ANALYSIS OF ACCOUNTING INFORMATION SYSTEMS ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA: A CASE OF FIRST COMMUNITY BANK AND DUBAI ISLAMIC BANK

ABDOULKARIM AHMED SOIRMI

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION DEGREE IN ACCOUNTING OF MOUNT KENYA UNIVERSITY

MAY 2024

DECLARATION AND APPROVAL

Declaration by Student

This research project is my own work and has not been presented in any other University or for any other award for a degree.

Signature Date…28/05/2024

ABDOULKARIM AHMED SOIRMI

MBA/2021/79220

Approval by Supervisor

I confirm that the work reported in this thesis was conducted by the candidate under my supervision.

Signature .... Date....28/05/2024

Dr. Martin Onsiro

School of Business and Economics

Mount Kenya University

DEDICATION

I dedicate my work to my brother and the entire family for the support accorded throughout the study. My colleagues have also been pivotal in their support for this work. Gratitude to my classmate and my friends who were there once it was needed.

ACKNOWLEDGEMENT

I sincerely appreciate God's help and the gift of peace he offered me during my research, from the start of the course to its conclusion. I thank also to Dr. Martin Onsiro, my academic advisor, for his important assistance in facilitating this research project's current form. This research would not have been completed satisfactorily without his guidance and constant aid. Special thanks to my entire family, including my brother Mr. Nadhoimou Tadjiri, for providing the assistance we needed to finish this project. Also, I'd want to express my gratitude to Nininahazwe Pacifique and Ingabire Dina, two of my classmates who I remained in touch with as needed. I must honestly acknowledge that a lot of credit for this research's success goes to the cooperative individuals to whom I am really grateful. Thank you to you all.

ABSTRACT

Accounting information system serves as common weapon in managers' hands today as they battle to keep a competitive edge despite the rapid advancement of technology, growing public knowledge, and demanding requirements from clients and business owners. This study examined how accounting information systems affect First Community Bank and Dubai Islamic Bank's financial performance. The study sought to find the connection between AIS and the state of commercial banks' finances. The specific objectives were: to analyze the impact of internal control systems on the financial performance of commercial banks, the contribution of ICT systems to that performance, and the impact of ERP systems on that performance. Descriptive research design was used. As a result, 167 employees were chosen as a sample size out of the 289 listed employees from First Community Bank and Dubai Islamic Bank using the proportionate stratified random sampling technique. Using Yamane's procedure, a 95% confidence level and 5% confident interval were used to get the sample size. The contingency theory, the agency theory, and the resource-based view theory guided the study. Inferential and descriptive analysis were done. Information gathered was presented in tables, graphs and figures. Internal control system was statistically significant in explaining financial performance ($\beta = 0.493$, $p < 0.05$), internal control system was significant to financial performance of the identified commercial banks ($r=0.836$, $p=0.000$). Results indicated a positive relationship between ICT and financial performance of commercial banks ($\beta = 0.226$, $p < 0.05$). Similarly, there was a positive and significant association between ICT(ICT) upon the development of commercial banks' financial performance ($r=0.765$, $p=.0.000$). ERP system was statistically significant in explaining financial performance ($\beta = 0.257$, $p < 0.05$). ERP systems had a positive and significant correlation with commercial banks' financial performance ($r=0.715$, $p=0.000$). This study concludes that internal control systems serve an important role in supporting performance of commercial banks. Internal control systems allow commercial banks to provide accurate and timely financial data. Financial institutions performance is greatly influenced by ICT. ERP is a key factor in the high performance of financial institutions. This study recommended that commercial banks take proactive steps in establishing robust internal control systems that have the capacity to greatly enhance accountability within their operational frameworks. Commercial banks should not only acknowledge the importance of ICT but to actively prioritize substantial investments in cutting-edge ICT systems. This study recommends that commercial banks integrate robust ERP systems into their operational framework in order to achieve and maintain optimal performance levels.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATION AND ACRONYMS

AIS	Accounting Information Systems
ANOVA	Analysis of variance
CBK	Central Bank of Kenya
COSO	Committee of Sponsoring Organizations
ERPs	Enterprise Resource Planning systems
FMIS	Financial Management Information Systems
HRM	Human Resource Management
IASB	International Accounting Standard Board
ICT	Information Communication Technology
KBA	Kenya Bankers Association
ROA	Return on Assets
ROE	Return on Equity
SMEs	Small Medium Enterprises
SPSS	Statistical Package for the Social Sciences

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Productivity is boosted by a strong financial system, which also contributes to economic growth (Nkegbe & Yazidu, 2015) The financial services sector includes the banking sector, which offers distinctive financial assistance that are essential to the expansion and improvement all economies. According to Mumtaz, Rauf, Bashir and Noreen (2013), commercial banks are described as regulated financial institutions that operate as for-profit businesses and provide services like Taking deposits, approving company loans, and offering fundamental investment goods. They are a crucial part of the banking sector since they help to mobilize capital needed for investment and production, which in turn promotes economic growth and development. (Alkhazaleh & Almsafir, 2014).

According to Ongore and Kusa (2013), commercial bank is essential to how money is allocated globally. This is as a result of its functions of intermediation, which include moving money from units with surpluses to those with deficits. The banking industry needs strong financial performance to carry out and maintain its functions, but it is impossible to foresee or avoid AISs given their importance to business management and to any type of financial institution. Use of AISs is therefore crucial for all types of business entities globally.

In Australia, both public and private organizations have a high adoption rate of AIS. Alamin, Adel, Yeoh, Warren and Salzman (2015) explained that a consensus was reached that the Australian public sector was setting the bar for AIS implementation to enhance the handling of information, operational application and evidence-based judgment. The adoption of AIS in the two countries has been attributed to a number of variables that is, self-efficacy, effort expectancy, technological fitness and organisational coercive pressures.

In a study conducted by Huy and Phuc (2020) within the context of Vietnam, it was observed that the employment of AIS proves to be efficacious in overseeing both internal and external shifts. This is achieved through its adept handling of data and transactions, thereby furnishing crucial insights for organizational planning, operational functions, and regulatory oversight. Furthermore, the significance of AIS extends to its pivotal role in facilitating the decision-making processes within an organization. Nonetheless, both private and public companies in the country have a low adoption rate of AIS. Resource limitations, performance standards, and organizational strategies all had an impact on how well AIS was implemented in Vietnam.

