, relation between internal and external auditors, management support for internal audit function, and independence of internal audit unit on internal audit effectiveness among SOEs in Ghana. The surveyed internal auditors, accountants and management of these sampled SOEs in Ghana. The results of the study showed that management support for internal audit function is the most significant determinants of internal audit effectiveness. The study also revealed that size of internal audit unit, competence of internal audit staff, independence of internal audit unit as well as good relationship between internal and external auditors were significant determinants of internal audit effectiveness.

Joshi (2020) sought to identify the determinants that affect the effectiveness of internal auditing for listed firms in India. A sample of 300 listed companies was drawn. Questionnaires were mailed to the head of audit department, internal audit managers, internal auditor and head of accounts of each company. The overall response rate was 28.3%. The results were derived by applying multiple regression method and the three determinants turned out to be significant. The three determinants are risk-based planning, usage of Big Data and Analytics, and frequency of meetings of internal auditor (IA) with audit committee (AC) respectively. The model explains 42.8% of variations in the dependent variable (IA effectiveness). The study indeed encourages internal auditors to develop their core skills and competencies in the area of risk assessment and Big Data and Analytics for delivering better services to the auditees, the board of directors and the AC members.

Ashfaq, Rehman, Haq and Usman (2021) explored the effectiveness and reliability of the performance of internal auditor by the stakeholders for their decision making. The absence of rules and regulations generates the debate that the non-standard reporting of the assessment of the internal controls system’s assessment by internal auditor and reliance by the external auditor. The study used the mixed-method (triangulation) for the analysis quantitative data was used for regression with Smart PLS 3.2.8, and the qualitative data was used to prove and strengthen the results. The data is collected for five IVs (Objectivity of IAF, Work Performance, Competence, Internal Control System's Assessment and Sourcing of IAF) and their impact on two DVs (Effectiveness and Reliance). This study used five areas as the target audience (Internal Auditor, External Auditor, Professional bodies, Shareholders, SECP and SBP). A total of 150 respondents were approached and received a valid response of 98 respondents. The study explores the positive relationship between Objectivity of IAF, Work Performance, Competence, Sourcing of IAF on Effectiveness and Reliance. Internal Control System's Assessment having significant relation with Effectiveness and non-significant with reliance because the absence of rules makes it unreliable for stakeholders.

Barkhordar, Nazemi and Namazi (2021) investigating factors that influencing the internal auditing effectiveness and then evaluating the role of this department in risk management and internal controls of Keshavarzi bank. This research is applied and a descriptive. Required data were collected from 78 bank experts in different organizational categories including internal auditors and inspectors, senior managers and experts in charge of Keshavarzi bank by questionnaire in 2019. The research hypotheses were analyzed by using SPSS software and the statistical method of Smart PLS software with structural equation modeling. The results showed that the factors of internal auditing independence, internal auditor's competence, management support of internal audit, internal auditing size and the relationship of internal and independent auditors had a significant positive effect on the effectiveness of internal auditing. Also, the effectiveness of internal auditing improves the bank's internal controls but does not have a significant impact on improving bank risk management. Based on the results of this study, it is better to involve internal auditors with risk management in the risk assessment process, setting up an internal auditing program with a risk-based approach to identify the priorities of the internal auditors' activity, to providing a more effective internal audit in Keshavarzi bank

Almahuzi (2020) investigated the effectiveness of internal audits in the Saudi Arabian public sector. The study examines the relationships between three external factors: top management support, organisational culture and independence of internal audits. It also examines the relationships between four internal factors: motivation of internal audit staff, size of the internal audit team, utilisation of information technology (IT) and competence of internal auditors. Lastly, the study considers the reasons for the non-implementation of internal audit units in some government organisations. Data were gathered using a mixed methods approach consisting of semi-structured interviews and a questionnaire. A total of 36 semi-structured interviews was conducted to gain the participants' views on the nature of internal audits in the Saudi public sector and of the issues affecting the effectiveness of the audits. Further, 300 questionnaires were distributed to the managers of internal audit units and internal audit staff in the Saudi Arabian public sector, of which 290 were returned completed. The findings showed that the key external factors affecting internal audit effectiveness were top management support, organisational culture and independence of the internal audit. The first ordinary least squares (OLS) regression model indicated that, of these external factors, top management support was the most significant impacting internal audit effectiveness. The second OLS regression model suggested that, of the internal factors, the competence of internal auditors was the primary driver of internal audit effectiveness. As a standalone construct, the competence of internal auditors significantly impacted internal audit effectiveness; however, the same could be said of the links between internal audit effectiveness and the motivation of internal audit staff, the size of internal audit team and the utilisation of IT.

Hamza Mohammad (2020) aimed to extend resourced-based and agency theories in the context of public sector, as well examining the moderating role of task complexity as a new construct to have a better understanding on the factors affecting IAE. This study hypothesized five factors affecting IAE, and five hypotheses on the moderating effects of task complexity on such relationships. Using the quantitative approach, this study distributed two sets of questionnaires among the financial managers and internal audit managers in Jordanian public institutions that are subject to the Audit Bureau Oversight. The returned questionnaires were 117 (41%). Results revealed the positive influence of top management support, internal auditors' independence, internal-external auditors' cooperation, and extrinsic rewards on IAE. Meanwhile, the internal audit department's size had an insignificant influence on IAE. The findings also ascertained the considerable moderating effect of task complexity on the relationships between all studied factors on IAE except the extrinsic rewards factor, wherein task complexity has found to be insignificant on the relationship between extrinsic rewards and IAE. The findings suggest that the government should pay attention to the complex environment of public sector internal auditors' tasks, and they should overcome deficiencies in their internal resources to be effectively able to enhance the IAE.

Kukuiah (2019) examined factors that influence internal audit effectiveness in the Ghanaian Public Sector. To sample the respondents for the study, purposive and stratified random sampling techniques were adopted and questionnaire was used to solicit information from 130 internal auditors in the study area. The study used Structural Equation Modelling to estimate the factors that influence effectiveness of internal audit. The study found out that, independence of internal auditors, competence of internal auditors and control environment have significant positive influence on internal audit effectiveness in the public sector in the Central Region. However, management support does not have significant positive influence on internal audit effectiveness.

Ganji, Hosayni and Nami (2023) investigated the impact of effectiveness of internal audit on the quality of internal audit in companies listed in TSE. For this purpose, 12 hypotheses were developed. It is worth mentioning that the "effectiveness of internal audit" variable was classified into three sections including "competence, independence, realism" and "consequences" into three sections including "management support, support and acceptance of the auditor and interdepartmental coordination of internal auditors". It is also worth mentioning that collecting information regarding the "quality of internal audit" variable. due to insufficient disclosure of information, requires to each firms, either the manager or one of the employees of the internal audit or of the committee members was asked to complete a questionnaire consisting of 32 internal audit quality criteria in 2021. The data were analyzed through structural equation modeling using SmartPLS software. Findings show that the records and results of internal audit effectiveness have a positive and significant effect on the quality of internal audit.

Poltak, Sudarma and Purwanti (2019) sought to test and provide the evidence of the determinants of the effectiveness of internal audits at the Ministry of Marine Affairs and Fisheries (KKP). The samples of this research were 31 internal auditors and 31 KKP employees. This research was explanatory research. To test the hypotheses, the data of the research questionnaire data were analysed using Partial Least Squares (PLS) analysis tool. The results show that the relationship between internal auditors and external auditors, organizational independence, and auditee perceptions positively influences the effectiveness of internal audits. However, audit professionalism does not have a positive effect towards the effectiveness of internal audits and the management support cannot be a moderating variable. This finding can open the horizons of interested parties, especially KKP leaders, to consider policies that can improve the effectiveness of internal audits to improve organizational goals and performance.

Ahmed and Sarea (2019) analyze factors that cause an effective internal Shariah audit among the Islamic Financial Institutions (IFIs) in Bahrain. The questionnaire method has been employed to examine the said topic. Meanwhile, the respondents are consisted of 52 IFIs‟ head of internal Shariah audit department. These IFIs are registered with the

Central Bank of Bahrain. To analyze those relationships the structural equation method (SEM) via SmarPLS3.0 has been adopted. The study has found that the effective execution of internal Shariah audit is positively linked with the competency and performance of internal Shariah audit. Meanwhile, the other two variables, i.e. being independent and Shariah supervisory board have been discovered to be positively related with internal Shariah audit effectiveness. Nonetheless, there is no significant contribution. Overall, all the variables contribute 63.2% to IFIs‟ internal Shariah audit effectiveness

Ta and Doan (2022) investigated four factors affecting internal audit effectiveness in Vietnam, namely, independence of internal audit, the competence of internal auditors, management support for internal audit, and quality of internal audit work. Quantitative and qualitative evaluations were conducted, including a logistics regression model and other analyses, using SPSS software. Through semi-structured in-depth interviews and an online survey, 144 responses were obtained from internal Vietnamese auditors of nonfinancial companies listed on the Vietnamese stock market in 2021. After processing the data, the results revealed two factors (independence of internal auditor and management support for internal audit) with a positive influence on internal audit effectiveness, whereas the competence of internal auditors and quality of internal audit work did not affect internal audit effectiveness.

Alqudah, Amran and Hassan (2019) investigated the moderating effect of task complexity on external auditors’ cooperation (EAC), top management empowerment and internal auditors' independence, which affect internal auditors' effectiveness in the Jordanian public sector. This paper utilised 117 usable questionnaires from financial managers and internal audit (IA) managers of the Jordanian public sector institutions. The collected data were analysed using partial least squares-structural equation modelling (PLS-SEM). The results reveal that EAC, top management empowerment, and internal auditors' independence are the factors which positively and significantly affect the internal auditors' effectiveness, as supported by the resource-based theory, with incomplete support for the task complexity's role as a moderator.

Solomon (2019) examined the factors affecting internal audit effectiveness in the Ethiopian private commercial banks. Five hypotheses were formulated based on a comprehensive review of past literature. The study used primary sources of data through questionnaires. A cross-sectional survey design was employed, purposive sampling method was used and data were collected using structured questionnaires. All of these five independent variables are making 60% explained internal audit effectiveness. The study found that there existed significant positive relationships between the factors (Independence and objectivity of internal auditors, Competency of internal audit staffs, Existence of audit committees) and internal audit effectiveness. However, Organizational Setting and Management support have no significant effect on internal audit effectiveness. But private commercial banks should understand that the contributions of these variables were collectively significant to identify any noncompliance activities in their office and to add values for the internal audit effectiveness.

2.5 Summary and Research Gaps

The chapter focuses on the theoretical review, conceptual review and empirical review related to the study specific objectives. The study will be guided by resource-based view theory, contingency theory and agency theory. It was evident that majority of reviewed studies were having gaps which current study sought to fill. The gaps were not only empirical, but also methodological and conceptual for instance, Kirui (2022) investigated the impact of audit committee attributes on the efficiency of audits in the local government of Kericho, Kenya. The research proposed that a similar investigation may be conducted to examine the correlation between audit features and audit effectiveness in other areas of the economy, such as the financial industry. Gitonga (2021) investigated the impact of internal audit features on the efficiency of audits in semi-autonomous government institutions in Kenya. Given that this study specifically focused on the effects of audit independence and audit experience, it is recommended that future studies explore other factors that may affect the effectiveness of internal audits conducted by government agencies.

In their study, Nyaga, Kiragu, and Riro (2018) investigated the impact of internal audit independence on the efficacy of internal auditing within the government of Kirinyaga county, Kenya. The researcher recommends doing more studies to investigate the impact of various variables on the success of internal audits in the County. Hence, this research aims to investigate the impact of management support, internal audit independence, internal audit competence, and internal audit risk management on the efficacy of internal audits in Saccos located in Western Kenya.

Ratmono and Darsono (2022) focused on the factors influencing the effectiveness of the internal audit function in Indonesian local government organizations. While the findings provide insights into internal audit practices in this specific context, the study recommended that there is a need to assess whether similar determinants apply to other types of organizations or in different countries. Temesgen and Estifanos (2018) sought to identify main determinants of internal audit effectiveness in Gurage zone local Administrations. The study recommended that future research could explore additional factors that may influence internal audit effectiveness, such as organizational culture, management support, resources allocation, and regulatory environment. Investigating a broader range of variables could provide a more comprehensive understanding of the factors contributing to internal audit effectiveness in local administrations

Table 2. 1: Research Gaps

Author	Title	Methodology	Findings	Gaps
Singh *et al*. (2021)	Factors that are associated with internal audit effectiveness.	A total of 102 questionnaires were collected from internal auditors and chief audit executives of 12 multinational companies in Malaysia. The data was analyzed through structuralinvoic equation modeling by using SmartPLS Software 3.0	The findings reveal that management support, interdepartmental coordination and the support and acceptance of auditees were associated with internal audit effectiveness.	Reliance on internal auditors and chief audit executives might introduce bias due to individual perceptions or reluctance to criticize practices.
Mpakaniye and Delphine (2022)	Factors affecting the effectiveness of internal audit functions in Rwandan public organizations; a case study of RSSB.	The study population was comprised of 305 employees of RSSB from which by using a purposive sampling technique	The study found that financial audit and performance audit is 100% the determinant of the effectiveness of internal audit function in RSSB followed by compliance audit as indicated by 92.6% of respondents while a risk assessment is also one of the determinants of the effectiveness of internal audit practice in RSSB as confirmed by 85.2% of	Purposive sampling: While convenient, this method might not ensure a fully representative sample of all RSSB employees and their diverse viewpoints.

			respondents	
Alsabti and Khalid (2022)	Factors influencing internal audit effectiveness (IAE) in the companies listed in Muscat Securities Market (MSM	A quantitative approach using structural equation modelling (SEM) was utilised as the main research design. The data was collected from a group of respondents comprising financial\ accounts manager, accountant, internal auditor, audit committee member through simple random sampling	The study results indicated that AIS factors have a significant influence on IAE.	There may be a lack of detailed understanding regarding the specific AIS components or functionalities that have the most significant impact on IAE.
Abdullah and Mustafa (2020)	Factors impact on internal audit effectiveness (IAE) in Kurdistan Iraq	Data were collected from 15 directors of colleges and 15 internal audit managers at University of Duhok. The relationship between IAE and three principle factors has been examined using multiple regression analysis	Findings reflect that management support for IAE perceived effectiveness of internal audit from both directors of colleges and internal auditor's perspective. Management support is related to occupy experienced and trained staff, providing sufficient resources. However, this study found insignificant relationship	Small sample size: 15 directors and 15 internal audit managers might not be enough for robust statistical analysis and generalizable conclusions.

			between independence of the internal audit and internal audit effectiveness	
Nugroho Uzliawati and Taqi (2021)	effect of audit quality, the size of the internal audit, and the competency of auditors with management support as moderating variables on the effectiveness of internal audit.	The research population was internal auditors who worked in State-Owned Enterprises (SOE) in the Finance and Insurance Sector. The data used was primary data with a sample of 62 respondents with the snowball method of data collection	The results of the study show that audit quality and auditor competency have a positive effect and management support moderate the effect of audit quality on internal audit effectiveness.	Small sample size: 62 respondents might not be enough for robust statistical analysis and generalizable conclusions. Snowball sampling: This method can introduce bias by relying on existing networks and potentially excluding diverse perspectives
Yanti, Sari, Ghazali and Astrina (2022)	Effect of Management Support, Competence, Organizational Culture and Professional Ethics on the Effectiveness of Internal Audit	The type of research used is associative research. The data used are primary data. The population in this study is the internal audit in the State-Owned Enterprises (BUMN) in Palembang City as many as 32 respondents. Data collection techniques are using interviews and questionnaires. The data analysis	The results of this study show that management support, competence, organizational culture and professional ethics significantly influence the effectiveness of internal audit.	While valuable, single-city case studies offer limited generalizability compared to larger-scale studies. 32 respondents might not be enough for robust statistical analysis and generalizable conclusions.

	(Case Study on State-Owned Enterprises (BUMN) in Palembang City).	method used in this research is quantitative analysis.		
Ratmono and Darsono (2022)	Factors influencing (determinants) the effectiveness of the internal audit function in Indonesian local government organizations	The research samples were 137 respondents. This study used primary data in the form of a questionnaire	The results of statistical tests showed that independence, competence, and management support could increase the effectiveness of the internal audit function. However, this cooperative relationship does not moderate the influence of competence and management support on the effectiveness of internal audit.	The study doesn't mention the amount of variance left unexplained, leaving room for exploring additional influencing factors.
Temesgen and Estifanos (2018)	Identifying main determinants of internal audit effectiveness in Gurage zone local Administrations.	Descriptive and explanatory research design was considered. The survey includes 60 respondents; using simple random sampling Woredas were selected and all units of each selected were included. The researcher collected data from	The results of the model show that quality of internal audit, independency of internal audit and proficiency of internal auditors are positively affecting internal audit effectiveness.	60 respondents might not be enough for robust statistical analysis and generalizable conclusions.

		primary sources. The primary data has been collected by distributing five scale likert scale questioner to the sampled respondent.		
Musah (2018)	Factors that determine internal audit effectiveness among SOEs in Ghana.	The surveyed internal auditors, accountants and management of these sampled SOEs in Ghana.	The results of the study showed that management support for internal audit function is the most significant determinants of internal audit effectiveness. The study also revealed that size of internal audit unit, competence of internal audit staff, independence of internal audit unit as well as good relationship between internal and external auditors were significant determinants of internal audit effectiveness.	Findings might not translate directly to other countries or types of organizations with different contexts and internal audit frameworks.
Joshi (2020)	Identify the determinants that affect the effectiveness of	A sample of 300 listed companies was drawn. Questionnaires were mailed to the head of audit department, internal audit managers,	The study indeed encourages internal auditors to develop their core skills and competencies in the area of risk assessment and	The overall response rate to the questionnaires is relatively low at 28.3%. A low response rate may raise concerns about the

	internal auditing for listed firms in India	internal auditor and head of accounts of each company. The overall response rate was 28.3%. The results were derived by applying multiple regression method and the three determinants turned out to be significant	Big Data and Analytics for delivering better services to the auditees, the board of directors and the AC members.	representativeness of the sample and the generalizability of the findings.
Barkhordar et al. (2021)	Factors that influencing the internal auditing effectiveness and then evaluating the role of this department in risk management and internal controls of Keshavarzi bank	This research is applied and a descriptive. Required data were collected from 78 bank experts in different organizational categories including internal auditors and inspectors, senior managers and experts in charge of Keshavarzi bank by questionnaire in 2019. The research hypotheses were analyzed by using SPSS software and the statistical method of Smart PLS software with structural equation modeling.	The results showed that the factors of internal auditing independence, internal auditor's competence, management support of internal audit, internal auditing size and the relationship of internal and independent auditors had a significant positive effect on the effectiveness of internal auditing.	The study does not thoroughly investigate the reasons behind this lack of significant impact on risk management.
Almahuzi (2020)	Effectiveness of internal audits in the	Data were gathered using a mixed methods approach consisting of	The findings showed that the key external factors affecting internal	Self-reported data from internal auditors and managers

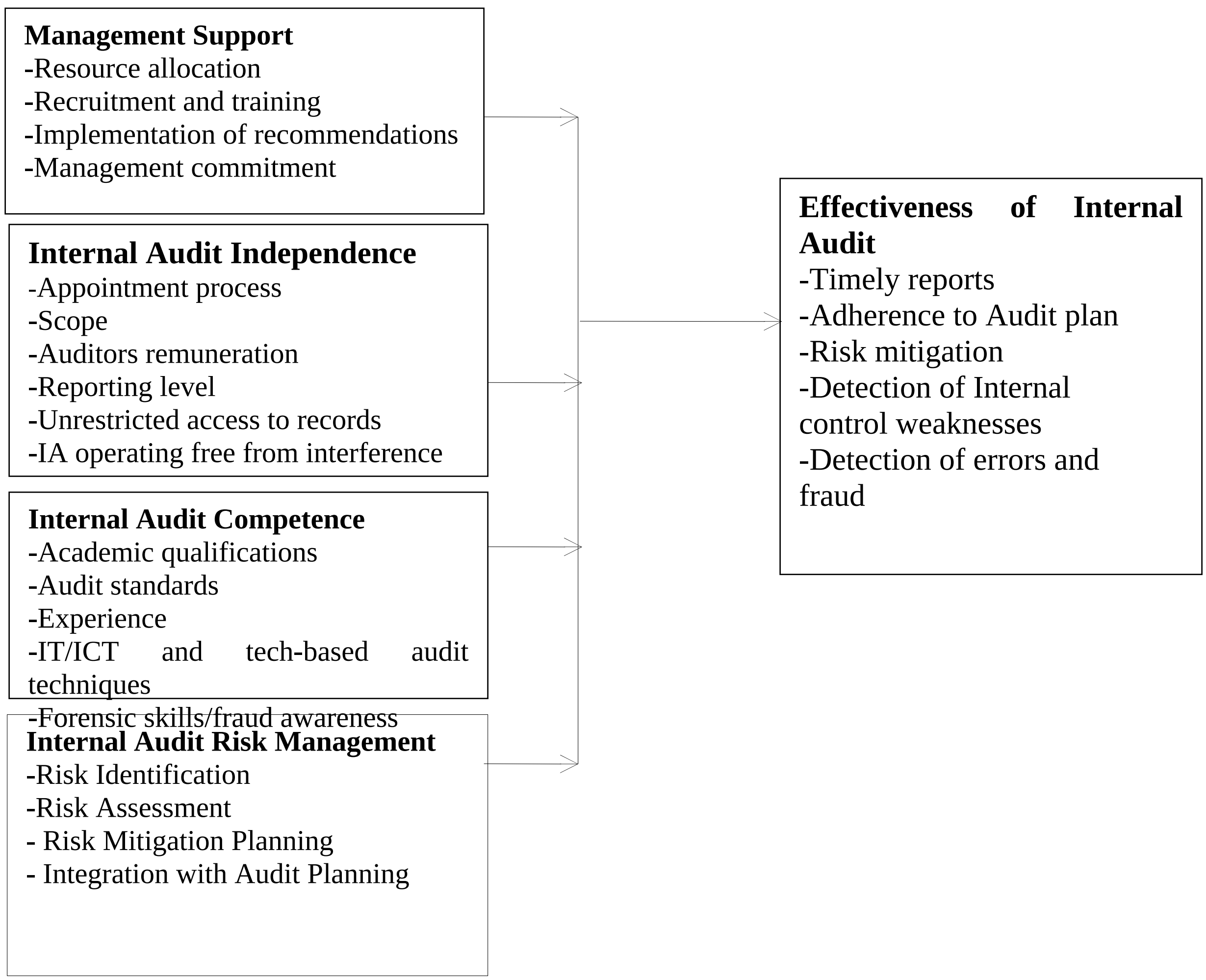
	Saudi Arabian public sector.	semi-structured interviews and a questionnaire. A total of 36 semi-structured interviews was conducted to gain the participants' views on the nature of internal audits in the Saudi public sector and of the issues affecting the effectiveness of the audits	audit effectiveness were top management support, organisational culture and independence of the internal audit. The first ordinary least squares (OLS) regression model indicated that, of these external factors, top management support was the most significant impacting internal audit effectiveness. The second OLS regression model suggested that, of the internal factors, the competence of internal auditors was the primary driver of internal audit effectiveness.	might introduce bias influenced by perception or reluctance to criticize practices.
Kukuiah (2019)	Factors that influence internal audit effectiveness in the Ghanaian Public Sector. To	To sample the respondents for the study, purposive and stratified random sampling techniques were adopted and questionnaire was used to solicit information from 130 internal auditors in the study area.	The study found out that, independence of internal auditors, competence of internal auditors and control environment have significant positive influence on internal audit	Focusing on the Ghanaian Public Sector restricts generalizability to other public sectors or countries with different cultural, political, or economic contexts.

			effectiveness in the public sector in the Central Region.	
Ganji et al. (2023)	Impact of effectiveness of internal audit on the quality of internal audit in companies listed in TSE.	The questionnaire method has been employed to examine the said topic. The questionnaire's primary source of information was the Accounting and Auditing Organizations for Islamic Financial Institutions (AAOIFI) Governance Standards.	The study has found that the effective execution of internal Shariah audit is positively linked with the competency and performance of internal Shariah audit. Meanwhile, the other two variables, i.e. being independent and Shariah supervisory board have been discovered to be positively related with internal Shariah audit effectiveness. Nonetheless, there is no significant contribution	While the study utilized structural equation modeling (SEM) to analyze the data, there was methodological limitations associated with this approach, such as model misspecification or sample size requirements.
Ta and Doan (2022)	Four factors affecting internal audit effectiveness in Vietnam, namely, independence of internal audit, the competence of	Quantitative and qualitative evaluations were conducted, including a logistics regression model and other analyses, using SPSS software. Through semi-structured in-depth interviews and an online survey, 144 responses	The results revealed two factors (independence of internal auditor and management support for internal audit) with a positive influence on internal audit effectiveness, whereas the competence of internal auditors	While the study employed both quantitative and qualitative evaluations, there may be methodological limitations associated with the use of a logistics regression model and SPSS software.

	internal auditors, management support for internal audit, and quality of internal audit work	were obtained from internal Vietnamese auditors of nonfinancial companies listed on the Vietnamese stock market in 2021.	and quality of internal audit work did not affect internal audit effectiveness.	
Alqudah, Amran and Hassan (2019)	Factors affecting internal audit effectiveness in the Ethiopian private commercial banks.	The study used primary sources of data through questionnaires. A cross-sectional survey design was employed, purposive sampling method was used and data were collected using structured questionnaires	The study found that there existed significant positive relationships between the factors (Independence and objectivity of internal auditors, Competency of internal audit staffs, Existence of audit committees) and internal audit effectiveness.	The study focuses only on Ethiopian private commercial banks, limiting generalizability to other countries or types of organizations. The study employed purposive sampling, which may introduce sample selection bias and limit the generalizability of findings.

2.6 Conceptual framework

A conceptual framework helps the reader to quickly see the proposed relationships between the variables in the study and show the same graphically. In this study, management support, internal audit independence, internal audit competence and internal audit risk management are the independent variables while effectiveness of internal audit is the dependent.



Independent variables **Dependent Variable**

Figure 2.1: Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

A formal overview of the analysis methods to be carried out in this proposal is provided in this chapter. It covers the following areas; research philosophy, research design, study area, target population, sample size and sampling techniques, data collection instruments and procedures, piloting, validity and reliability of research instruments, data analysis and ethical considerations.

3.2 Study Area

The study was conducted in Western Region, Kenya region comprising of counties of Kakamega, Vihiga, Busia and Bungoma. The region has 15 registered Deposit taking Saccos. The Saccos are Invest and Grow Sacco, Wevasity Sacco, Afya Sacco, Police Sacco, Ukulima, Mwalimu National, Kussco sacco, Mudete Sacco in Kakamega County; Vihiga County Farmers Sacco and Vihiga County Sacco in Vihiga County; Faridi Sacco and Elimu Sacco in Busia County; Ng'arisha Sacco, Metropolitant Sacco, Stawisha Sacco in Bungoma County.

3.3 Research Design

Research design is a blueprint that guides the process of research from the formulation of the research questions and hypotheses to reporting the research findings (Sekaranm &

Bougie, 2011). This study adopted a descriptive survey design and causal design. A descriptive survey is usually concerned with describing a population with respect to important variables with the major emphasis being establishing the relationship between the variables (Essendi, 2013). The research design attempted to explain the reasons and sources of the observed events, characteristics and correlations. In this research design, the researcher has no control over the independent variables. The study took the effect and examining the data to establish the causes, relationships or associations and their meanings. The study investigated how the dependent variable was influenced by the independent variable.

3.4 Target Population

Sekaran and Bougie (2011) defines population as the entire group of people, events or objects of interest that the researcher is to investigate. The population of this study comprised of 15 deposits taking SACCOs in Kenya (SASRA, 2020). The study targeted 129 internal auditors, accountants, finance officers and chief executive officers in all the 15 DT-SACCOS as shown in Table 3.1. The distribution per Sacco is as shown in Appendix II.

Table 3. 1: Target Population

Population Units	Population
Internal Auditors	39
Accountants	45
Finance Officers	30
Chief Executive Officers	15
Total	129

Source: SASRA (2023)

3.5 Sample Design and Sampling Procedure

Sampling is the process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group (Fancera, 2023). Krejcie and Morgan formular will be used to determine the population

$$S = \frac{X^2 NP(1-P)}{d^2 (N-1) + X^2 P(1-P)}$$

Where

S is the desired sample size

X^2 is the table value of chi-square for one degree of freedom at desired confidence level which is 1.96x 1.96= 3.841

N is the population size

P is the population proportion assumed to be 0.5 since this will provide maximum sample size and d is the degree of accuracy expressed as a proportion 0.05

$$S = \frac{3.8416 \text{ X } 129 \text{ X } 0.5 (1- 0.5)}{0.05^2 (129-1) + 3.8416 \text{ X } 0.5(1- 0.5)} = 96.76007498 = 97$$

Respondents.

Stratified random sampling was used to select 97 respondents from a target of 129 as shown in Table 3.2.

Table 3. 2: Sample Size

Population Units	**Target Population**	**Sample Size**
Internal Auditors	39	29
Accountants	45	34
Finance Officers	30	23
Chief Executive Officers	15	11
Total	129	**97**

3.7 Data Collection Instruments and Procedures

3.7.1 Data Type

Primary data was used for the study. Primary data, gathered firsthand by researchers, holds immense value in providing fresh insights and original perspectives. Primary data offers direct access to unfiltered information from the target population, allowing researchers to delve into the nuances of the research topic.

3.7.2 Data Collection Instruments

Primary data was collected through a self-administered structured questionnaire. The use of primary data collected through self-administered structured questionnaires holds substantial merit in the realm of research. The control, cost-efficiency, time savings, minimized bias, and wide geographic reach make this method a valuable tool for researchers seeking reliable and comprehensive data. The questionnaire was subdivided into three parts. Part 1 consisted of statements aimed at obtaining general information of the respondents while Part 2 consisted of closed ended statement aimed at obtaining data on specific study independent variables and part 3 solicited information on effectiveness of auditing of SACCOs. A five-point Likert-type scale ranging from 1(Strongly Disagree) to 5 (Strongly Agree) was used.

3.7.3 Data Collection Procedures

Primary data collection instruments were mainly the questionnaires. To increase the response rate, the questionnaires were administered to the respondents by five (5) trained research assistants via drop and pick method. In addition, an introductory letter from the university and a research permit from the NACOSTI accompanied the research questionnaires. The letters explained the purpose of the study and also assure respondents of the confidentiality of the data that was collected from them.

3.8 Reliability and Validity of Instruments

A pilot study was conducted on a sample of 2 Deposit Taking Saccos representing 10% of the entire sample size as recommended by Lowe (2019) in Nairobi County. The study piloted 10 respondents who were excluded from the main study sample. This took two weeks prior to actual data collection. The results of the pilot study permitted preliminary testing of the hypotheses that leads to testing more precise hypotheses in the main study.

3.8.1 Reliability of the Instruments

Reliability is a measure of degree to which a research instrument yields consistent results or data after accepted trials. To measure the reliability, Cronbach Alpha technique was employed. Cronbach alpha coefficient was estimated from the response using statistical package for social scientist (SPSS). According to Ahmad, Yussiff and Mustapha (2015), Cronbach’s alpha of is excellent, is good, is acceptable, is poor, and is unacceptable. large value of alpha (preferably greater than 0.7) indicated a high level of consistence of the instruments in measuring the variables which this study was adopt.

3.8.2 Validity of the Instrument

Validity can be defined as the extent to which a measuring instrument provides adequate coverage of the topic under study or in simple terms, the degree of relevance the instruments are towards the research (Cheruiyot, 2021). The study assessed two types of validity namely; construct and content validity. Construct validity is the extent to which the measure 'behaves' in a way consistent with theoretical hypotheses and represents how well scores on the instrument are indicative of the theoretical construct. It involves testing a scale in terms of theoretically derived hypotheses concerning the nature of underlying variables or constructs (Pallant, 2011). Construct validity was tested by use of Factor analysis.