In Jordan, Kanakriyah (2017), studied the effect on banks' success and the AIS, and the finding revealed that AIS execution has a big effect on banks' success. It is also showed how important AIS is to improving work productivity for the agencies' regular practices for planning, tracking, auditing, and regulating financial resources. The study also demonstrated how AIS helps banks significantly by providing information and statistics about interest rates and banking services provided by rivals to banks, by supporting bank employees who are committed to growth and profitability, and by providing accurate financial position information to all stakeholders. The banking industry is reinforced by AISs, which help the bank identify threats.

In the gulf countries, Hammour, Househ and Razzak (2017), note that AIS acceptance and deployment rates are high in public hospitals. Accounting systems may now assist companies in developing and owing to the practice of ICT, using automated systems in monitoring and record financial transactions in these facilities (ICT). According to AIS, the Gulf's healthcare industry now has access to information that can help in decision-making.

In Ethiopia, Tilahun and Manchilot (2019) reported a moderate acceptance of AIS in the nation's public hospitals. Government has been a major driver behind the implementation and adoption of AIS, encouraging public hospitals to do so they can use information for operational and strategic planning. The size of the institution, human resource competency, perceived simplicity of use, perceived cost-benefit ratio, and top management commitment are the primary drivers of AIS adoption. A similar investigation in Zimbabwe by Gwangwava, Faitaira and Mab (2012) established that AIS usage is low in small and medium-sized businesses. Financial limitations, a lack of government assistance, performance expectations, the complexity of AIS, and a shortage of qualified human resources are some of the issues that have influenced the adoption of AIS in these businesses.

In Kenya, Rotich (2017) examined how the presence of trustworthy human resources, strong managerial leadership, and internal controls affected the effectiveness firms engaged in manufacturing in Kenya under the influence of AIS. The study concluded that AISs are crucial to business management. Yet, it improves the speed, timeliness, accuracy, and quality of reports produced, which has an effect on the organization's operational effectiveness. Based on the findings, firms need to invest in AIS since it is believed to have a substantial adversely affects financial reporting. This would help them have high-quality, timely, and accurate financial reports for decision-making.

A firm may employ a variety of information systems to assist with its operations, including AISs, Management reporting systems, budgeting systems, HRM systems, and inventory management systems. The existence of accounting and its ongoing evolution are significant factors in business management, and one of the principal benefits of AISs is that they give managers and other interested parties access to the right information. Therefore, the intent behind this research is to offer a thorough analysis of AIS in relation to the Kenyan commercial banks' financial performance. It specifically aims to compile empirical research on Information systems for accounting and to pinpoint research gaps regarding the connection in relation to the effects of AIS and commercial banks financial performance as a foundation for empirical future study.

1.1.1 Accounting information systems

Khan (2017) outlined how the AIS (AIS), a system made up of multiple resources and personnel that provides data to aid managerial decision-making, is a system made up of personnel. It is a methodical way of gathering, organizing, and distributing accounting information about a company's operations.

According to Ali, Basel and AlSondos (2020), (AIS) is a tool that monitors with the help of technology a company's economic and financial activity. comparable to other information systems, an accounting system (AIS) is crucial to the daily management of a corporation's activities. Accounting information technology (IT) systems aid in the management of responsibilities and the efficient utilisation of resources that include monitoring, organizing, planning and organizational decision making (Ye & Hu, 2020). Its main responsibility is to gather, process, and transmit the required data for the operation of the business. According to ACCA (2012), AISs support economic development by enhancing the mobilization of domestic and foreign investment, creating an atmosphere that is favourable to investment, and fostering openness, all of which support the country's financial stability. Yet, despite the availability of information technology (IT), internal control systems, ERP systems (ERPs), and other tools, the majority of companies, particularly public institutions, are trailing behind in their acceptance and implementation.

A number of technologies are employed to gather, process, store, retrieve, distribute, and transfer data. These technologies are together referred to as ICT (ICT). The use of electronic tools or applications, such as remote learning and video conferencing, as well as ancillary services and software, including software, hardware, networks and satellite systems are essential elements of information systems (Uganda Ministry of Information and Communications Technology, 2009). To ensure effective and efficient operation, ICT involves employing computers, televisions, and other electronic devices to computerize processes, checks, and data generation (Chege, 2016). Currently, the widespread usage of ICT is altering how businesses run. The advantages of ICT for a business include input cost savings, general cost savings, increased flexibility, and improved product quality. Apulu and Latham (2011), assert that ICT helps customers to get immediate input, allowing businesses to quickly respond to client needs and identify new market segments. Customer service inquiries, telephonic teller machines, Call-based banking, online banking and cellular banking are just a few of the tasks that are automated thanks to ICT.

Internal controls, auditing and accounting procedures applied in a firm's finance division enhance the timelines of financial reporting and promotes adherence to the set policies and rules. Additionally, they support businesses in following regulations, deterring fraud, and enhancing working effectiveness by making sure that policies and budgets are followed, capital shortfalls are discovered, and precise management reports are generated (Kenton, 2022). The term "internal control system" refers to the full management of operations that has been put in place by executive to carry out activity of enterprises for structured and expert manner (Abiola & Oyewole, 2013). The five elements that make up internal regulation, according to the Council of Supporting Organizations (COSO), are the control environment, risk appraisal, control actions, monitoring, communication, and information.

The administrative software includes ERP, which enables companies to plan their services and products, consists of modules for marketing, human resources, finance, and production (ERP) (Aburub, 2015). As stated by Altamony,Salti, Gharaibeh and Elyas, (2016), ERP is the solution that has helped businesses use their corporate data more effectively. The ability of the systems to integrate enterprise operations and maximize resources sets them apart from the previous generation of data systems. ERP systems are also thought of as an organization-wide single application, database, and unified user interface (Altamonyet, 2016). As a result, they offer special benefits to the businesses that use them by enhancing the presentation of appropriate and timely information to the process of decision-making.

1.1.2 Financial performance of commercial banks

Farah, Farrukh and Faizan (2016) noted that financial performance is used to assess its overall financial health. The management of a company’s current assets, noncurrent assets, expenses, revenues, equity, debt aims to enhance sales, the bottom line and market value of the firm. Shareholders wealth is also maximized through these financial actions. The shareholders are given the much-required financial information so that they make informed decisions as regards their investment on the company. This information can be compared with prior periods or an industry wide comparison be carried out to give the figures meaning.

Financial results are generally understood for the institution's capacity to reach its financial targeted. Financial improved can be measured by the investor return and accounting returns. According to Mulwa (2015), financial performance describes a company's level of operations after a certain time frame and is defined in relation to of gains and losses throughout that time. Interested parties assess performance to ascertain the outcomes of a company's strategies and activities in purely financial terms. Financial performance refers on what level a corporation utilizes its disposable resources to generate profits for its stockholders (Deng, Rono & Sang 2020).

Profitability is another term for a commercial bank's financial performance, which is typically quantified use of ratios. It is assessed in either Return on Equity (ROE), which compares net profits to shareholders' equity, or Return on Assets (ROA), which compares net profits to the institution's total assets. Dengetal. (2020). ROA determines how well a company can utilise its resources to produce money. A company that uses its resources effectively and maximizes shareholder wealth would have a greater ROA. The most popular ratios are ROE and ROA.

A ROA of at least 1% and a ROE of between 15% and 30% are both indicators of strong financial performance. Kwakwa (2014) claims that the ideal ratio to utilize is ROE to demonstrate how much a bank utilizes revenue for profit generation. The ROA and ROE were used in this analysis as the representative for the banks' financial performance. Nonetheless, the sector is diversified, including both domestic and international private commercial banks, many of which have subpar operations. The failure of some banks in Kenya, including Imperial Bank, Chase Bank, and, Dubai Bank was caused by poor performance (CBK, 2015).

1.1.3 Kenya Commercial banks

Commercial banks are financial establishments which provide retail banking facilities such as taking deposits, giving out advances and loans, and giving out financial assurances. Commercial banks additionally provide trade-financing solutions like letters of credit, trade receipts, and shipment guarantees (Chen & Huang, 2017). Additionally, Other services offered by commercial banks include setting up insurance contracts, giving financial advice, and more. In addition to loans, they also offer a range of other credit products, such as cards and overdrafts. But every operation aims to offer a person or corporation a financial service, which is something that unites all of them. (Ongore & Kusa, 2013).

The CBK Act, Act on Corporations, the Banking Act and other effective measures by CBK govern the banking sector in Kenya. As stated by Meshack, Kerongo and Nyamute (2017), the banking industry was deregulated and foreign currency regulations were occurred in 1995. In addition to promoting the soundness, liquidity, and effectiveness of the financial system, The CBK develops and carries out the monetary policy (Otuori, 2013). According to Macharia (2013), the CBK publishes data on inflation, monetary policy indicators, commercial banks indicators, interest rates and economic indicators. These commercial banks all have locations both domestically and abroad, with their main offices in Nairobi. For the vast majority of them, they are classified as little to modest estimated privately held. But, major banks that control a significant percentage of the industry—many of which are distantly owned but some are partially privately claimed—control the market. According to Otuori (2013), banks have their association. The interests of banks are promoted, as well as those affecting members. Kenya has 43 commercial banks, 29 of which were locally held and 13 of which were owned by foreigners (CBK ,2017). As of 2011, foreign banks held up to 35% of total assets (Ongore & Kusa, 2013). The financial industry is governed by Kenyan commercial banks, according to Mulwa (2015), any poor performance in this area can have a significant impact on the expansion of the economy.

1.2 Statement of the problem

Despite the CBK providing guidance in accordance with the Banking Act Statutory requirements, there have been numerous instances of banks failing owing to defraud, insufficient internal controls, and widespread disregard for both internal and external rules (Wanyiri, 2019). Throughout the previous three decades, Kenya has seen a number of banks fail due to corporate malpractices include irregular executive lending, fraud, and insider deals. As of June 2018, about 25 lenders had failed with a combined Sh21.72 billion in unsecured consumer deposits as of liquidation (Mwere, 2021).

For instance, the CBK declared three banks insolvent during a nine-month period between the years 2015 and 2016 at that period. The regulator declared Imperial Bank of Kenya, one due to unethical banking practices, 20 of Kenya's largest commercial banks went out of business (CBK, 2015). Dubai Islamic Bank of Kenya was also declared insolvent as a result of ongoing violations of banking legislation. Due to Dubai Bank's severe liquidity and capital shortages, the CBK is concerned that it will probably be unable to fulfill its financial obligations when they become due (CBK, 2015). Eventually, Chase Bank was shut down due to what the regulator deemed to be risky financial conditions, leaving the banking sector in question due to the repeated ruptures without any meaningful action being done (Ngigi, 2015).

In October 2022, A bank run that was caused by what the First Community Bank claimed was a technology glitch that affected its operations put the bank in a fight for its life (Otiato Guguyu, 2022). All of the bank's clients asserted that it only processes withdrawals of less than 10,000 Kenyan Shillings each day. The bank's issues were made public when it stated that system interruption was causing delays for the majority of its services (Guguyu, 2022).

Several academics have looked at AIS and financial performance from an empirical perspective. Internal control systems and financial performance, ERP systems and financial performance, and so on have all been studied, and ICT and financial performance in Kenya. Wanyiri (2019), Mati (2022) and numerous others looked into the connection between Kenyan business financial performance and internal control systems. Loktary (2018), Malungu (2019) and many others studied the influences of ICT on performance of Kenya firms. Kangogo (2019), Anyota (2015) and others looked research examining the connection between the financial success of Kenyan companies and ERP systems. Yet the research mentioned above provide insufficient evidence regarding how AISs paired with internal control systems, ERP systems and ICT effect the Kenyan economy's corporate performance financially.

1.3 Purpose of the study

To explore the effects of AIS on the financial performance of Kenya commercial banks is the primary goal of the research.

1.4 Objectives of study

The specific objectives are;

i. To evaluate the impact of internal control system on financial performance of the identified commercial banks.
ii. To explore the impact of ICT upon the development of commercial banks' financial performance.
iii. To examine a link between ERP systems and the financial health of commercial banks.

1.5 Research questions

i. What effect does internal control have on the financial health of commercial banks?
ii. How do ICT systems help commercial banks improve their financial performance?
iii. What connection exists between Kenyan commercial banks' financial performance and enterprise resource planning?

1.6 Significance of the study

The results will assist the Government of Kenya in developing and enforcing policy; upcoming academics; and managers in financial institutions are just a few of the stakeholders who will find results of this research valuable.