Content validity considers whether or not the items on a given test accurately reflect the theoretical domain of the latent construct it claims to measure. Items need to effectively act as a representative sample of all the possible questions that could have been derived from the construct. The more the scale items represent the domain of the concept being measured, the greater the content validity (Lamm, Lamm & Edgar, 2020). To effectively evaluate content validity, Ismail and Zubairi (2022) suggest the use of a panel of experts. Expert judgment of content was employed using supervisors and other experts from the school of Business and Economics, Masinde Muliro University of Science and

Technology and measured by use of content validity index (CVI). (Flake, Davidson, Wong & Pek, 2022) recommends a content validity index of above 0. 7 as acceptable.

3.9 Data Analysis

Waguthii (2021) refers to data processing as the operations performed on a certain set of data with the view of extracting the required information in an appropriate form such as diagrams, reports, tables amongst others. According to them, data analysis is a process of creating order, structure and meaning to the data collected. Anderson and Cole (2023) postulates that once data has been collected, the researcher must be able to interpret it reliably. The procedure encompasses grouping of questionnaires, editing and coding of responses and then running the processed data using the Statistical Package for Social Sciences (SPSS) tool. Both the descriptive statistics (frequencies, percentages and means) and inferential statistics (correlation and regressions) were used to analyze the data collected with significance level of 0.05. The findings were presented in form of tables and models. Simple linear regression equation was written as follows for each independent variable;

$Y = \alpha + \beta_1 \mathbf{X_1} + \varepsilon$

$Y = \alpha + \beta_1 \mathbf{X_2} + \varepsilon$

$Y = \alpha + \beta_1 \mathbf{X_3} + \varepsilon$

$Y = \alpha + \beta_1 \mathbf{X_4} + \varepsilon$

Where Y is the dependent variable (Effectiveness of internal audit),

β_0 is the regression constant,

β_1, β_2, β_3 and β_4 are the coefficients of independent variables,

X_1 is Top management support

X_2 is Internal audit independence

X_3 is Internal audit competence

X_4 is Internal audit risk management

ε is error term

The multiple regression equation was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where Y is the dependent variable (Effectiveness of internal audit),

β_0 is the regression constant,

β_1, β_2, β_3 and β_4 are the coefficients of independent variables,

X_1 is Top management support

X_2 is Internal audit independence

X_3 is Internal audit competence

X_4 is Internal audit risk management

ε is error term

3.9.1. Multiple Regression Model Assumptions

Prior to conducting inferential statistics, diagnostic analyses were performed to test the assumption of Pearson correlation and multiple regression analyses. This is as follows.

Normality tests: Normality tests are statistical procedures employed to assess whether a set of data follows a normal distribution. In the context of regression analysis, these tests are applied to the residuals obtained from the regression model. There are various normality tests, each with its own strengths and weaknesses. Three common tests include the Shapiro-Wilk test, the Kolmogorov-Smirnov test, and the Anderson-Darling test. Ghasemi and Zahedias (2012) recommend that normality be assessed visually using Q-Q plot to show departure from the approximation to the line of fit which will be adopted in this study.

Multicollinearity: In the context of regression analysis, multicollinearity refers to the situation where two or more independent variables in a model are highly correlated, making it challenging to discern the individual effect of each variable on the dependent variable. The presence of multicollinearity does not impact the overall fit of the model, as measured by the coefficient of determination (R-squared), but it severely hampers the precision and reliability of the estimated coefficient. To check for multi-collinearity Variance Inflation Factor and Tolerance level was used. A VIF of less than 10 or a tolerance level of greater than 0.1 is acceptable

Test of Linearity is a core assumption in regression analysis that stipulates the existence of a linear relationship between the independent variables and the dependent variable. Linearity testing serves as a diagnostic tool to assess whether the relationship between the independent and dependent variables conforms to the assumption of linearity. Detecting violations of linearity is crucial for ensuring the validity and reliability of regression analysis. If the linearity assumption is not met, the model may produce biased parameter estimates, leading to inaccurate interpretations and conclusions. In this study all predictor variables were examined to confirm if they had significant correlation with the dependent variable using Pearson correlation analysis and scatter plot.

3.10 Ethical Consideration

The research work was carried out in accordance with set ethical standards which are of utmost importance especially when human subjects are involved. These ethical considerations ensured that professionalism was upheld during research work which included; Respecting anonymity, privacy and confidentiality of respondents, avoiding deceptions or exaggerations, treating participants with dignity, avoiding or declaring conflict of interest e.g. that related to funding, honesty and transparency. No pressure or inducement of any kind was applied to encourage an individual to become a research subject. The relevant persons, authorities and committees were consulted and a research permit will be obtained from NACOSTI.

All research work were consistent with the ethical standards of the respondents and intellectual property rights was respected through strict acknowledgement of sources of information and their authors. Scientific dishonesty which includes plagiarism, fabrication and falsification, faulty data gathering procedures and misleading authorship were avoided at all cost.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents results of the analysis, findings and discussions based on the objective of the study which was to examine antecedents of internal audit effectiveness among Deposit Taking Saccos in Western Kenya. Specifically, the study examined the influence of management support, internal audit independence, Internal audit competence and internal audit risk management on the internal audit effectiveness of Saccos in Western Kenya. This chapter presented empirical findings and results using descriptive analysis, Pearson correlation and regression analysis. Data was collected using questionnaires, and then it was coded and analyzed based on each independent variable using the Statistical Package for the Social Science (SPSS) and was discussed and presented using tables and models.

4.2 Response Rate

In this study, a total of 97 questionnaires were administered to the sampled respondents, 74 were successfully completed by the respondents which is a response rate of 76.3% of the total questionnaires. Richard (2005) observed that the Australian Vice Chancellors' committee and graduate careers council of Australia (2001) regarded an overall institutional response rate for the course experience questionnaire of at least 70% to be both desirable and achievable. The response rate of 76.3% which was attained during this study is acceptable because it is above the 60%.

4.3 Reliability and Validity Tests

4.3.1 Reliability Test

For reliability tests Cronbach alpha was applied for each variable which had a range 0.717 to 0.811 thus for this, Cronbach alpha statistic with a value of 0.7 or more was considered reliable. The test items were retained and used in this study hence considered reliable as shown in the Table 4.1.

Table 4. 1: Reliability.

Variable	N	Cronbach alpha
Management support	6	0.767
Internal audit independence	8	0.773
Internal audit competence	8	0.826
Internal audit risk management	8	0.843
Internal audit effectiveness	8	0.877

Source: Primary Data (2024)

4.3.2 Validity Test

In order to ascertain content validity, the questionnaires were constructed with the aid of the researcher's supervisor. The contents and impressions of the instruments were improved based on the advice from the supervisor. The questionnaire was constructed in a way that they related to each question. This ensured that all research questions were covered. The comments from the supervisor were incorporate in the questionnaires before the final administration of the instruments on the participants of the study.

Table 4. 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.812
Bartlett's Test of Sphericity	Approx. Chi-Square	913.569
	Df	45
	Sig.	.000

Source: Primary Data (2024)

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy assesses the suitability of data for conducting a factor analysis. It ranges from 0 to 1, where values closer to 1 indicate that the data are highly suitable for factor analysis. In this case, the KMO value of 0.812 suggests that the dataset is adequate for factor analysis, indicating that the variables are sufficiently correlated for meaningful interpretation. The test statistic is 913.569 with 45 degrees of freedom. The associated significance value (Sig.) of .000 indicates that the correlation matrix is significantly different from an identity matrix, suggesting that the variables are interrelated and suitable for factor analysis.

Table 4. 3: Communalities

Communalities	Initial	Extraction
Internal audit is performed in accordance with the IIA Standards (ISPPIA)	1.000	.677
Internal audit makes appropriate recommendations for improving the organizational processes	1.000	.722
Internal audit develops appropriate annual audit plans	1.000	.773
Internal audit assesses that organizational missions are consistent with organizational objectives	1.000	.606
Internal audit improves organizational productivity	1.000	.558
Internal audit reviews the effectiveness and efficiency of operations and programs	1.000	.760
Internal audit communicates timely the engagement results	1.000	.839
Internal audit establishes a follow-up process to ensure that corrective actions have been effectively implemented	1.000	.902
Internal audit evaluates and improves the effectiveness of risk management and governance process	1.000	.815
Internal audit reviews the reliability and integrity of financial information	1.000	.852
Extraction Method: Principal Component Analysis.		

Source: Primary Data (2024)

The initial communalities for all variables are 1.000, indicating that each variable initially explained all of its own variance. The values of the communalities after extraction range from .558 to .902, suggesting that the extracted components account for a substantial portion of the variance in each variable. Higher communalities indicate that the variable is well-represented by the extracted components, while lower communalities suggest that additional factors may be influencing the variable. Overall, these results suggest that the variables are suitable for further analysis using PCA, as the extracted components explain a significant portion of the variance in each variable.

Table 4. 4: Component Matrix

	Component Factor Loadings
Internal audit is performed in accordance with the IIA Standards (ISPPIA)	.823
Internal audit makes appropriate recommendations for improving the organizational processes	.850
Internal audit develops appropriate annual audit plans	.879
Internal audit assesses that organizational missions are consistent with organizational objectives	.778
Internal audit improves organizational productivity	.747
Internal audit reviews the effectiveness and efficiency of operations and programs	.872
Internal audit communicates timely the engagement results	.916
Internal audit establishes a follow-up process to ensure that corrective actions have been effectively implemented	.950
Internal audit evaluates and improves the effectiveness of risk management and governance process	.903
Internal audit reviews the reliability and integrity of financial information	.923
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

Source: Primary Data (2024)

These results present the factor loadings for each variable after conducting Principal Component Analysis (PCA) to extract components. Factor loadings represent the correlation between each variable and the extracted component. They indicate the strength and direction of the relationship between the variables and the underlying factors identified by PCA. Higher factor loadings indicate stronger associations between variables and components. In this case, the factor loadings range from .747 to .950 for the single component extracted which were above 0.4. Each variable shows a strong positive correlation with the extracted component, suggesting that they are all closely related to the underlying factor identified by PCA. This suggests that the identified component represents a coherent construct capturing various aspects of internal audit effectiveness.

4.4 Descriptive Information on Demographics

The demographic information of the respondents is considered very crucial not only for subsequent discussions of the findings but also for the authenticity and generalization of the results. This section, therefore, presents respondents' background information which is considered crucial for discussions in this study such as gender, age, education level and the duration in the current position. The results on demographic information are shown in Table 4.5.

Table 4. 5: Descriptive Information on Demographics

Characteristics (N=74)	Indicator	Frequency	Percentage
Gender	Male	59	79.7
	Female	15	20.3
Age	Below 25 years	0	0.00
	25-34 years	11	14.9
	35-44 years	43	58.1
	45-54 years	14	18.9
	Over 55 years	6	8.1
Education Level	Certificate	0	0.00
	Diploma	20	27
	Degree	38	51.4
	Post Graduate	16	21.6
	Others	0	0.00
Working Experience	1-5 years	2	2.7
	6-10 years	29	39.2
	11-15 years	35	47.3
	Over 15 years	8	10.8

Source: Primary Data (2024)

From Table 4.5, majority of the sampled respondents were male as shown by 79.7% of the respondents while female was 20.3%. This gender imbalance could impact the perspectives, experiences, and decision-making processes within internal audit functions, highlighting the importance of considering gender diversity in audit teams to enhance effectiveness and inclusivity.

The results further revealed that 14.9% of respondents were between 25 and 34 years, 58.1% were between 35 and 44 years, between 45 and 54 years were 18.9% while 8.1% were over 55 years. The majority of respondents falling within the age range of 35 to 44 years (58.1%) indicates that mid-career professionals play a significant role in internal audit effectiveness. This age group may possess a balance of experience and adaptability, potentially contributing to the effectiveness of audit processes and practices.

In terms of education level, majority of the respondents were having bachelor’s degree as indicated by 51.4% while diplomas were 27.0%. Post graduates were 21.6% of the respondents. Professionals with bachelor's degrees and postgraduate qualifications may possess the analytical skills, critical thinking abilities, and specialized knowledge necessary to excel in audit roles and drive organizational improvement.

Lastly, majority of the respondents have been found to be working in their current position for between 11 and 15 years as shown by 47.3%, between 6 and 10 years were 39.25 and over 15 years were 10.8%. However, between 1 and 5 years were 2.7% of the respondents. The majority of respondents (47.3%) have been in their current positions for between 11 and 15 years, indicating a relatively stable and experienced workforce. Longer tenure may contribute to greater institutional knowledge, familiarity with organizational processes, and proficiency in performing audit responsibilities, thereby enhancing internal audit effectiveness.

4.5 Descriptive statistics

Descriptive analysis for this section used percentages, frequencies, means and standard deviation to show the response from the respondents as shown in the tables below for each variable. The respondents were required to state their level of agreement on various statements on each variable. The level of agreement ranged from 1-strongly disagree, 2-disagree, 3-fairly agreed, 4-agree and 5- strongly agree. The results are as follows.

4.4.1 Management support and Internal audit effectiveness

The sampled respondents were provided with 10 statements related to Management support. Percentages are in parenthesis. The results are as presented in Table 4.6.

Table 4. 6: Management support

No	Management support	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Mean	S.D
1	Senior management supports internal audit to perform its duties and responsibilities.	37.8 (28)	41.9 (31)	14.9 (11)	1.4 (1)	4.1 (3)	4.08	0.98
2	Management takes timely corrective action based on internal audit recommendations.	40.5 (30)	29.7 (22)	9.5 (7)	16.2 (12)	4.1 (3)	3.86	1.23
3	The response to internal audit reports by the senior management is reasonable	36.5 (27)	35.1 (26)	12.2 (9)	10.8 (8)	5.4 (4)	3.86	1.19
4	Management supports IA by providing training in order to improve their skill and update with the field.	35.1 (26)	37.8 (28)	13.5 (10)	9.5 (7)	4.1 (3)	3.91	1.11
5	Management take timely corrective action based on internal audit recommendations	32.4 (24)	48.6 (36)	8.1 (6)	6.8 (5)	4.1 (3)	3.99	1.03
6	Senior management is aware of internal audit's needs/ basic resources	37.8 (28)	37.8 (28)	8.1 (6)	12.2 (9)	4.1 (3)	3.93	1.15
7	Internal audit department has sufficient staff to successfully carry out its responsibilities	41.9 (31)	29.7 (22)	13.5 (10)	10.8 (8)	4.1 (3)	3.95	1.17
8	There is management commitment to strengthen internal audit division	35.1 (26)	44.6 (33)	10.8 (8)	5.4 (4)	4.1 (3)	4.01	1.027
9	Senior management supports internal audit to perform its duties and responsibilities.	36.5 (27)	40.5 (30)	13.5 (10)	4.1 (3)	5.4 (4)	3.99	1.079
10	The management uses the recommendations, criticisms and information provided by internal auditor for decision making.	44.6 (33)	29.7 (22)	9.5 (7)	12.2 (9)	4.1 (3)	3.99	1.188

Source: Primary Data (2024)

From Table 4.6, a significant proportion (37.8% strongly agree, 41.9% agree) indicates support from senior management for internal audit functions, with minimal disagreement (1.4% disagree, 4.1% strongly disagree). The mean score of 4.08 and standard deviation of 0.98 suggest strong agreement with low variability in perceptions. This indicates a positive organizational culture that values and supports internal audit, which can contribute to improved effectiveness and efficiency in audit processes. While a considerable portion (40.5% strongly agree, 29.7% agree) perceives management's timely corrective action, some respondents (16.2% disagree, 4.1% strongly disagree) express reservations. The mean score of 3.86 and standard deviation of 1.23 suggest moderate agreement with variability in perceptions. This underscores the importance of prompt action on audit recommendations to address identified issues and improve organizational processes.

A significant majority (36.5% strongly agree, 35.1% agree) perceives the response to internal audit reports by senior management as reasonable, with minimal disagreement (5.4% disagree, 10.8% strongly disagree). The mean score of 3.86 and standard deviation of 1.19 suggest strong agreement with low variability in perceptions. This indicates effective communication and collaboration between internal audit and senior management, facilitating constructive responses to audit findings. While a notable proportion (35.1% strongly agree, 37.8% agree) acknowledges management's support through training, some respondents (9.5% disagree, 4.1% strongly disagree) express reservations. The mean score of 3.91 and standard deviation of 1.11 suggest moderate agreement with variability in perceptions. This highlights the importance of investing in the professional development of internal audit staff to enhance their capabilities and keep them abreast of evolving practices and standards.

A significant majority (32.4% strongly agree, 48.6% agree) perceives management's timely corrective action, with minimal disagreement (6.8% disagree, 4.1% strongly disagree). The mean score of 3.99 and standard deviation of 1.03 suggest strong agreement with low variability in perceptions. This underscores the importance of proactive management response to address audit findings promptly and effectively. A considerable portion (37.8% strongly agree, 37.8% agree) perceives senior management's awareness of internal audit's needs, with minimal disagreement (8.1% disagree, 12.2% strongly disagree). The mean score of 3.93 and standard deviation of 1.15 suggest strong agreement with low variability in perceptions. This indicates effective communication and support from senior management, facilitating the provision of necessary resources for internal audit functions.

While a notable majority (41.9% strongly agree, 29.7% agree) perceives the sufficiency of internal audit staff, some respondents (13.5% disagree, 10.8% strongly disagree) express reservations. The mean score of 3.95 and standard deviation of 1.17 suggest strong agreement with low variability in perceptions. This highlights the importance of adequate staffing to ensure the effectiveness and efficiency of internal audit functions. A significant proportion (35.1% strongly agree, 44.6% agree) acknowledges management's commitment to strengthening the internal audit division, with minimal disagreement (5.4% disagree, 4.1% strongly disagree). The mean score of 4.01 and standard deviation of 1.027 suggest strong agreement with low variability in perceptions. This indicates a proactive approach from management in enhancing internal audit functions to meet organizational objectives.

A significant majority (36.5% strongly agree, 40.5% agree) perceives senior management's support for internal audit functions, with minimal disagreement (4.1% disagree, 5.4% strongly disagree). The mean score of 3.99 and standard deviation of 1.079 suggest strong agreement with low variability in perceptions. This indicates a consistent level of support from senior management, which can positively influence internal audit effectiveness and efficiency. While a considerable proportion (44.6% strongly agree, 29.7% agree) perceives management's use of internal audit information for decision-making, some respondents (12.2% disagree, 4.1% strongly disagree) express reservations. The mean score of 3.99 and standard deviation of 1.188 suggest strong agreement with variability in perceptions. This underscores the importance of leveraging internal audit insights to inform strategic decision-making processes within the organization.

4.4.2 Internal audit independence and Internal audit effectiveness

The sampled respondents were provided with 10 statements related to Internal audit independence. The pertinent results are as shown in Table 4.7.

Table 4. 7: Internal audit independence

No	Internal audit independence	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Mean	S.D
1	Internal audit staff assignments are rotated periodically	33.8 (25)	27 (20)	21.6 (16)	8.1 (6)	9.5 (7)	3.68	1.28
2	Internal audit staff are not requested to perform non-audit functions	31.1 (23)	21.6 (16)	12.2 (9)	25.7 (19)	9.5 (7)	3.39	1.40
3	Internal Auditor has free and unrestricted access to all operations, personnel, assets and transaction records	35.1 (26)	23 (17)	23 (17)	10.8 (8)	8.1 (6)	3.66	1.29
4	Internal auditors feel free to include any audit findings in their audit reports.	37.8 (28)	24.3 (18)	17.6 (13)	9.5 (7)	10.8 (8)	3.69	1.35
5	Internal audit is free from intervention in performing its duties	27 (20)	20.3 (15)	20.3 (15)	16.2 (12)	16.2 (12)	3.26	1.43
6	Internal audit staff is sufficiently independent in performing their professional obligations and duties	33.8 (25)	21.6 (16)	17.6 (13)	18.9 (14)	8.1 (6)	3.54	1.35
7	Internal audit staff does not assess specific operations for which they were previously responsible	35.1 (26)	18.9 (14)	20.3 (15)	17.6 (13)	8.1 (6)	3.55	1.35
8	Internal audit staff has free access to all information, departments and employees in the organization	36.5 (27)	13.5 (10)	17.6 (13)	20.3 (15)	12.2 (9)	3.42	1.462
9	Internal auditors feel free to include any audit finding in their audit work and directly report to responsible body	35.1 (26)	23 (17)	14.9 (11)	16.2 (12)	10.8 (8)	3.55	1.396
10	Internal audit provides reports to the board of directors (audit committee)	39.2 (29)	17.6 (13)	20.3 (15)	13.5 (10)	9.5 (7)	3.64	1.371

Source: Primary Data (2024)

The results in Table 4.7, A notable portion (33.8% strongly agree, 27% agree) supports the periodic rotation of internal audit staff assignments, indicating a perceived enhancement of independence. However, a considerable proportion (17.6% disagree, 9.5% strongly disagree) expresses reservations. The mean score of 3.68 and standard deviation of 1.28 suggest moderate agreement with variability in perceptions. This highlights the importance of periodic rotation to mitigate potential conflicts of interest and enhance independence. While a significant percentage (31.1% strongly agree, 21.6% agree) acknowledges the non-performance of non-audit functions by internal audit staff, there is notable disagreement (25.7% disagree, 9.5% strongly disagree). The mean score of 3.39 and standard deviation of 1.40 suggest moderate agreement with variability in perceptions. This underscores the importance of ensuring that internal audit functions remain distinct from non-audit activities to preserve independence and objectivity.

A substantial majority (35.1% strongly agree, 23% agree) affirm the free and unrestricted access of internal auditors. However, a notable proportion (10.8% disagree, 8.1% strongly disagree) expresses reservations. The mean score of 3.66 and standard deviation of 1.29 suggest moderate agreement with variability in perceptions. This underscores the importance of ensuring unrestricted access to facilitate thorough audit processes and maintain independence. While a considerable percentage (37.8% strongly agree, 24.3% agree) perceives internal auditors' freedom to include audit findings, some respondents (10.8% disagree, 9.5% strongly disagree) express doubts. The mean score of 3.69 and standard deviation of 1.35 suggest moderate agreement with variability in perceptions. This highlights the importance of fostering a culture of openness and transparency in reporting audit findings to ensure the integrity of audit reports.

A significant portion (27% strongly agree, 20.3% agree) perceives internal audit as free from intervention. However, a notable proportion (16.2% disagree, 16.2% strongly disagree) expresses skepticism. The mean score of 3.26 and standard deviation of 1.43 suggest moderate agreement with variability in perceptions. This underscores the importance of safeguarding internal audit independence from undue influence to maintain the integrity of audit processes. While a significant percentage (33.8% strongly agree, 21.6% agree) views internal audit staff as sufficiently independent, there is notable disagreement (18.9% disagree, 8.1% strongly disagree). The mean score of 3.54 and standard deviation of 1.35 suggest moderate agreement with variability in perceptions. This indicates a need for continuous efforts to strengthen and maintain the independence of internal audit staff to ensure the effectiveness of audit functions.

A notable proportion (35.1% strongly agree, 18.9% agree) supports the non-assessment of specific operations previously handled by internal audit staff, indicating a perceived enhancement of independence. However, some respondents (17.6% disagree, 8.1% strongly disagree) express reservations. The mean score of 3.55 and standard deviation of 1.35 suggest moderate agreement with variability in perceptions. This highlights the importance of avoiding conflicts of interest and ensuring impartiality in audit assessments. While a significant majority (36.5% strongly agree, 13.5% agree) affirms internal audit staff's free access, some respondents (20.3% disagree, 12.2% strongly disagree) express doubts. The mean score of 3.42 and standard deviation of 1.462 suggest moderate agreement with variability in perceptions. This underscores the importance of ensuring unfettered access to facilitate thorough audit processes and maintain independence.

A notable portion (35.1% strongly agree, 23% agree) perceives internal auditors' freedom to include audit findings and report directly to the responsible body, indicating a perceived enhancement of independence. However, some respondents (16.2% disagree, 10.8% strongly disagree) express reservations. The mean score of 3.55 and standard deviation of 1.396 suggest moderate agreement with variability in perceptions. This highlights the importance of ensuring internal auditors' autonomy in reporting to uphold the integrity of audit processes. While a significant majority (39.2% strongly agree, 17.6% agree) acknowledges internal audit's provision of reports to the board of directors, some respondents (13.5% disagree, 9.5% strongly disagree) express reservations. The mean score of 3.64 and standard deviation of 1.371 suggest moderate agreement with variability in perceptions. This underscores the importance of transparent reporting mechanisms to ensure accountability and oversight in audit processes.

4.4.3 Internal audit competence

The sampled respondents were provided with 10 statements related to Internal audit competence. The relevant results are as shown in Table 4.8.

Table 4. 8: Internal audit competence

No	Internal audit competence	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Mean	S.D
1	Internal auditors have adequate professional knowledge on the overall activities of the department.	37.8 (28)	24.3 (18)	5.4 (4)	31.1 (23)	1.4 (1)	3.66	1.31
2	Internal auditors are proficient in planning on risk-based Internal auditing	41.9 (31)	21.6 (16)	1.4 (1)	28.4 (21)	6.8 (5)	3.64	1.44
3	Internal auditors are capable in techniques on control assessment and risk analysis	45.9 (34)	25.7 (19)	1.4 (1)	23 (17)	4.1 (3)	3.86	1.33
4	Internal auditors undertake continuous professional development training per annual.	47.3 (35)	18.9 (14)	4.1 (3)	25.7 (19)	4.1 (3)	3.80	1.37
5	Internal audit obtains a sufficient budget to successfully carry out its duties.	45.9 (34)	37.8 (28)	8.1 (6)	6.8 (5)	1.4 (1)	4.20	0.95
6	Internal auditors have a deep professional knowledge on the overall activities of the department.	45.9 (34)	37.8 (28)	6.8 (5)	5.4 (4)	4.1 (3)	4.16	1.05
7	The audit department or division has progressed in terms of appropriately qualified or professional staff.	39.2 (29)	28.4 (21)	0 ()	28.4 (21)	4.1 (3)	3.70	1.35
8	Internal auditors are proactive (controlling a situation rather than just responding).	37.8 (28)	25.7 (19)	2.7 (2)	29.7 (22)	4.1 (3)	3.64	1.361
9	Internal auditors attend educational seminars for continuous training	33.8 (25)	24.3 (18)	8.1 (6)	29.7 (22)	4.1 (3)	3.54	1.336
10	There is communication between internal auditors and auditees	48.6 (36)	27 (20)	5.4 (4)	17.6 (13)	1.4 (1)	4.04	1.176

Source: Primary Data (2024)

From Table 4.8, A significant portion (37.8% strongly agree, 24.3% agree) perceive internal auditors as possessing adequate professional knowledge. However, a considerable proportion (31.1% disagree, 1.4% strongly disagree) express doubts. The mean score of 3.66 and standard deviation of 1.31 suggest moderate agreement with notable variability in perceptions. This indicates a need for further assessment and potential improvement in the professional knowledge of internal auditors. While a majority (41.9% strongly agree, 21.6% agree) view internal auditors as proficient in risk-based internal auditing planning, there is notable disagreement (28.4% disagree, 6.8% strongly disagree). The mean score of 3.64 and standard deviation of 1.44 suggest moderate agreement with considerable variability in perceptions. This indicates a potential gap in the proficiency of internal auditors in risk-based auditing planning, requiring attention and potential training interventions.

A substantial majority (45.9% strongly agree, 25.7% agree) recognize the capability of internal auditors in control assessment and risk analysis techniques. However, a notable proportion (23% disagree, 4.1% strongly disagree) express reservations. The mean score of 3.86 and standard deviation of 1.33 suggest moderate agreement with variability in perceptions. This highlights the need for continuous skill development and refinement of techniques among internal auditors to address potential gaps in capabilities. A significant majority (47.3% strongly agree, 18.9% agree) acknowledge internal auditors' commitment to annual continuous professional development training. However, a notable portion (25.7% disagree, 4.1% strongly disagree) express doubts. The mean score of 3.80 and standard deviation of 1.37 indicate moderate agreement with variability in perceptions. This underscores the importance of ensuring consistent and effective professional development opportunities for internal auditors to enhance their competencies.

A majority (45.9% strongly agree, 37.8% agree) affirm the adequacy of the internal audit budget. Only a small percentage (6.8% disagree, 1.4% strongly disagree) express disagreement. The mean score of 4.20 and standard deviation of 0.95 suggest high agreement with minimal variability in perceptions. This indicates a positive perception of resource allocation for internal audit activities, contributing to their effectiveness and efficiency. A substantial majority (45.9% strongly agree, 37.8% agree) perceive internal auditors as possessing deep professional knowledge. However, a small percentage (5.4% disagree, 4.1% strongly disagree) express doubts. The mean score of 4.16 and standard deviation of 1.05 indicate high agreement with minimal variability in perceptions. This suggests a strong perception of internal auditors' expertise in departmental activities, which can positively impact audit effectiveness.

A notable portion (39.2% strongly agree, 28.4% agree) recognize progress in the audit department's staff qualifications. However, some respondents (28.4% disagree, 4.1% strongly disagree) express skepticism. The mean score of 3.70 and standard deviation of 1.35 suggest moderate agreement with variability in perceptions. This underscores the importance of ongoing efforts to enhance the qualifications and professionalism of audit staff. While a significant proportion (37.8% strongly agree, 25.7% agree) view internal auditors as proactive, there is notable disagreement (29.7% disagree, 4.1% strongly disagree). The mean score of 3.64 and standard deviation of 1.361 suggest moderate agreement with variability in perceptions. This highlights the need for internal auditors to enhance their proactive approach to auditing practices to address potential areas of concern before they escalate.

A substantial majority (33.8% strongly agree, 24.3% agree) acknowledge internal auditors' participation in educational seminars for continuous training. However, some respondents (29.7% disagree, 4.1% strongly disagree) express doubts. The mean score of 3.54 and standard deviation of 1.336 suggest moderate agreement with variability in perceptions. This underscores the importance of ensuring consistent opportunities for continuous training and professional development. A significant majority (48.6% strongly agree, 27% agree) recognize effective communication between internal auditors and auditees. However, some respondents (17.6% disagree, 1.4% strongly disagree) express reservations. The mean score of 4.04 and standard deviation of 1.176 indicate moderate agreement with variability in perceptions. This highlights the importance of fostering open and transparent communication channels between internal auditors and auditees to facilitate effective audit processes.

4.4.4 Internal audit risk management

The sampled respondents were provided with 10 statements related to Internal audit risk management. The relevant results are as shown in Table 4.9.

Table 4. 9: Internal audit risk management

No	Internal audit risk management	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Mean	S.D
1	Internal audit assesses that risk responses are appropriate and align with the Sacco's risk appetite.	25.7 (19)	35.1 (26)	16.2 (12)	21.6 (16)	1.4 (1)	3.62	1.13
2	Internal audit evaluates the potential for the occurrence of fraud and how the organization manages fraud risk	40.5 (30)	45.9 (34)	9.5 (7)	2.7 (2)	1.4 (1)	4.22	0.83
3	There is consideration of risk assessment in the detection of errors	35.1 (26)	16.2 (12)	18.9 (14)	28.4 (21)	1.4 (1)	3.55	1.27
4	Risk identification and management is a responsibility of all employees of the organization	32.4 (24)	29.7 (22)	13.5 (10)	20.3 (15)	4.1 (3)	3.66	1.24
5	Risk is analyzed, level is identified by the impact/likelihood e.g. high, medium, low.	33.8 (25)	28.4 (21)	29.7 (22)	6.8 (5)	1.4 (1)	3.86	1.01
6	Risk Based audit Annual plans are done by the Management	44.6 (33)	21.6 (16)	9.5 (7)	23 (17)	1.4 (1)	3.85	1.26
7	In the organization, risk assessment is a continuous and permanent process.	40.5 (30)	39.2 (29)	6.8 (5)	12.2 (9)	1.4 (1)	4.05	1.05
8	Risk matrix is available and shows degrees of likelihood and impact and plots risk scores.	33.8 (25)	21.6 (16)	23 (17)	20.3 (15)	1.4 (1)	3.66	1.185
9	Implementation of strategies agreed upon aimed at reducing risk factors annually after discussion with management	43.2 (32)	31.1 (23)	10.8 (8)	13.5 (10)	1.4 (1)	4.01	1.104
10	Risk monitoring is carried out to identify errors in Internal audit independence	39.2 (29)	25.7 (19)	20.3 (15)	13.5 (10)	1.4 (1)	3.88	1.122

Source: Primary Data (2024)

From Table 4.6, a substantial proportion of respondents (25.7% strongly agree, 35.1% agree) acknowledge that risk responses are aligned with the Sacco's risk appetite. This indicates a general satisfaction with risk assessment practices within the organization. The mean score of 3.62, with a standard deviation of 1.13, suggests moderate agreement with this statement, indicating room for improvement. A significant majority (40.5% strongly agree, 45.9% agree) recognize the organization's efforts in evaluating and managing fraud risk. This high level of agreement (with a mean score of 4.22 and a standard deviation of 0.83) underscores the effectiveness of fraud risk management practices.