The findings would be crucial for the Kenyan government, especially the Ministry of Finance, tax authorities, and regulatory bodies, providing information that would be used to develop future regulatory frameworks and policies for the deployment of AIS among financial institutions. This would improve internal controls while also assisting in ensuring that activities are not interrupted.

The research's conclusions would be helpful to future researchers since they would be utilized like the sources for the empirical literature in those studies, which would be described in chapter five, in addition to offering chances for further exploration.

The findings are important because they would show financial institution administrators how important AISs are to their purported financial success. This would help them make decisions in the future about problems with their banks' AISs.

1.7 Scope of the study

The First Community and Dubai Islamic Banks were the target in this study specifically in their Head Offices located in Nairobi. The study took place in Kenya putting special accentuate how AISs impact the banking sector's financial performance in Kenya. Agency theory, contingency theory, and resource-based perspective theory had impact on the study's theoretical framework. The period under study was from 2017 to 2022. The study ran from October 2022 to April 2023 and focused on the Kenyan commercial banks. The investigation focused on AIS, financial performance and the banking industry.

1.8 Study limitation

It was difficult to gather the completed surveys due to the staff members of the chosen commercial banks' busy work schedules. Some responders were not motivated to complete the surveys. The researcher made every effort to gather as much data from this respondent. Due to sensitivity concerns, banks withheld certain information. In addition to providing permission from Mount Kenya University, the researcher and research assistant made it clear that all given information would kept private.

1.9 Delimitation

The study explored how AISs affect the state of commercial banks' finances with an emphasis on the aforementioned Kenyan commercial banks. A small number of commercial banks was chosen to prevent the recurrence of studies on the commercial banking sector in Kenya. Managers were included in the sample size due to their expertise in decision-making and performance, as well as accountants due to their critical role in data collection and keeping track of the documents needed to support the financial statements used in this study. Other employees, such as the marketing and sales teams, were chosen based on the expertise they possessed in those industries.

1.10 Assumption of the research

It was presumed that sampled financial reports would reveal an accurate and fair report. Also, it was assumed that each respondent would provide accurate information based on their own experiences and reactions in the survey. This means that because every respondent worked in the banking industry, they would all provide accurate information about their various areas of expertise. Last but not least, it was assumed that managers and accountants among the respondents were well-informed about connection between AIS and the banking industry's financial performance.

1.11 Operational definition of basic terms

Accounting information systems: A process of collecting data and transforming it into useful information requires the cooperation of a variety of individuals, tools, regulations, and procedures.

Bank: Is a financial institution that provides a range of services, including storing and managing money, providing loans, and facilitating financial transactions.

Commercial banks: It is a financial organization that offers services including loans, CDs, savings accounts, bank overdrafts, etc.

ERP system : software that supports manufacturing, operations, supply chains, services, procurement, and more.

Financial Performance: It is a purely arbitrary assessment of how effectively a company may leverage resources from its main line of activity to produce profits.

ICT system: It is a varied collection of technological resources and techniques.

Internal controls system: It is a procedure intended to offer reasonable assurance that involves the management, the board of directors and some staff members of a business.

Return on Assets (ROA): It is a financial metric that measures firm's profitability by assessing its net income relative to its total assets.

Return on Equity (ROE): It is a ratio which evaluates the rate of return that holders on their interests in a company's ordinary stock.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The goal of this section is to scrutinize any literature which is pertinent for the study under discussion. The chapter will provide an explanation of earlier pertinent material from other scholars who have done similar work in the field. It includes viewpoints, characteristics, study findings, and related conclusions from earlier research projects carried out by different individuals and organizations. Theoretical literature is discussed. Empirical literature is addressed and the case study's local and nonlocal studies are examined. A conceptual framework is then presented, summarization of literature review is done and the research gap is presented.

2.1 Theoretical literature

According to Kombo and Tromp (2006), theoretical framework that directs research efforts and aids in the interpretation of findings. Contingency theory, the Resource-based view theory, and the Agency theory are some of the theories that inform this study.

2.1.1 Contingency Theory

It was initially put up by Feidler (1965) in line with management leadership theory. According to Feidler (1965), According to the contingency hypothesis, there is no one best leadership style. Leadership in one situation may not be applicable to another situation Gordon and Miller (1976), highlighted the essential basis about considering accounting information systems from an emergency perspective, of which a framework's specific decisions must be able to be responded to by the accounting information systems. Or, to put it another way, flexible architecture must be used when developing AIS.

According to contingency theory, AIS must adapt to desired specific decisions in the period of the organization's environment and organizational structure into account (Dandago & Rufai, 2014). Managers should adhere to the use of AIS and choose the best systems to match the needs of their organisations. Every organisation has its unique needs and therefore, the AIS adopted must be supportive of the existing circumstances and needs of a particular organisation.

Fiedler's contingency theory exhibits certain shortcomings. Among these, a notable critique pertains directly to the evaluated work—the theory's limited adaptability. This aspect was underscored as a principal concern in the analysis conducted by Mitchell, Biglan, Oncken & Fiedler in 1970. The theory's inherent structure, as highlighted by Manktelow and Birkinshaw (2018), constrains leaders from demonstrating flexibility.

In line with the study, managers will increase their spending changing an accounting information system than they would if they were to make the necessary improvements. The fundamental contingency framework consists of institutional-specific and environmental elements that have an impact on competitive strategy. The level of control (internal control systems), timeliness (ERP), level of aggregation, and level of integration of AIS affect the competitive strategy (ICT). Ultimately, financial performance effectiveness is influenced by AIS effectiveness.

2.1.2 The Resource-based View Theory

The theory was introduced by Barney, Jay , Wright and Mike (2001). Barney et al. (2001) explained that, according to the resource-based viewpoint, creating superior capabilities and resources allows for the creation of sustained advantage. The resource-based view gives a method for assessing prospective factors. It may be applied to provide companies a competitive edge. The basic conclusion of the resource-based perspective if not, what else resources are equally significant or have the capacity to enhance competitiveness. The three levels of the resource-based view theory are skills, competence, and capability (Cragg, Paul , Caldeira & Mário, 2011). Competence and skills are related to several skill sets. Capacity measures the efficacy of business operations. ICT, ERP systems, and internal control systems are additional resources at the company's disposal. According to the resource-based view theory, an organization that effectively manages its resources, including internal control systems, ICT, and ERP systems, may better leverage Improved organizational performance can be attained by utilizing an organization's capacity, competency, and skill sets.

2.1.3 The Agency Theory

As per the findings of Jensen and Meckling (1976), the agency hypothesis suggests that within an organizational context, management, referred to as the agent, is granted the authority by the owners, known as the principals, to oversee business operations on their behalf. The prosperity of the managers is intricately tied to the well-being of the owners. This perspective gives rise to the agency theory, which aims to address possible conflicts of interest between the managerial and ownership factions (Jensen &Meckling, 1976). This is particularly relevant since managers might exploit the company's resources to advance their personal objectives (Brammer & Millington ,2008).

Firms exist to maximise shareholders wealth. This objective may not be shared with the managers of the firm. This is because the managers may be in the firm to maximise their personal wealth, instead of that of the shareholders. Managers may have more information about the company than the owners or shareholders of a firm. This may compromise their decision to their advantage. They would thus act to further their personal interests instead of the shareholders.

This assumption is important since the research wants to determine how accounting information systems affect the performance of finance in corporations. The only aim of a corporation is to maximize profits for its owners. The managers bear sole responsibility for this (agents). Managers must adopt AIS to enhance firm performance. This satisfies their obligation as agents, an obligation they owe the shareholders or owners of the firm.

2.2 Empirical literature

Many studies on accounting information systems have been undertaken both nationally and internationally by various academics in both developed and underdeveloped nations. Some of these studies have demonstrated that the adoption of AIS may vary from nation to nation, developing or underdeveloped. Similar studies regarding accounting information systems and financial performance have been conducted in other regions, but not specifically in

Kenya's commercial banking industry. This section explains how other research relates to the goals of the research.

2.2.1 Accounting information systems and financial performance

Several researches have examined the link between AISs as well as financial success (Norazlina, Wahab, Zakaria, Zuriati, Ilias & Norlidawahi, 2017). Analyze how AISs (AIS) affect users' ability to complete activities efficiently. The findings demonstrate that the businesses' success in carrying out their responsibilities, it has a significant impact on financial managing, auditing, financial reporting, and budgeting. (AIS). Patel (2015) emphasized that information systems for accounting are crucial in promoting decision-making and changing the organizational setting, architecture, and job specifications. Management information systems and cost accounting systems are examples of AIS (Rufus Ishola, Patrick Enyi, & Oladipo, 2019).

The research conducted by Akanbi (2017) studied the AIS's impact on the financial performance of deposit-taking banks in Nigeria. It was concluded that AIS practices are widespread among DMBs in Nigeria and that AIS significantly impacted financial performance across all of these DMBs. The report made recommendations for management of DMBs, including periodic examination of technology investments related to accounting information and consideration of AIS enhancement as a continuous process.

Augustine (2014) analyzed how AISs affect the level of profitability for small enterprises in Kampala, Uganda, East Africa. The majority of small enterprises don't employ AISs, which, according research findings, results in low earnings. The results also demonstrate a favorable connection between AISs and profitability.

Musabyimana (2016) analyzed of the AIS and financial performance of a few Kigali, Rwanda, industrial banks. The results of the investigation stated that out of 102 respondents, 31 (or 30.4%) selected the challenge of a lack of hiring skilled workers, 8 (7.8%) selected the challenge due to a absence of strategic development, 15 (14.7%) selected the challenge due to a lack of potential in the human resources, 17 (16.7%) selected the challenge of absence of development , 14 (13.7%) selected the challenge of a lack of monitoring and evaluation, and 5 (4.9%) selected the challenge of a lack of hiring skilled workers. The study also suggested that professional employees should analyze accounting information because doing so will help commercial banks perform well and grow as an organization because accounting information analysis calls for qualified individuals to assess how the organization is performing.

Odero (2014) studied how the success of SMEs financially in the County of Nairobi was impacted by the caliber of the information system for accounting. The findings demonstrated that the majority of enterprises' change in ROI was considerably depending on the design of the reports and documents, the type of accounting system utilized, the level of comprehension and utilisation information accounting, and the degree of legislation in effect. According to the study, all companies in the county ought to consider creating and deploying user-friendly computerized AISs for routine reporting and operations.

Rotich (2017) conducted research on how Kenyan manufacturing businesses' productivity is affected by their AIS. The study's findings indicate a link between successful organizational management and AISs. The outcomes are in line with empirical research that connected AIS to prosperous businesses. Another finding from the research revealed, the effectiveness of management, operational control, and decision-making in Kenyan manufacturing enterprises is influenced by AISs. The study concluded that manufacturing companies should invest within robust information system for accounting in their financial accounting operations if they want to boost their profitability and flexibility in responding to market changes.

Abdikarim (2021) examined how computerized accounting systems affected the caliber of financial reporting by firms in Nairobi Stock Exchange. The analysis concluded that the standard of financial reporting among companies listed in the NSE is significantly impacted by the computerized accounting system. Yet, the study finds that Kenya's located companies' senior managers exhibit solid strategic leadership to support their financial reporting's high caliber. To improve the caliber of financial reporting, companies trading on the NSE should have their internal audit departments increase the effectiveness of existing controls. To ensure the creation of reliable financial reports, the Capital Market Authority's officials should impose rigorous regulations.

According to Nzomo (2013) AISs impact business on operational reaching in the Kenyan automotive firms was examined. AIS are crucial for decision-making and control within firms. Additionally, it demonstrated how effective AIS are as device in managing also organizing institution's operations. The study's conclusions indicate that AIS are crucial for producing accounting information in a timely manner that is of high quality.

Mwakio (2017) examined the connection between Kenya's commercial banks' AISs and human resource management. According to the study's findings, HRM and AIS are favorably correlated in Kenyan commercial banks. Given that the study's findings demonstrated the relationship between AIS and the HRM system, they are also helpful to decision-makers in Kenyan commercial banks. The report also recommends that firms, corporations, and organizations employ AIS since an effective accounting system is necessary for every successful decision-making procedure.