While a notable portion (35.1% strongly agree, 16.2% agree) acknowledge the consideration of risk assessment in error detection, there is a significant segment expressing disagreement (28.4% disagree, 21.6% strongly disagree). This indicates potential gaps in risk assessment processes, highlighting the need for improvement. The mean score of 3.55, with a standard deviation of 1.27, suggests some variability in perceptions. A sizeable proportion (32.4% strongly agree, 29.7% agree) affirm that risk identification and management are shared responsibilities among all employees. However, the presence of disagreement (20.3% disagree, 15% strongly disagree) indicates possible inconsistencies in understanding or implementation. The mean score of 3.66 and standard deviation of 1.24 suggest moderate agreement with some variability in opinions.

A considerable number (33.8% strongly agree, 28.4% agree) recognize the organization's practice of analyzing risk levels based on impact and likelihood. This indicates a structured approach to risk analysis. The mean score of 3.86, with a standard deviation of 1.01, suggests a relatively high level of agreement with minimal variability. A significant majority (44.6% strongly agree, 21.6% agree) acknowledge that management is responsible for developing risk-based audit annual plans. This indicates a top-down approach to audit planning, ensuring alignment with organizational objectives. The mean score of 3.85, with a standard deviation of 1.26, suggests a relatively high level of agreement with some variability in perceptions.

A substantial proportion (40.5% strongly agree, 39.2% agree) recognize risk assessment as an ongoing process within the organization. This emphasizes the importance of continual risk monitoring and management. The mean score of 4.05 and standard deviation of 1.05 indicate a high level of agreement with minimal variability, reflecting a shared understanding among respondents. While a significant portion (33.8% strongly agree, 21.6% agree) affirm the availability of a risk matrix, there is notable disagreement (20.3% disagree, 15% strongly disagree). This suggests inconsistencies in the availability or usability of risk assessment tools. The mean score of 3.66, with a standard deviation of 1.185, indicates moderate agreement with some variability in perceptions.

A considerable majority (43.2% strongly agree, 31.1% agree) acknowledge the implementation of risk reduction strategies after discussions with management. This highlights a collaborative approach to risk management and decision-making. The mean score of 4.01 and standard deviation of 1.104 suggest a high level of agreement with minimal variability, indicating a shared understanding among respondents. A notable portion (39.2% strongly agree, 25.7% agree) affirm the practice of risk monitoring to identify errors in internal audit independence. This underscores the organization's commitment to maintaining the integrity and objectivity of internal audit processes. The mean score of 3.88 and standard deviation of 1.122 suggest a moderate level of agreement with some variability in perceptions.

4.4.5 Internal audit effectiveness

The sampled respondents were provided with 8 statements related to internal audit effectiveness of county government. The relevant results are as shown in Table 4.10.

Table 4. 10: Internal audit effectiveness

No	Internal audit effectiveness	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Mean	S.D
1	Internal audit is performed in accordance with the IIA Standards (ISPPIA)	40.5 (30)	44.6 (33)	10.8 (8)	4.1 (3)	0 (0)	4.22	0.80
2	Internal audit makes appropriate recommendations for improving the organizational processes	37.8 (28)	37.8 (28)	5.4 (4)	13.5 (10)	5.4 (4)	3.89	1.21
3	Internal audit develops appropriate annual audit plans	39.2 (29)	29.7 (22)	8.1 (6)	23 (17)	0 (0)	3.85	1.18
4	Internal audit assesses that organizational missions are consistent with organizational objectives	32.4 (24)	21.6 (16)	16.2 (12)	27 (20)	2.7 (2)	3.54	1.27
5	Internal audit improves organizational productivity	33.8 (25)	50 (37)	10.8 (8)	5.4 (4)	0 (0)	4.12	0.81
6	Internal audit reviews the effectiveness and efficiency of operations and programs	40.5 (30)	33.8 (25)	14.9 (11)	10.8 (8)	0 (0)	4.04	1.00
7	Internal audit communicates timely the engagement results	41.9 (31)	33.8 (25)	18.9 (14)	5.4 (4)	0 (0)	4.12	0.91
8	Internal audit establishes a follow-up process to ensure that corrective actions have been effectively implemented	37.8 (28)	29.7 (22)	8.1 (6)	24.3 (18)	0 (0)	3.81	1.190
9	Internal audit evaluates and improves the effectiveness of risk management and governance process	36.5 (27)	33.8 (25)	6.8 (5)	23 (17)	0 (0)	3.84	1.159
10	Internal audit reviews the reliability and integrity of financial information	36.5 (27)	35.1 (26)	20.3 (15)	8.1 (6)	0 (0)	4.00	0.951

Source: Primary Data (2024)

From Table 4.10, a substantial portion, comprising 40.5%, strongly agreed that internal audit is performed in accordance with the IIA Standards (ISPPIA), while an additional

44.6% agreed with this statement. This indicates a general consensus among respondents regarding adherence to standards, as reflected in the relatively high mean score of 4.22 and a standard deviation of 0.80, suggesting a moderate level of agreement.

Similarly, regarding the appropriateness of recommendations made by internal audit for improving organizational processes, respondents exhibited a mixed response. While 37.8% strongly agreed and an equal percentage agreed with the statement, a notable proportion (13.5%) expressed disagreement. This variation is reflected in the mean score of 3.89, with a relatively high standard deviation of 1.21, indicating a wider range of opinions among respondents.

Moreover, concerning the development of annual audit plans, a substantial portion (39.2%) strongly agreed, while 29.7% agreed with the statement. Notably, 23% disagreed, highlighting a disparity in perceptions. The mean score of 3.85, coupled with a standard deviation of 1.18, underscores the variability in responses, suggesting differing opinions among respondents regarding the effectiveness of this aspect of internal audit.

Additionally, in assessing the consistency of organizational missions with objectives, opinions varied widely among respondents. While 32.4% strongly agreed and 21.6% agreed with the statement, a significant proportion (27%) expressed disagreement. This divergence is evident in the mean score of 3.54 and a relatively high standard deviation of 1.27, indicating a lack of consensus among respondents regarding this aspect of internal audit effectiveness.

Furthermore, regarding internal audit's role in improving organizational productivity, respondents demonstrated a more consistent perception. A notable majority, comprising 83.8%, either strongly agreed or agreed with the statement, reflecting a high level of consensus. This is corroborated by the mean score of 4.12 and a low standard deviation of 0.81, suggesting widespread agreement among respondents regarding the effectiveness of internal audit in enhancing productivity.

The responses concerning the review of the effectiveness and efficiency of operations and programs indicated a notable consensus among respondents. A considerable percentage, comprising 40.5%, strongly agreed, while an additional 33.8% agreed with the statement. This overwhelming agreement is reflected in the high mean score of 4.04 and a moderate standard deviation of 1.00, suggesting a high level of concurrence among respondents regarding this aspect of internal audit performance.

Likewise, regarding the timely communication of engagement results by internal audit, respondents exhibited a strong consensus. A significant majority, comprising 41.9%, strongly agreed, and an additional 33.8% agreed with the statement. This widespread agreement is supported by the high mean score of 4.12 and a relatively low standard deviation of 0.91, indicating a high level of agreement and consistency among respondents regarding the importance of timely communication in internal audit activities.

However, in terms of establishing a follow-up process to ensure that corrective actions have been effectively implemented, respondents' opinions were more divided. While

37.8% strongly agreed and 29.7% agreed with the statement, a substantial proportion (24.3%) disagreed. This divergence in opinions is reflected in the mean score of 3.81 and a relatively high standard deviation of 1.190, indicating a wide range of perspectives among respondents regarding the necessity and effectiveness of follow-up processes in internal audit.

Similarly, regarding the evaluation and improvement of the effectiveness of risk management and governance processes by internal audit, respondents' opinions were somewhat varied. While 36.5% strongly agreed and 33.8% agreed with the statement, a notable proportion (23%) expressed disagreement. This variation is evident in the mean score of 3.84 and a standard deviation of 1.159, indicating a degree of uncertainty or disagreement among respondents regarding the role of internal audit in risk management and governance.

Lastly, concerning the review of the reliability and integrity of financial information by internal audit, respondents generally exhibited a high level of agreement. A considerable majority, comprising 36.5%, strongly agreed, and an additional 35.1% agreed with the statement. This consensus is reflected in the high mean score of 4.00 and a relatively low standard deviation of 0.951, indicating a high level of agreement among respondents regarding the importance and effectiveness of internal audit in ensuring the reliability and integrity of financial information.

4.6 Assumption of Linear Regression

The assumption of linear regression in this study included test for normality using Shapiro-Wilk, auto-correlation using Durbin-Watson and multi-Collinearity test. The results are as follows.

4.6.1 Normality

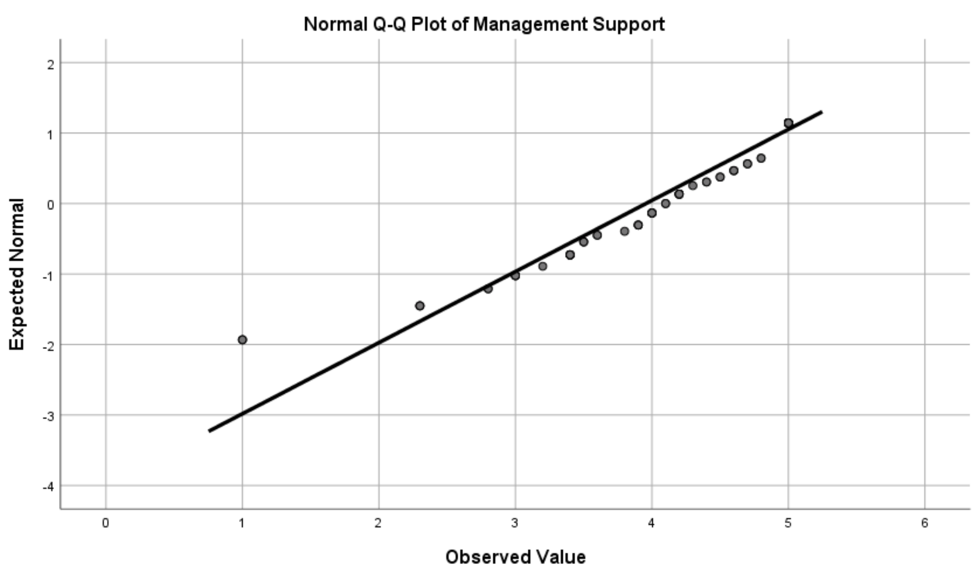
The tests of normality, specifically the Kolmogorov-Smirnov and Shapiro-Wilk tests, assess whether the distribution of data for each variable follows a normal distribution. Normality is an assumption often required for certain statistical analyses.

Table 4. 11: Kolmogorov-Smirnova and Shapiro-Wilk

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**Df**	**Sig.**
Management Support	.146	74	.000	.879	74	.000
Internal Audit Independence	.133	74	.002	.906	74	.000
Internal Audit Competence	.149	74	.000	.872	74	.000
Internal Audit Risk Management	.111	74	.024	.926	74	.000
Internal Audit Effectiveness	.175	74	.000	.875	74	.000
a. Lilliefors Significance Correction						

Source: Primary Data (2024)

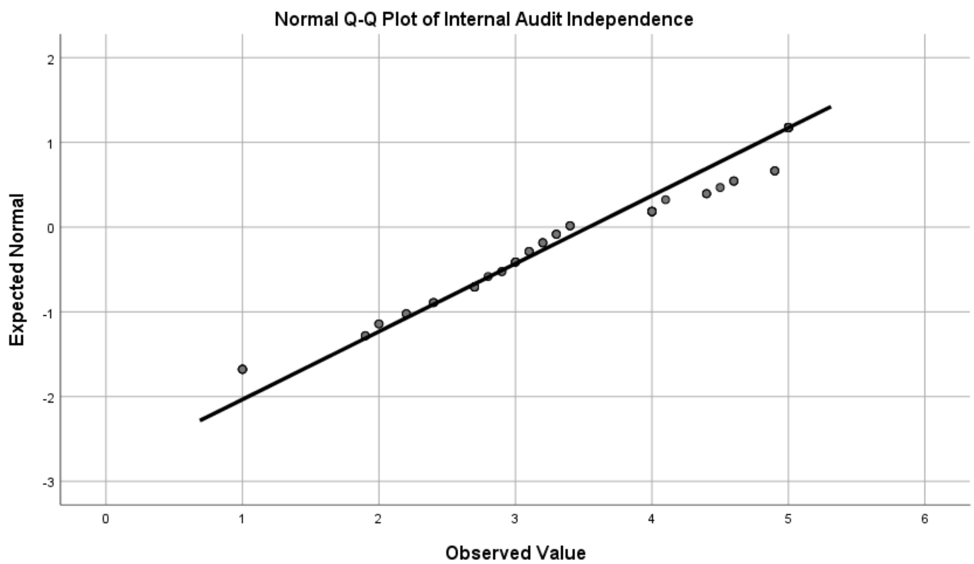
For the variable "Management Support," both the Kolmogorov-Smirnov and Shapiro-Wilk tests resulted in statistically significant values ($p < .05$), indicating that the data significantly deviate from a normal distribution. Similarly, for the variables "Internal Audit Independence," "Internal Audit Competence," "Internal Audit Risk Management," and "Internal Audit Effectiveness," both tests yielded significant results, suggesting non-normal distributions for these variables as well. Ghasemi and Zahedias (2012) recommend that normality be assessed visually. From Figure 4.1, normal Q-Q plot of Management support the deviation from normality was not much as from the approximation to the line of fit. Therefore, the data was near normal distribution and hence could be used in a regression analysis.



Source: Primary Data (2024)

Figure 4. 1: Normal Q-Q plot of Management support

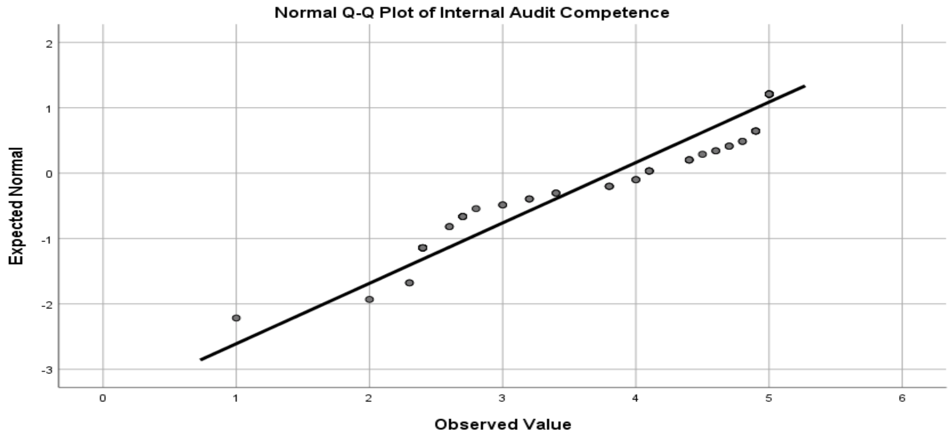
From Figure 4.2, normal Q-Q plot of Internal audit independence the deviation from normality was not significant as from the approximation to the line of fit. Hence, the data had almost normal distribution and hence could be used for parametric test such as linear regression.



Source: Primary Data (2024)

Figure 4. 2: Normal Q-Q plot of Internal audit independence

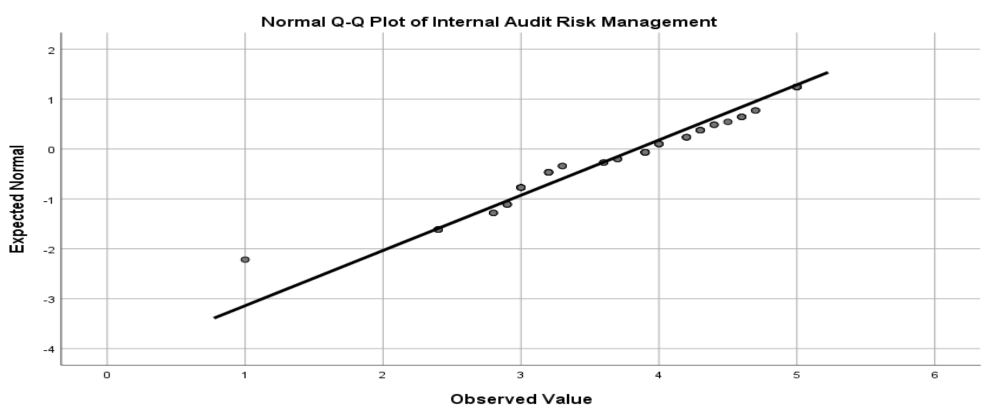
From Figure 4.3, normal Q-Q plot of Internal audit competence departure from normality was not great as from the approximation to the line of fit. Hence, the data had near normal distribution and hence could be used for parametric test such as linear regression.



Source: Primary Data (2024)

Figure 4. 3: Normal Q-Q plot of Internal audit competence

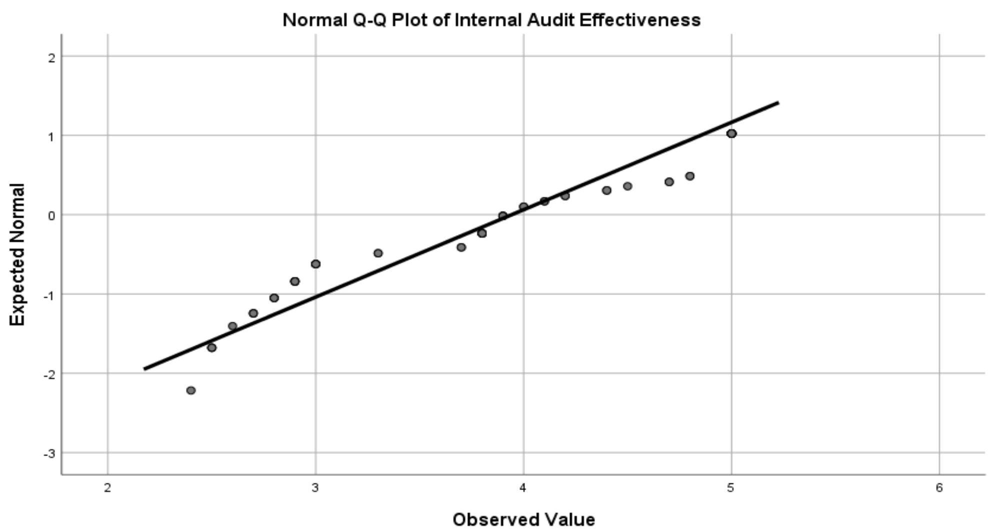
From Figure 4.4 Normal Q-Q plot of Internal audit risk management the departure from normality was not much as from the approximation to the line of fit. Thus, the data was near normal distribution and hence could be used for parametric tests.



Source: Primary Data (2024)

Figure 4. 4: Normal Q-Q plot of Internal audit risk management

From Figure 4.5 Normal Q-Q plot of internal audit effectiveness the departure from normality was not much as from the approximation to the line of fit. Thus, the data was near normal distribution and hence could be used in a regression analysis.



Source: Primary Data (2024)

Figure 4. 5: Normal Q-Q plot of Internal audit effectiveness

4.6.2 Auto-correlation

Table 4. 12: Autocorrelation Test for Regression

Std. Error of the Estimate	Durbin-Watson
.51335	2.317

Source: Primary Data (2024)

Test of independence was done by the use of Durbin-Watson. It tests that the residuals from a linear regression or multiple regression are independent. When Durbin-Watson factors are between (1.5) and (2.5) there is no autocorrelation problem (Alsaeed, 2005) from table 4.12 the Durbin Watson value is between 1.5 and 2.5 hence there was no problem of autocorrelation.

4.6.3 Multi-Collinearity Test

Multicollinearity problem cause ability to define any variable to diminish owing to their interrelationship. According to Besley 1980 as sighted in (Jingyu li, 2003) researchers have used VIF= 10 as critical value rule of thumb to determine whether there is too much correlation. The VIF value in the table 4.13, are less than 10 so there is no multi-Collinearity problem in study variables.

Table 4. 13: Multi-Collinearity

Independent variable	Tolerance	VIF
Management support	0.763	1.311
Internal audit independence	0.660	1.515
Internal audit competence	0.488	2.048
Internal audit risk management	0.393	2.546

Source: Primary Data (2024)

4.7 Pearson Correlation Results

The correlation coefficient (r) results are presented as shown in Table 4.14 using Pearson correlation analysis, which computes the direction (Positive/negative) and the strength (Ranges from -1 to +1) of the relationship between two continues or ratio/scale variables.

Table 4. 14: Multiple Correlation Matrix

		MS	IAI	IAC	IARM
MS: Management support	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	74			
IAI: Internal audit independence	Pearson Correlation	.349**	1		
	Sig. (2-tailed)	.002			
	N	74	74		
IAC: Internal audit competence	Pearson Correlation	.418**	.277*	1	
	Sig. (2-tailed)	.000	.017		
	N	74	74	74	
IARM: Internal audit risk management	Pearson Correlation	.413**	.543**	.686**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	74	74	74	74
Internal audit effectiveness	Pearson Correlation	.554**	.611**	.632**	.750**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	74	74	74	74

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Source: Primary Data (2024)

From the correlation Table 4.14, Management support is positively correlated to internal audit effectiveness the coefficient is 0.554 (p value < 0.01) this is significant at 95% confidence level. Thus, increase in Management support would make internal audit effectiveness to increase in same direction. The results are supported by a study by Smith et al. (2018) found a significant positive relationship between management support and internal audit effectiveness in a sample of multinational corporations. The researchers concluded that increased support from top management positively influenced the effectiveness of internal audit functions. Contrary to the findings presented, a study by Lee and Kim (2019) found no significant relationship between management support and internal audit effectiveness in a sample of small and medium-sized enterprises. The researchers suggested that other factors, such as organizational culture and resource allocation, may play a more influential role in determining audit effectiveness.

Similarly, the correlation coefficient for Internal audit independence was 0.611, P=0.000, suggesting that there is significant positive relationship between internal audit independence and internal audit effectiveness of Saccos in Western Kenya. Increase in Internal audit independence would result to increase in internal audit effectiveness. Research conducted by Johnson and Brown (2019) examined the relationship between internal audit independence and audit effectiveness in the banking sector and reported similar results. Their findings supported a significant positive correlation between independence and effectiveness, suggesting that greater independence led to improved audit outcomes. However, Research by Garcia and Perez (2018) examined the relationship between internal audit independence and effectiveness in the public sector. Their study did not find a significant correlation between independence and effectiveness, indicating that other factors may be more influential in driving audit outcomes within this context.

Similarly, a correlation coefficient of 0.632** implied that there is significant positive relationship between Internal audit competence and internal audit effectiveness. The results are in agreement with Wang and Li (2020) conducted a study on internal audit competence and its impact on organizational performance in Chinese companies. Their results indicated a significant positive relationship between audit competence and effectiveness, with higher levels of competence associated with better audit outcomes. On the other hand, a study by Zhang et al. (2021) investigated the relationship between internal audit competence and effectiveness in the healthcare industry. Their findings did not support a significant positive correlation between competence and effectiveness, suggesting that other organizational factors may have a greater impact on audit outcomes.

Lastly, there is significant positive relationship between Internal audit risk management and internal audit effectiveness of Saccos in Western Kenya as indicated by .750**, p=0.000. This implies that increase in Internal audit risk management would results to increase in internal audit effectiveness. The results are supported by by Chen et al. (2017) focusing on internal audit risk management practices, the researchers found that effective risk management within internal audit functions was positively associated with overall audit effectiveness. Their findings supported the idea that robust risk management processes contributed to better audit outcomes. Contrarily, in a study by Patel and Patel (2019) focusing on internal audit risk management practices in manufacturing firms, the researchers found mixed results regarding the relationship between risk management and effectiveness. While some aspects of risk management were positively associated with audit outcomes, others showed no significant correlation, indicating a complex relationship between risk management and effectiveness.

4.8 Simple Linear Regression

Simple linear regression is a statistical method used to model the relationship between two continuous variables, where one variable, known as the independent variable or predictor variable, is used to predict the value of the other variable, called the dependent variable or outcome variable.

4.8.1 Influence of Management support on internal audit effectiveness of Saccos in Western Kenya

The first objective of the study was to determine the influence of management support on internal audit effectiveness of Saccos in Western Kenya. This objective sought to test first null hypothesis which posits H_{01}**:** Management support has no significant influence on internal audit effectiveness of Saccos in Western Kenya. Regression analysis was used to tell the amount of variance accounted for by one variable in predicting another variable. Regression analysis was conducted to find the proportion in the dependent variable (internal audit effectiveness) which can be predicted from the independent variable (Management support). Table 4.15 shows the analysis results.

Table 4.15: Regression Results of Management support and Internal audit effectiveness

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.554[a]	.306	.297	.76140

a. Predictors: (Constant), Management support

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	18.441	1	18.441	31.811	.000[b]
	Residual	41.740	72	.580		
	Total	60.182	73			

a. Dependent Variable: Internal audit effectiveness

b. Predictors: (Constant), Management support

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.937	.366		5.287	.000
	Management support	.507	.090	.554	5.640	.000

a. Dependent Variable: Internal audit effectiveness

Source: Primary Data (2024)

From the Table 4.15 above the value of R square was 0.306 this shows that management support explains 30.6% of variance in internal audit effectiveness of Saccos in Western Kenya. From the ANOVA table significance of the model has a value F (1,72) =31.811, P<0.05 this shows that it's significant at 95% confidence level hence the model is significant. This implies that management support is a useful predictor of internal audit effectiveness among Deposit Taking Saccos in Western Kenya. The simple linear regression equation is as shown below

Y=1.937+0.507 Management support

The unstandardized regression coefficient value of Management support was 0.507 and significance level of $P<0.05$. This indicated that a unit change in Management support would result to significant change in internal audit effectiveness by 0.507 in same direction. The results are supported by the work of Suleiman, Hamad and Yussuf (2021) who indicated that management support to internal auditing have influencing the effectiveness of internal audit services at the Ministry of finance Zanzibar. Further, Abrar (2020) revealed that management support (funding, response to audit finding and staff training) are key factors affecting internal audit effectiveness. Dyhati and Wahyudi (2022) revealed that Management support has a direct impact on effectiveness of internal audit. However, Mohammed and Mohammed (2021) revealed that top management support contributes insignificantly towards internal audit effectiveness. The study also revealed that the current regulatory framework in Ghana is ineffective towards helping internal auditors in discharging their duties. Saputra, Winarningsih and Puspitasari (2020) indicated that top management support directly does not have a significant effect on the effectiveness of internal audit.

4.8.2 Influence of Internal audit independence on internal audit effectiveness of Saccos in Western Kenya

The second objective of the study was to analyze the influence of internal audit independence on internal audit effectiveness of Saccos in Western Kenya. This objective sought to test second null hypothesis which posits H_{02}**:** Internal audit independence has no significant influence on internal audit effectiveness of Saccos in Western Kenya.

Regression analysis was conducted to find the proportion in the dependent variable (internal audit effectiveness) which can be predicted from the independent variable (Internal audit independence). Table 4.16 shows the analysis results.

Table 4.16: Regression Results of Internal audit independence and Internal audit effectiveness

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.611[a]	.373	.365	.72365

a. Predictors: (Constant), Internal audit independence

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.477	1	22.477	42.922	.000[b]
	Residual	37.704	72	.524		
	Total	60.182	73			

a. Dependent Variable: Internal audit effectiveness
b. Predictors: (Constant), Internal audit independence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.370	.254		9.312	.000
	IAI	.445	.068	.611	6.552	.000

a. Dependent Variable: Internal audit effectiveness, IAI-Internal audit independence

Source: Primary Data (2024)

From the table 4.12 above the value of R square was 0.373 which implies that up to 37.3% change in internal audit effectiveness of Saccos in Western Kenya is significantly accounted for by their internal audit independence. From the ANOVA result, the significance of the model has a value F (1,72) =42.922, P<0.05 which shows that the model is significant 95.0% confidence level. This postulates that internal audit independence is a useful predictor of internal audit effectiveness. The simple linear regression equation is as shown below

$$Y=2.370+0.445 \text{ Internal audit independence}$$

The unstandardized regression coefficient value of Internal audit independence was 0.445 and significance level of $P<0.05$. This implies that a unit change in internal audit independence would result to significant change in internal audit effectiveness by 0.445 in the same direction. These findings compare favorably with Pelser, Mensah and Ngwenya (2020) revealed that, independence of the internal auditing staff have impact on the effectiveness of internal auditing. Alqudah, Amran, Alessa and Almaiah (2023) showed independence, and extrinsic rewards all have a significant influence on the effectiveness of internal auditor. Pham and Nguyen (2021) revealed that internal audit effectiveness in steel enterprises in Vietnam is influenced by various internal factors, including the independence of internal auditor, and the operational bases and methods of internal audit. However, some studies failed to support these results. Sharma and Iselin (2014) investigated the impact of internal audit reporting relationships on audit fees. They found little evidence that the degree of internal audit independence affects internal audit effectiveness. Krishnamoorthy, Lee, and Park (2016) explored the relationship between agency problems, internal audit quality, and earnings management in South Korea. While their results indicate that internal audit quality is linked to internal audit independence, the strength of this relationship varies depending on the type of agency problem.

4.8.3 Influence of Internal audit competence on internal audit effectiveness of Saccos in Western Kenya

The third objective of the study was to analyze the influence of Internal audit competence on internal audit effectiveness of Saccos in Western Kenya. This objective sought to test third null hypothesis which posits H_{03}**:** Internal audit competence has no significant influence on internal audit effectiveness of Saccos in Western Kenya. Regression analysis was conducted to find the proportion in the dependent variable (internal audit effectiveness) which can be predicted from the independent variable (Internal audit competence). Table 4.17 shows the analysis results.

Table 4.17: Regression Results of Internal audit competence and Internal audit effectiveness

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.632[a]	.399	.391	.70874

a. Predictors: (Constant), Internal audit competence

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.015	1	24.015	47.809	.000[b]
	Residual	36.167	72	.502		
	Total	60.182	73			

a. Dependent Variable: Internal audit effectiveness

b. Predictors: (Constant), Internal audit competence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.916	.304		6.294	.000
	Internal audit competence	.530	.077	.632	6.914	.000

a. Dependent Variable: Internal audit effectiveness

Source: Primary Data (2024)

From the table 4.17 above the value of R square was 0.399 this shows that Internal audit competence explains 39.9% of variance in internal audit effectiveness of Saccos in Western Kenya. From the ANOVA table significance of the model has a value $F(1,72) = 47.809$, $P<0.05$ this shows that it's significant at 95% confidence level hence the model is feasible. This implies that Internal audit competence is a useful predictor of internal audit effectiveness among Deposit Taking Saccos in Western Kenya. The simple linear regression equation is as shown below

$$Y=1.916+0.530 \text{ Internal audit competence}$$

The unstandardized regression coefficient value of internal audit competence was 0.530 and significance level of $P<0.05$. This indicated that a unit change in internal audit competence would result to significant change in internal audit effectiveness by 0.530 in the same direction. The results are supported by Afzal (2023) showed that performance, competence, and objectivity factors are statistically positively significant that influenced internal audit quality to improve it. This research helps improve the internal audit quality in Pakistani commercial banks. Mpakaniye (2022) showed that there was a strong positive relationship between the competency of internal auditors and internal audit effectiveness. However, Brown and Taylor (2018) studied 100 US-based credit unions and found no significant difference in audit effectiveness between institutions with high and low levels of internal audit competence. Instead, their research pointed to cultural factors and tone at the top as primary drivers of effective audit functions. Ward and Davis (2016) challenged the notion that internal audit competencies alone determine audit effectiveness. Using a dataset comprising 200 Australian banks, they found that an interaction effect existed between internal audit competencies and management support, implying that the latter might compensate for deficiencies in the former.