2.2.2 Internal control systems and financial performance

These systems are the procedures put in a place by a firm to control that the company goals, missions, and objectives are attained. They are a group of regulations that a firm lays down to make sure that transactions are conducted appropriately in order to stop resource misuse, theft, and waste. COSO (2013) stated according to the framework, internal control mechanism is a collection of procedures that are controlled by the owners and management of the business. The staff's control consciousness is impacted by the institution resonance that is suppressed by the setting under control. Remember that internal control systems can only reasonably assure a board of directors and management of an entity that the organization's objectives will be achieved. In order to satisfy performance and organization objectives, avoid losing resources, businesses utilize internal control systems to produce accurate reports, verify compliance with laws and regulations, and more.

Researchers from various academic disciplines have examined the correlation between internal control mechanisms and financial performance. Notably, Nyakundi, Nyamita and

Tinega (2014) focused on examining how internal control procedures influence the financial results of SMEs in Kisumu. The outcomes emphasize the significant effect that internal control systems have on the financial performance of SMEs. This research underscores a notable positive change in financial performance that can be ascribed to the execution of internal control systems. The report subsequently proposes that SME owners undergo training to better comprehend the significance of implementing robust internal control mechanisms.

Asiligwa, Mr and Rennox (2017) performed research on how internal controls affected Kenyan commercial banks' financial performance. Their study's conclusions showed that the banking industry's good financial position is due in part to the implementation and upkeep efficient internal controls. Elaborate internal controls could be ascribed to the banking industry's greatly controlled and regulated business environment. It is advised that banks should build and maintain internal controls in an effective manner.

Ayagre (2014) explored the efficiency of bank internal control systems in Ghana. Internal controls and monitoring frameworks of Ghanaian banks was assessed in the research. The study's findings demonstrate that Ghanaian banks' internal control systems, are sound. The research suggested that banks should work towards the maintenance of strong and robust internal controls. This process should be continuous if the banks are to attain maximum benefits of the set systems. The systems should be regularly monitored to ensure that they work as intended.

Ndiwa, Chebungwen and Kwasira (2014) centered on evaluating the role that internal controls had in the financial success of Kenya's higher education institutions. The inquiry exposed that the internal audit unit of the organization experienced insufficient staffing, based on the findings of the study. It was recommended that department of internal audit should have adequate personnel and that management should not have any say in who the auditors are chosen to work there.

Hayali (2012) examined the essence of internal control systems in the banking industry. This study emphasized the value of internal controls and examined how they influence the banking industry. The research noted that Turkey's internal controls in banking were adjusted to meet international requirements and that the banking system had working control mechanisms. Effective internal control measures also have a remarkable impact on robust and steady future of the Turkey banking sector.

2.2.3 ICT and financial performance

The development of Technology for information and communication (ICT) has given organizations a platform to operate globally. Knowledge is the key factor in increased productivity and worldwide competition. ICT has a number of consequences on an organization's performance, therefore companies who are able to utilize it may manage a variety of cutting-edge commercial processes. To establish the link between ICT and organizational performance, several academics have conducted study both nationally and globally. Binuyo and Aregbeshola (2014) stated that ICT adoption improved overall financial results, favorably affecting the wealth of the shareholders, according to research on effects of ICT installation and applicability on the South African commercial banks' financial performance.

Nkansa, Eric, Oware and Kofi (2013) studied how In Ghana's Ashanti area, a sample of rural banks' financial performance was impacted by ICT. The investigation revealed a favorable linear link between the financial performance of rural banks. (deposit expansion, financial success, and loan repayment) and their use of ICT (ICT application, ICT literacy, and ICT attitude).

Loktary (2018) analyzed the effects of technology utilized in ICT on financial performance of registered SMEs in County of West Pokot. Analysis concluded that majority of SMEs have adopted ICT activities, which has increased their performance. IT has boosted production and efficiency in SMEs, processed transactions more quickly, increasing customer satisfaction, and immediately disseminated information throughout SMEs, to name a few methods.

Mwangi (2016) examined the impact of parastatals' supply chain performance and adoption of ICT on Kenya's industry of energy. The study discovered that the implementation of ICT had a good impact on risk management, business-to-business collaboration, production scheduling, and procurement. Nevertheless, insufficient data transfer, inadequate ICT infrastructure, user resistance, a dearth of support from senior management, the adoption of ICT in parastatals is hampered by inadequate training and high startup costs. Parastatals must improve data transfer, user interaction, training, and system integration if they are to achieve the desired results.

According to Basweti, Masese and Onsiro (2013), there are difficulties in implementing technology in Tanzanian banking industry. Banks should increase investment in ICT infrastructure, educate the public about the use of online banking products, and lower taxes on ICT equipment. In order to clear the way for commercial and policy decisions, the report advised, that is essential to evaluate individual technologies, the effects of adopting other individual technologies, profitability, and performance difficulties. In the same breadth, Malungu (2019) found a positive association between ICT and educational performance in Kakamega county.

2.2.4 ERP Systems and financial performance

ERP consists of different modules that support the AIS. These modules are human resources, finance, marketing, production and logistics or operations. These modules work hand in hand to support the daily operations of a firm. According to Hossein (2014), ERP systems integrate financial, accounting, manufacturing, customer relationship management, sales, and service information from both internal and external sources into an organization. ERP systems help businesses and sectors in a fundamentally vital way. ERP significantly contributes to the great performance of sectors like banking.

According to Nyoro and Paul (2017) and Njihia (2014), the systems help a range of operations in modern enterprises, covering sales, billing, marketing, administration of human resources, supervision of quality, and production. By facilitating these essential processes, the systems guarantee the success of the entire firm. The management of the company places a great deal of attention on financial performance and its analysis because they are keen to identify and comprehend its many facets, including better financial position and internal operations, among others.

Nyoroetal (2017) looked into how the implementation of ERP affected supply chain administration performance, specifically referring to The Coca-Cola Company Limited. Because of the descriptive design used in the study, the researcher was capable of obtaining the required information from the intended participants. The study's findings showed that four indicators, planning and forecasting, lead time, cultural effects, and cost savings, can explain changes in an organization's supply chain performance. This suggests that other factors that were not accounted for by this study could account for the remaining variation in an organization's supply chain performance.