4.8.4 Influence of Internal audit risk management on internal audit effectiveness of Saccos in Western Kenya

The fourth objective of the study was to analyze the influence of Internal audit risk management on internal audit effectiveness of Saccos in Western Kenya. This objective sought to test fourth null hypothesis which posits H_{04}: Internal audit risk management has no significant influence on internal audit effectiveness of Saccos in Western Kenya. Regression analysis was conducted to find the proportion in the dependent variable (internal audit effectiveness) which can be predicted from the independent variable (Internal audit risk management). Table 4.18 shows the analysis results.

Table 4.18: Regression Results of Internal audit risk management and Internal audit effectiveness

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.750[a]	.563	.557	.60462
a. Predictors: (Constant), Internal audit risk management				

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	33.861	1	33.861	92.628	.000[b]
	Residual	26.320	72	.366		
	Total	60.182	73			
a. Dependent Variable: Internal audit effectiveness						
b. Predictors: (Constant), Internal audit risk management						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.051	.309		3.405	.001
	Internal audit risk management	.754	.078	.750	9.624	.000
a. Dependent Variable: Internal audit effectiveness						

Source: Primary Data (2024)

From the Table 4.18 above the value of R square was 0.563 which suggests that up to 56.3% variation in internal audit effectiveness of Saccos in Western Kenya is significantly accounted for by Internal audit risk management. From the ANOVA result, the significance of the model has a value F (1,72) =92.628, P<0.05 which shows that the model is significant 95% confidence level. This postulates that Internal audit risk management is a useful predictor of internal audit effectiveness. The simple linear regression equation is as shown below

Y=1.051+0.754 Internal audit risk management

The unstandardized regression coefficient value of Internal audit risk management was 0.754 at 0.05 significance level. This implies that a unit change in Internal audit risk management would result to significant change in internal audit effectiveness by 0.754 in the same direction. These findings support earlier studies that suggest the importance of risk-based auditing in enhancing audit effectiveness. ElHaddad, ElHaddad and Alfadhli (2020) concluded that the internal audit offices and departments of the Libyan universities carry out their activities related to risk management evaluation and add value to the work of the department. Nyerere (2022) established that corporate governance has a controlling effect on the association between risk-based audit and financial performance of DT-SACCOs. However, there are also studies that have questioned the extent of the impact of internal audit risk management on audit effectiveness. For example, Karjalainen and Saari (2016) analyzed the attitudes and behaviors of Finnish chief audit executives regarding risk-based auditing and found that only a few organizations applied it comprehensively. Yusoff (2018) reveled that the adoption of risk-based approach at macro level was not statistically significantly affects the internal audit effectiveness and efficiency. But the adoption of risk-based approach at micro level does contribute a significant impact.

4.9 Multiple Regression Analysis

Objective of this study sought objective of the study was to examine antecedents of internal audit effectiveness among Deposit Taking Saccos in Western Kenya. This was achieved by carrying out standard multiple regression. The study was interested in knowing the effect of each of the antecedents on internal audit effectiveness when all these constructs were entered as a block on the model. The results of multiple linear regression analysis were presented in Table 4.19.

Table 4. 19: Model Summary

Model	R	R Square	Adj R Square	Std. Error of the Estimate	Change Statistics			
					R Sq Change	F Change	df	Sig. F Change
1	.835[a]	.698	.680	.51335	.698	39.841	4,69	.000

a. Predictors: (Constant), Internal audit risk management, Management support, Internal audit independence, Internal audit competence

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.998	4	10.499	39.841	.000[b]
	Residual	18.184	69	.264		
	Total	60.182	73			

a. Dependent Variable: Internal audit effectiveness

b. Predictors: (Constant), Internal audit risk management, Management support, Internal audit independence, Internal audit competence

Source: Primary Data (2024)

The results from the model summary in Table 4.19 give us information on the overall summary of the model. Looking at the R square column, we can deduce that four antecedents accounted for 69.8% significant variance in internal audit effectiveness (R square =.698, P=0.000) implying that 30.2% of the variance in internal audit effectiveness among Deposit Taking Saccos in Western Kenya is accounted for by other variables not captured in this model. In order to assess the significance of the model, simply whether the study model is a better significant predictor of the internal audit effectiveness rather than using mean score which is considered as a guess, the study resorted to F Ratio. From the findings, the F value is more than one, as indicated by a value of 39.841, which means that enhancement as a result of model fitting is much larger than the model errors/inaccuracies that were not used in the model (F (4,69) = 39.841, P=0.000). This implies that the final study model has significant improvement in it is prediction ability of internal audit effectiveness among Deposit Taking Saccos in Western Kenya.

The presented in Table 4.20 shows unstandardized coefficients, standardized coefficients, t statistic and significant values.

Table 4. 20: **Multiple Regression Coefficients**

	Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
	(Constant)	.354	.302		1.173	.245
	Management support	.198	.069	.217	2.860	.006
	Internal audit independence	.204	.059	.280	3.437	.001
1	Internal audit competence	.182	.079	.217	2.287	.025
	Internal audit risk management	.362	.106	.360	3.409	.001

a. Dependent Variable: Internal audit effectiveness

Source: Primary Data (2024)

A regression of the four predictor variables against internal audit effectiveness established the multiple linear regression model as below as indicated in Table 4.20:

Y=0.354 + 0.198 X_1**+0.204** X_2**+0.182** X_3**+ 0.362** X_4

Where Y is the dependent variable (Internal audit effectiveness),

X_1 is Management support

X_2 is Internal audit independence

X_3 is Internal audit competence

X_4 is Internal audit risk management

From the findings presented in Table 4.20, we look at the model results and scan down through the unstandardized coefficients B column. All antecedents had significant effect on the internal audit effectiveness. If the antecedents are held at zero or it is absent, the internal audit effectiveness among Deposit Taking Saccos in Western Kenya would be 0.354, p=0.245.

$H_{01:}$ Management support has no significant influence on internal audit effectiveness of Saccos in Western Kenya.

The results revealed that management support had unique significant contribution to the model with B=.198, p=.006 suggesting that controlling of other variables (Internal audit independence, Internal audit competence and Internal audit risk management) in the model, a unit change in management support would result to significant change in internal audit effectiveness by 0.198 in the same direction. These findings underscore the critical importance of fostering a supportive organizational culture that values and prioritizes internal audit functions. By allocating sufficient resources, investing in staff training and development, actively implementing audit recommendations, and demonstrating strong commitment to audit processes, senior management can enhance the effectiveness and impact of internal audit activities.

The results are supported by the work of Suleiman, Hamad and Yussuf (2021) who indicated that management support to internal auditing have influencing the effectiveness of internal audit services at the Ministry of finance Zanzibar. Further, Abrar (2020) revealed that management support (funding, response to audit finding and staff training) are key factors affecting internal audit effectiveness. Dyhati and Wahyudi (2022) revealed that Management support has a direct impact on effectiveness of internal audit.

On the contrary, there are also studies that do not entirely support the argument that management support significantly impacts internal audit effectiveness. In a case study of six manufacturing companies in Thailand, Sirisrisak and Kumar (2018) found that management support is indeed significant but accounts for only a tiny fraction of internal audit effectiveness. Other factors, such as auditor qualities and assurance service utilization, exert much stronger effects on internal audit effectiveness. Yeh, Huang, and Wang (2020) conducted a study on the relationship between management support and internal audit effectiveness in Chinese state-owned enterprises. Surprisingly, they discovered that management support is weakly related to internal audit effectiveness, and its significance depends on the company's political connections. Nevertheless, the preponderance of evidence supports the proposition that management support significantly influences internal audit effectiveness. Organizations intending to enhance their internal audit functions should invest time and effort in garnering management buy-ins and commitments, as well as supplying adequate resources and training opportunities to internal audit staff.

$H_{02:}$ Internal audit independence has no significant influence on internal audit effectiveness of Saccos in Western Kenya

The coefficient of Internal audit independence was 0.204, which was significant (p=.001) and also positive. When the variance explained by all other variables (Management support, Internal audit competence and Internal audit risk management) in the model is controlled, a unit change in Internal audit independence would result to change in internal audit effectiveness by 0.204 in the same direction. These findings underscore the importance of fostering an environment where internal audit functions operate autonomously and free from undue influence (Author et al., Year). By ensuring independence in appointment processes, defining clear audit scopes, providing adequate remuneration to auditors, granting unrestricted access to records, and minimizing interference in audit operations, organizations can strengthen internal audit independence and enhance audit effectiveness.

These findings compare favorably with Pelser, Mensah and Ngwenya (2020) revealed that, independence of the internal auditing staff have impact on the effectiveness of internal auditing. Alqudah, Amran, Alessa and Almaiah (2023) aimed at probing the influence of the empowerments on the internal auditors' effectiveness. According to the Resource-Based View (RBV), the findings show independence, and extrinsic rewards all have a significant influence on the effectiveness of internal auditor. Pham and Nguyen (2021) revealed that internal audit effectiveness in steel enterprises in Vietnam is influenced by various internal factors, including the independence of internal auditor, and the operational bases and methods of internal audit. Nyaga, Kiragu & Riro (2018) revealed that internal audit independence had positive and significant effect on internal audit effectiveness at p value ≤ 0.05. The study concluded that internal audit independence was an important predictor of the effectiveness of the audit function in the county government.

However, some studies failed to support these results. Sharma and Iselin (2004) investigated the impact of internal audit reporting relationships on audit fees. They found little evidence that the degree of internal audit independence affects internal audit effectiveness. Krishnamoorthy, Lee, and Park (2011) explored the relationship between agency problems, internal audit quality, and earnings management in South Korea. While their results indicate that internal audit quality is linked to internal audit independence, the strength of this relationship varies depending on the type of agency problem.

H_{03}: Internal audit competence has no significant influence on internal audit effectiveness of Saccos in Western Kenya

Another variable that also had a unique significant contribution to the model was the value for Internal audit competence (B=.182, p=.025) was measured by Academic qualifications, Audit standards, Experience, IT/ICT and tech-based audit techniques and Forensic skills/fraud awareness. When other variables in the model are controlled (Internal audit independence, Management support and Internal audit risk management), a unit change in Internal audit competence would result to significant change in internal audit effectiveness by 0.182 in the same direction. These findings underscore the imperative for Deposit Taking Saccos in Western Kenya to prioritize investments in enhancing internal audit competencies across various domains. By fostering a workforce equipped with robust academic qualifications, adherence to audit standards, diverse experience, technological proficiency, and forensic skills, organizations can elevate the caliber of internal audit functions.

The results are supported by Afzal (2023) showed that performance, competence, and objectivity factors are statistically positively significant that influenced internal audit quality to improve it. This research helps improve the internal audit quality in Pakistani commercial banks. Mpakaniye (2022) showed that there was a strong positive relationship between the competency of internal auditors and internal audit effectiveness. Lihuan (2022) examined the factors that influence the effectiveness of internal auditing of unlisted SMEs in China. The findings show that competence of internal auditors have significant positive impact on internal audit effectiveness. Sulanjana and Puspitasari (2018) revealed that competence and independence have a significant impact on the quality of internal audit performance result at the head office of BJB Syariah bank with the coefficient value of R Square as much as 93%.

However, Brown and Taylor (2018) studied 100 US-based credit unions and found no significant difference in audit effectiveness between institutions with high and low levels of internal audit competence. Instead, their research pointed to cultural factors and tone at the top as primary drivers of effective audit functions. Ward and Davis (2016) challenged the notion that internal audit competencies alone determine audit effectiveness. Using a dataset comprising 200 Australian banks, they found that an interaction effect existed between internal audit competencies and management support, implying that the latter might compensate for deficiencies in the former.

$H_{04:}$ Internal audit risk management has no significant influence on internal audit effectiveness of Saccos in Western Kenya

Lastly, Internal audit risk management (measured by Risk Identification, Risk Assessment, Risk Mitigation Planning and Integration with Audit Planning) had also unique significant contribution to the model with B=0.362, p=.001implying that when other variables in the model are controlled (Internal audit independence, Internal audit competence and Management support), a unit change in Internal audit risk management would result to significant change in internal audit effectiveness by 0.362 in the same direction. The significant contribution of risk management practices, including risk identification, assessment, mitigation planning, and integration with audit planning, highlights the importance of proactive risk management processes within the internal audit function.

These findings support earlier studies that suggest the importance of risk-based auditing in enhancing audit effectiveness. For instance, Yudianto, Mulyani, Fahmi and Winarningsih (2021) concluded that the enterprise risk management implementation and the internal audit quality have a positive and significant influence on the Performance of State-Owned Universities-Legal Entity and State-Owned Universities-Public Service Agency in Indonesia. ElHaddad, ElHaddad and Alfadhli (2020) concluded that the internal audit offices and departments of the Libyan universities carry out their activities related to risk management evaluation and add value to the work of the department. Nyerere (2022) established that corporate governance has a controlling effect on the association between risk-based audit and financial performance of DT-SACCOs.

However, there are also studies that have questioned the extent of the impact of internal audit risk management on audit effectiveness. For example, Spira and Page (2020) claimed that the concept of 'risk-based auditing' lacks clarity and definition, making it difficult for auditors to apply consistently. Further, Karjalainen and Saari (2016) analyzed the attitudes and behaviors of Finnish chief audit executives regarding risk-based auditing and found that only a few organizations applied it comprehensively. Yusoff (2018) reveled that the adoption of risk-based approach at macro level was not statistically significantly affects the internal audit effectiveness and efficiency. But the adoption of risk-based approach at micro level does contribute a significant impact.

4.10 Stepwise Regression

The study also conducted stepwise regression that takes each one of independent variables separately to determine its contribution to the overall R square of 62.4%. The results are as shown in Table 4.21.

Table 4. 21: Stepwise Regression

					Change Statistics			
Model	R	R Square	Adj. R Square	Std. Error of the Estimate	R Square Change	F Change	df	Sig. F Change
1	.750[a]	.563	.557	.60462	.563	92.628	1,72	.000
2	.796[b]	.634	.624	.55680	.072	13.898	1,71	.000
3	.822[c]	.675	.661	.52864	.041	8.764	1,70	.004
4	.835[d]	.698	.680	.51335	.023	5.231	1,69	.025

a. Predictors: (Constant), Internal Audit Risk Management

b. Predictors: (Constant), Internal Audit Risk Management, Management Support

c. Predictors: (Constant), Internal Audit Risk Management, Management Support, Internal Audit Independence

d. Predictors: (Constant), Internal Audit Risk Management, Management Support, Internal Audit Independence, Internal Audit Competence

Source: Primary Data (2024)

From Table 4.21 results using R^2 the value increases with addition of each of the independent variables. The F value shows that Internal audit competence, Management support, Internal audit risk management and Internal audit independence are significant on every addition at 95% confidence level. These results show that for the significant variables the value of R^2 increase in every step to a value of 0.698. Based on the above values it shows that Internal audit risk management contributes 56.3% in explaining variance in internal audit effectiveness among Deposit Taking Saccos in Western Kenya, while the contribution of management support is 7.2%, the contribution of internal audit independence to the model is 4.1% and addition of Internal audit competence to the regression its contribution is 2.3%. This shows that Internal audit risk management contributed the highest followed by Management support, Internal audit independence then lastly by Internal audit competence.

4.11 Hypothesis testing

Table 4.22: Hypothesis Results

Hypothesis	Findings	P Value (P<0.05)	Verdict
$H_{01:}$ Management support has no significant influence on internal audit effectiveness of Saccos in Western Kenya.	Management support has a significant influence on internal audit effectiveness of Saccos in Western Kenya.	.006	Reject
$H_{02:}$ Internal audit independence has no significant influence on internal audit effectiveness of Saccos in Western Kenya	Internal audit independence has a significant influence on internal audit effectiveness of Saccos in Western Kenya	.001	Reject
$H_{03:}$ Internal audit competence has no significant influence on internal audit effectiveness of Saccos in Western Kenya	Internal audit competence has a significant influence on internal audit effectiveness of Saccos in Western Kenya	.025	Reject
$H_{03:}$ Internal audit risk management has no significant influence on internal audit effectiveness of Saccos in Western Kenya	Internal audit risk management has a significant influence on internal audit effectiveness of Saccos in Western Kenya	.001	Reject

. **Source: Field Data (2024)**

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The general objective of this study was to examine antecedents of internal audit effectiveness among Deposit Taking Saccos in Western Kenya. From this overall objective, this study aimed at finding out the influence of Management support, Internal audit independence, Internal audit competence and Internal audit risk management on the internal audit effectiveness of Saccos in Western Kenya. This chapter presents the summary of major findings of the study, the conclusions, and recommendations and finally, the chapter highlights important recommendations for further research.