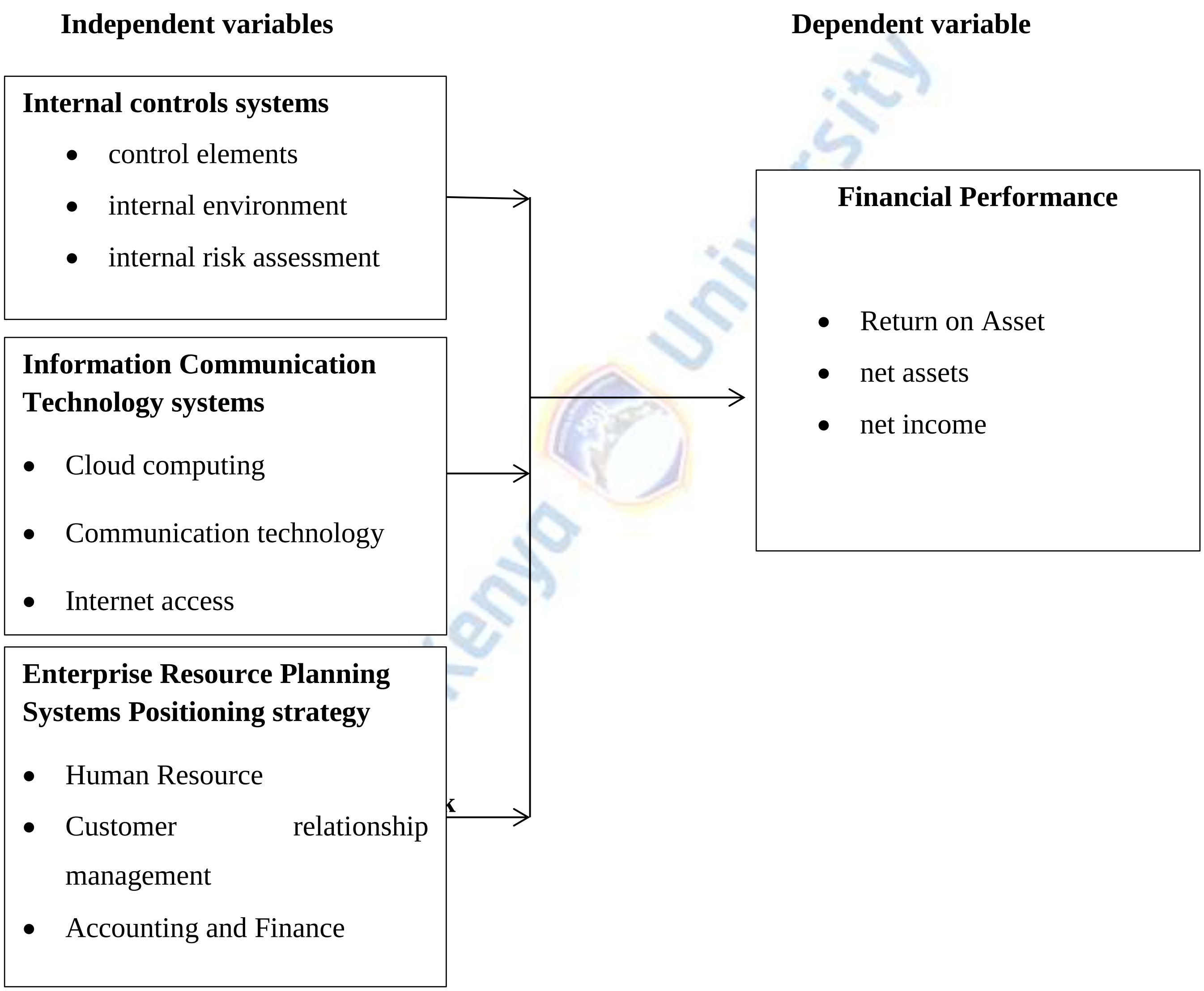
Nzama (2015) investigated in Kenyan sugar industry, the connection between ERP systems and that subject of financial growth, the impact on the financial growth of ERP systems was looked at. A statistically significant result was obtained by using positive linear correlations between ERP and sugar companies' financial results. Yet, it was discovered that organizational characteristics had a significantly negative impact on how sugar businesses' financial success and ERP systems are related. Similarly, Wanyoike (2017), evaluated the outcomes of Kenyan engineering consultancy firms' adoption of an ERP system. A sample of 41 was selected. Results indicated that ERP systems had enhanced the company's financial performance. Participants in the survey stated that practically every facet of financial performance was improved by ERP.

Karimi (2017) examined how adopting ERP affected the effectiveness of businesses Kenya's transportation industry. To collect qualitative data, questionnaires were utilized, which was then analyzed using inferential and descriptive statistics in SPSS. It's utilization of ERP systems and the profitability of a firm were correlated. According to the finding, performance and communication have a non-statistically significant relationship.

Mjomba and Kavale (2015) investigated how ERP will affect the Kenyan electricity and lighting company's performance. The researchers selected 125 volunteers as sample size in their descriptive study design. They gathered the data using surveys that the researcher had created and that the research assistant had distributed. After data analysis with SPSS software, figures and tables were utilized to illustrate the research’s outcomes in frequency form. According to the study, the enterprises had increased managerial efficiency, cut operational costs, increased profitability, and acquired a competitive advantage. The effectiveness of the organization was significantly influenced by each factor.

2.3 Conceptual Framework

Figure 1 illustrates connection related to the study's dependent financial performance variable and independent AISs.



In conclusion, academics have investigated how the performance of businesses is impacted by AISs. The researchers examined performance in terms of cost savings, pace of growth, contribution, profitability, organizational stability, and capability for making decisions. Accounting information efficiency is determined by a company's use of ICT, systems for business resource planning, and the effectiveness of internal control mechanisms inside that organization. Although they weren't the only ones, contingency theory, agency theory, and resource-based perspective theory were some of the ideas applied in this study effort. According to theorists of uncertainty, AIS adoption ought to be founded on the current economic circumstances a company is facing.

As a result of the agency theory, there could be information imbalance between the mangers(agents) and the shareholders (principals). The managers may have more information about the company than the owners or shareholders. The managers must therefore institute AIS to support the interests of the principals, who are the owners or shareholders in the company. This would enhance transparency and accountability in the organization; thus, giving it a competitive edge over competition. A method for evaluating potential components that might be employed to provide business organizations a competitive edge is provided by the resource-based perspective. The theory clarifies the rationale behind why certain technologies are created by commercial banks.

The great most of the empirical research considered in this investigation employed descriptive research design. Additional studies were examined utilizing a range of styles, whereby some depended on empirical evaluation to reach results and others depended on existing literature to gauge the relationships between the variables. While other research papers used other forms of analysis, including, others also used secondary and primary data. As an example, Odero (2014) employed descriptive survey design to inspect how performance of SMEs in Nairobi County was impacted by the quality of their AISs. 50 SMEs were used as a realistic sample size.