5.2 Summary of the Findings

The data for the findings of this study was collected using questionnaires from 74 sampled respondents from deposit taking Saccos in Western Kenya. The specific objectives of the study were achieved through conducting Pearson correlation analysis and linear regression analysis. These analyses were conducted at 95.0% confidence level ($P<0.05$). The major findings are as follows

5.2.1 Influence of Management support on internal audit effectiveness of Deposit Taking Saccos

The first objective of the study was to determine the influence of management support on internal audit effectiveness among Deposit Taking Saccos in Western Kenya. Descriptive statistics revealed that strong senior management support for internal audit functions, fostering a positive culture (mean score 4.08). While corrective action is generally prompt, some express reservations (mean score 3.86). Effective communication and collaboration between internal audit and senior management are evident (mean score 3.86). Management's support through training is acknowledged, yet some express reservations (mean score 3.91). Proactive management response to audit findings is emphasized (mean score 3.99).

Pearson Correlation results showed a significant relationship between Management support and internal audit effectiveness of Saccos in Western Kenya ($r=0.554$, $P<0.05$). Linear regression analysis indicated that Management support significantly accounts for 30.6% variance in internal audit effectiveness of Saccos in Western Kenya. Multiple regression analysis revealed that when other variables are controlled in the model, a unit change in Management support would results to a significant change in internal audit effectiveness by 0.198 units in the same direction($\beta_3=0.198$, $P=0.006$). Hence, Management support is useful predicator of internal audit effectiveness of Saccos in Western Kenya. Therefore, the first null hypothesis was rejected.

5.2.2 Influence of Internal audit independence on internal audit effectiveness of Saccos in Western Kenya

The second objective of the study was to investigate the influence of internal audit independence on internal audit effectiveness among Deposit Taking Saccos in Western Kenya. Descriptive statistics revealed moderate agreement on internal audit independence. While perceptions on staff rotation (mean: 3.68) and non-audit functions (mean: 3.39) indicate variability, access (mean: 3.66) and reporting freedom (mean: 3.69) lean towards agreement. However, doubts persist regarding intervention (mean: 3.26) and staff independence (mean: 3.54). Ensuring autonomy is vital for maintaining integrity in audit processes.

Pearson Correlation results a significant relationship between internal audit independence and internal audit effectiveness of Saccos in Western Kenya ($r=0.611$, $P<0.05$). Linear regression analysis indicated that Internal audit independence significantly accounts for 37.3%variance in internal audit effectiveness of Saccos in Western Kenya. Multiple regression analysis revealed that when other variables are controlled in the model, a unit change in Internal audit independence would results to a significant change in internal audit effectiveness by 0.204 units in the same direction ($\beta_2=0.204$, $P=0.001$). Thus, Internal audit independence is useful predicator of internal audit effectiveness of Saccos in Western Kenya Therefore, the second null hypothesis was rejected.

5.2.3 Influence of Internal audit competence on internal audit effectiveness of Deposit Taking Saccos

The third objective of the study was to establish the influence of Internal audit competence on internal audit effectiveness among Deposit Taking Saccos in Western Kenya. Descriptive statistics revealed that while a significant portion recognizes internal auditors' knowledge (mean: 3.66) and commitment to professional development (mean: 3.80), doubts exist about their proficiency in risk-based planning (mean: 3.64) and control assessment techniques (mean: 3.86). Moreover, while there's agreement on the adequacy of the audit budget (mean: 4.20) and auditors' deep professional knowledge (mean: 4.16), skepticism persists about staff qualifications (mean: 3.70) and proactive auditing practices (mean: 3.64). Consistent training and skill development are crucial to address these gaps and enhance audit effectiveness.

Pearson Correlation results revealed a significant relationship between Internal audit competence and internal audit effectiveness of Saccos in Western Kenya ($r=0.632$, $P<0.05$). Linear regression analysis revealed that Internal audit competence significantly accounts for 39.9% variance in internal audit effectiveness of Saccos in Western Kenya. Multiple regression analysis revealed that when other variables are controlled in the model, a unit change in Internal audit competence would results to a significant change in internal audit effectiveness by 0.182 units in the same direction($\beta_3=0.182$, $P=0.025$). Hence, Internal audit competence is a significant predicator of internal audit effectiveness of Saccos in Western Kenya. Therefore, the third null hypothesis was rejected.

5.2.4 Influence of Internal audit risk management on internal audit effectiveness of Saccos in Western Kenya

The fourth objective of the study was to establish the influence of internal audit risk management on internal audit effectiveness among Deposit Taking Saccos in Western Kenya. Descriptive statistics revealed that while respondents largely perceive risk responses aligned with the Sacco's risk appetite and commend efforts in fraud risk management, concerns exist regarding risk assessment in error detection. Mixed perceptions on shared risk management responsibilities and the availability of risk assessment tools suggest areas for improvement. Collaborative risk reduction strategies and monitoring practices are acknowledged, emphasizing the organization's commitment to audit integrity and continual improvement in risk management practices.

Pearson Correlation results revealed a significant relationship between Internal audit risk management and internal audit effectiveness of Saccos in Western Kenya ($r=0.750$, $P<0.05$). Linear regression analysis indicated that Internal audit risk management significantly accounts 56.3% for variance in internal audit effectiveness of Saccos in Western Kenya. Multiple regression analysis revealed that when other variables are controlled in the model, a unit change in Internal audit risk management would results to a significant change in internal audit effectiveness by 0.365 units in the same direction ($\beta_4=0.362$, $P=0.001$). Thus, Internal audit risk management is a significant predicator of internal audit effectiveness of Saccos in Western Kenya. Therefore, the fourth null hypothesis was rejected.

5.3 Conclusion

Based on the empirical evidence, a number of logical conclusions can be made as follows and presented in terms of study objectives.

The study concluded that management support has significant influence on internal audit effectiveness of Saccos in Western Kenya. An increase in management support would results to significant increase in internal audit effectiveness of Saccos in Western Kenya. The significant influence of management support suggests that organizational leadership plays a crucial role in shaping the effectiveness of internal audit processes. This implies that fostering a culture of support and collaboration between management and internal audit teams is vital for optimizing audit outcomes.

The study concluded that Internal audit independence has significant influence on internal audit effectiveness of Saccos in Western Kenya. The research highlighted the importance of internal audit independence. When internal auditors are free from undue influence or pressure from management, they can conduct more objective and comprehensive audits. This independence is a significant predictor of internal audit effectiveness, leading to a more accurate assessment of the Sacco's control environment and risk management practices.

The study concluded that Internal audit competence has significant effect on internal audit effectiveness of Saccos in Western Kenya. An increase in Internal audit competence would results to significant increase in internal audit effectiveness of Saccos in Western Kenya. The study underscores the importance of a competent internal audit team. Auditors with the necessary knowledge, skills, and experience are better equipped to identify and assess risks, evaluate controls, and provide valuable insights to management. Increased internal audit competence directly translates to a more effective internal audit function.

The study concluded that Internal audit risk management has significant effect on internal audit effectiveness of Saccos in Western Kenya. Hence, Internal audit risk management is a significant predicator of internal audit effectiveness of Saccos in Western Kenya. Effective risk management practices within internal audit functions are essential for identifying, assessing, and mitigating risks effectively. By managing risks proactively, internal audit teams can enhance their ability to provide valuable insights and recommendations to support organizational decision-making processes.

5.4 Recommendation

The following recommendations have been made based on the study conclusions as shown below.

The study recommended that the management should enhance their support by fostering open communication and collaboration between internal audit teams and management to ensure that audit findings are effectively communicated and addressed. This could involve regular meetings between internal audit and management to discuss audit results and develop action plans for improvement through provision of need resources.

The recommended that management of Sacco should develop and implement a formal internal audit charter to enhance internal audit independence. This document should clearly define the internal audit function's role, responsibilities, and reporting lines. It should emphasize independence from management and ensure direct reporting to the Board or a dedicated audit committee. Further, there is need to implement a rotation policy for internal audit staff to minimize familiarity bias and enhance objectivity in audits.

The study also recommended that the management need to conduct a skills gap analysis so as to assess the current knowledge and skill level of the internal audit team. This analysis will help identify specific areas for improvement. Relatedly, basing on the skills gap analysis, the management should provide opportunities for internal auditors to pursue professional certifications and attend relevant workshops to stay updated on the latest internal audit standards and best practices.

The study recommended that the management should encourage the adoption of continuous risk monitoring practices instead of traditional periodic assessments. Introduce automated controls, exception reporting, and threshold alerts to notify relevant parties of material changes in risk exposure immediately. Further, management should clarify shared risk responsibilities by establishing a formal RACI matrix (Responsible, Accountable, Consulted, Informed) detailing risk management roles and responsibilities for every department and position within the Sacco.

5.5 Suggestion for Further Studies

The current study focused on how Management support, Internal audit independence, Internal audit competence and Internal audit risk management influences internal audit effectiveness of Saccos in Western Kenya which presented conceptual limitations to the study. Further studies should consider other antecedents such size of internal audit department. Further studies should also consider size of Sacco as a moderating variable.

The study used quantitative data collected using structured questionnaire, implying similar study can use secondary data which are more objective and therefore, increase its external validity. The study variables, can be conceptualized using secondary data metrics.

The study focused on deposit taking saccos confined in western Region, implying other deposit taking saccos were not considered. In this regard, further studies should focus on all deposit taking Saccos regulated by SASRA.

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APPENDICES

APPENDIX I: INTRODUCTORY LETTER

Dear respondent,

I am a Student at Masinde Muliro University of Science and Technology conducting a study on "*Antecedents Of Internal Audit Effectiveness Among Deposit Taking Saccos In Western Kenya*''.

Your contribution in providing necessary information will be highly welcome.

Thank you in advance,

Yours faithfully,

Achola John

APPENDIX II: RESEARCH QUESTIONNAIRE

SECTION I. BACKGROUND INFORMATION

1. What is your gender?

   Male [ ] Female [ ]

2. What is your age? Below 25years [ ] 25-34 years [ ] 35-44 years

   45-54 years [ ] Above 55years [ ]

3 What is your highest level of education?

   Secondary education [ ] Certificate [ ]

   Diploma [ ] Bachelor's degree [ ] Masters Degree [ ]

   Others vb) If other, please explain ……………………………………………..

   ………………………………………………………………………………..

3. How long have you worked for this Sacco?

   Below 1 year [ ] 1-5 years [ ] 6-10 years [ ]

   11-15 years [ ] Over 15years [ ]

Please indicate on scale of 1 to 5 whether you Strongly Agree (SA), Agree (A), Fairly Agree(FA), disagree (D) or strongly disagree (SD) to the following statements relating to financial internal audit effectiveness.

SECTION II

	Management Support	**SA**	**A**	**NS**	**D**	**SD**
1	Senior management supports internal audit to perform its duties and responsibilities.					
2	Management takes timely corrective action based on internal audit recommendations.					
3	The response to internal audit reports by the senior management is reasonable					
4	Management supports IA by providing training in order to improve their skill and update with the field.					
5	Management take timely corrective action based on internal audit recommendations					
6	Senior management is aware of internal audit's needs/ basic resources					
7	Internal audit department has sufficient staff to successfully carry out its responsibilities					
8	There is management commitment to strengthen internal audit division					
9	Senior management supports internal audit to perform its duties and responsibilities.					
10	The management uses the recommendations, criticisms and information provided by internal auditor for decision making.					

	Internal Audit Independence	SA	A	NS	D	SD
1	Internal audit staff assignments are rotated periodically					
2	Internal audit staff are not requested to perform non-audit functions					
3	Internal Auditor has free and unrestricted access to all operations, personnel, assets and transaction records					
4	Internal auditors feel free to include any audit findings in their audit reports.					
5	Internal audit is free from intervention in performing its duties					
6	Internal audit staff is sufficiently independent in performing their professional obligations and duties					
7	Internal audit staff does not assess specific operations for which they were previously responsible					
8	Internal audit staff has free access to all information, departments and employees in the organization					
9	Internal auditors feel free to include any audit finding in their audit work and directly report to responsible body					
10	Internal audit provides reports to the board of directors (audit committee)					

	Internal Audit Competence	SA	A	S	D	SD
1	Internal auditors have adequate professional knowledge on the overall activities of the department.					
2	Internal auditors are proficient in planning on risk-based Internal auditing					
3	Internal auditors are capable in techniques on control assessment and risk analysis					
4	Internal auditors undertake continuous professional development training per annual.					
5	Internal audit obtains a sufficient budget to successfully carry out its duties.					
6	Internal auditors have a deep professional knowledge on the overall activities of the department.					
7	The audit department or division has progressed in terms of appropriately qualified or professional staff.					
8	Internal auditors are proactive (controlling a situation rather than just responding).					
9	Internal auditors attend educational seminars for continuous training					
10	There is communication between internal auditors and auditees					

	Internal Audit Risk Management	SA	A	S	D	SD
1	Internal audit assesses that risk responses are appropriate and align with the Sacco’s risk appetite.					
2	Internal audit evaluates the potential for the occurrence of fraud and how the organization manages fraud risk					
3	There is consideration of risk assessment in the detection of errors					
4	Risk identification and management is a responsibility of all employees of the organization					
5	Risk is analyzed, level is identified by the impact/likelihood e.g. high, medium, low.					
6	Risk Based audit Annual plans are done by the Management					
7	In the organization, risk assessment is a continuous and permanent process.					
8	Risk matrix is available and shows degrees of likelihood and impact and plots risk scores.					
9	Implementation of strategies agreed upon aimed at reducing risk factors annually after discussion with management					
10	Risk monitoring is carried out to identify errors in Internal audit independence					

SECTION III: Internal Audit Effectiveness

	Internal Audit Effectiveness	**SA**	**A**	**S**	**D**	**SD**
1	Internal audit is performed in accordance with the IIA Standards (ISPPIA)					
2	Internal audit makes appropriate recommendations for improving the organizational processes					
3	Internal audit develops appropriate annual audit plans					
4	Internal audit assesses that organizational missions are consistent with organizational objectives					
5	Internal audit improves organizational productivity					
6	Internal audit reviews the effectiveness and efficiency of operations and programs					
7	Internal audit communicates timely the engagement results					
8	Internal audit establishes a follow-up process to ensure that corrective actions have been effectively implemented					
9	Internal audit evaluates and improves the effectiveness of risk management and governance process					
10	Internal audit reviews the reliability and integrity of financial information					

THANKS FOR PARTICIPATING

APPENDIX III: RESPONDENTS PER SACCO

	Internal Auditors	Accountants	Finance Officers	Chief Executive Officers	Total
Invest and Grow Sacco	4	3	3	1	11
Wevasity Sacco	3	3	2	1	9
Afya Sacco	3	3	2	1	9
Police Sacco	3	3	2	1	9
Ukulima Sacco	3	3	2	1	9
Mwalimu National Sacco	3	3	2	1	9
Kussco sacco	2	3	2	1	8
Mudete Sacco	1	3	2	1	7
Vihiga County Farmers Sacco	1	3	1	1	6
Vihiga County Sacco	1	3	2	1	7
Faridi Sacco	3	3	2	1	9
Elimu Sacco	3	3	2	1	9
Ng’arisha Sacco	3	3	2	1	9
Metropolitant Sacco	3	3	2	1	9
Stawisha Sacco	3	3	2	1	9

Total	**39**	**45**	**30**	**15**	**129**

APPENDIX IV: SACCOS PER COUNTY IN WESTERN KENYA AND THEIR CLASSIFICATION

	COUNTY	**Tier**
Invest and Grow Sacco	Kakamega	Large
Wevasity Sacco	Kakamega	Small
Afya Sacco	Kakamega	Large
Police Sacco	Kakamega	Large
Ukulima Sacco	Kakamega	Large
Mwalimu National Sacco	Kakamega	Large
Kussco sacco	Kakamega	Medium
Mudete Sacco	Vihiga	Small
Vihiga County Farmers Sacco	Vihiga	Small
Vihiga County Sacco	Vihiga	Small
Faridi Sacco	Busia	Medium
Elimu Sacco	Busia	Medium
Ng'arisha Sacco	Bungoma	Medium
Metropolitant Sacco	Bungoma	Large
Stawisha Sacco	Bungoma	Small