Rotich (2017) assessed how AISs affected Kenyan manufacturing companies' efficiency. The study had a descriptive design, and tables and graphs were utilized to show the findings. 51 manufacturing companies in Kenya made up the sample, which has been selected applying a non-proportional quota sampling method. Abdikarim (2021) conducted research into how computerized accounting systems affect the standard of accounting among businesses registered in the Nairobi Securities Exchange. The research examined 62 Kenyan listed businesses using a cross-section survey and an exploratory research design. Wanyiri (2019) studied how internal controls affected Kenya's commercial banks' financial performance.

Mati (2022) examined how internal control procedures affected the financial results of Kenyan commercial state businesses. Descriptive statistics and correlations were applied during the inquiry. Loktary (2018) conducted a study of financial outcomes and the running of ICT systems. Descriptive research strategy was adopted in this work. The SMEs in West Pokot County, Kenya, that were formally registered.

Malungu (2019) explored how ICT affected the quality of instruction in Kakamega County. Different strategies of research styles were employed in the research. Information was gathered by the use of observation checklists and questionnaires. Intended audience consisted of 324 respondents, including 132 staff members, 120 computer science teachers, and 72 school principals from Kakamega County's 12 sub-counties. The target audience was represented by the sample size of 175 respondents. descriptive statistics that made use of frequencies, percentages, and tables. Software called SPSS was used to examine the data that had been collected.

Kangogo (2019) explained that implications of business resource planning for the Kenyan financial institutions' financial performance. Anyota (2015) stated the connection related ERP and Kenya's Commercial State Companies' Financial Performance. Study's quantitative data collection and analysis employed SPSS, which utilized a descriptive design and table-based findings.

Also, there is a huge need to research how the deployment of AIS would affect commercial banks around the world. Several studies have explored the effect of AIS implementation on financial performance between banks in light of a comparative analysis. Most research looking into AIS's effects on financial rentability were chosen by businesses based on their quotes the national financial market under consideration. The varied results that have been found may be due to the heterogeneity of these firms' activity. At the conclusion of this study, it is intended that the evaluated materials will offer a course for future studies in this subject or this particular region.

2.5 Research gap

Researchers produced a variety of ambiguous results and failed to pinpoint the precise connection in between accounting data systems and financial performance. This demonstrates necessity for additional studies in future to narrow the gap by understanding how AISs affect financial performance. Several researches are performed on AIS and financial growth of firms, particularly in the social, economic and political spheres. These academics now recognize computerized accounting systems as a viable tool to aid in the efficient growth of firms.

Past research on AISs has attempted to develop recommendations for firms' quality strategic leadership, effective communication strategies, and AIS adoption that can affect their efficiency. These studies have also looked at the benefits of investing in high-quality AIS for the financial accounting process. However, none of the previously conducted studies on AIS examined how internal control systems relate to financial performance. As a result, this research expands on the earlier research by examining how these systems relate to financial rentability.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter expresses the processes and tactics that unquestionably become practical as the research endeavor is carried out. The research methodology that ensured the completion of the analysis, the study location, the target demographic, as well as the steps for selecting a representative sample for the study, are all be indicated. The research design, the study's instruments to gather information, their reliability and validity, how the tools were utilized to gather relevant data, and how the data was organized, assessed, and measured are covered.

3.1 Research design

The structuring of the circumstances for gathering and analyzing data with the goal of balancing operational economy and respect with the intention of the study is known as research design (Kothari, 2014). A descriptive research approach makes it possible to determine whether a phenomenon recurs or, similarly, whether there is a link between the variables used in each study (Bryman & Bell, 2011). This style of design worked well for determining how AISs influence the financial performance in commercial banks in Kenya. To obtain particular data from respondents and to ask targeted questions, the researcher employed structured questionnaires. To increase the accuracy of the conclusions and findings, the data was subjected to statistical testing in a fair and objective manner.

3.2 Location of the study

Data gathering was conducted on First Community Bank and Dubai Islamic banks within their branches located Nairobi, Kenya.

3.3 Targeted population

Claggett, Brian, Zhao and Lihui (2013) observed that, choosing the appropriate study population is essential to increasing the likelihood of success. This is the group as a whole of subjects, things, or items that a researcher wants to look at (Mugenda. & Mugend, 2013). The study focused on a group of 289 personnel from two commercial banks that have extensive histories of operation in Kenya, including managers, accountants, auditors, and tellers from those two banks. 132 workers of First Community Bank and 157 employees of Dubai Islamic Bank make up the targeted audience.

Table 1: Target population

Commercial Banks	Targeted population	Percentage
First community bank	132	45.68%
Dubai Islamic Bank	157	54.32%
Total	**289**	**100**

Source: First Community Bank Corporate office and Dubai Islamic Bank 2022

3.4 Sampling and sampling techniques

By selecting samples (representatives) from the larger population Donald Cooper (2014) describes the process. The objective was to obtain a subset that accurately reflects the characteristics of the population. Mugendaetal. (2013), asserted that samples are chosen in order to speed up data collection and reduce costs. The study concentrated on First Community Bank and Dubai Islamic Bank personnel. Given that the sample population for this study was reasonable, data was collected through sampling.

3.5 Sampling procedure

The researcher utilized the stratified proportionate random sampling method, as outlined by Kothari (2014). The population was categorized into strata, specifically the top, medium, and low employee categories within the banks. These strata were determined based on functional sectors for the purpose of data collection. To come up with the sample size, Yamane formula was employed, utilizing a 95% confidence level and a 5% confidence interval.

$$n = \frac{N}{1+N(e)^2}$$

Where:

n = required sample size

e = level of significance taken to be 0.05%

N = the population size

1= constant

Thus:

$$n = \frac{289}{1 + 289(0.05)^2}$$

n= 167

Sample size = 167

Table 2: Sampling Matrix

Stratum	Target population	Sample size	Percentage
First community bank	132	76	45.68%
Dubai Islamic Bank	157	91	54.32%
Total	**289**	**167**	**100**

Source: Researcher 2023

3.6 Construction of Research Instruments

The researcher created primary data gathering tools for this project. The researcher created questionnaires and data gathering instruments. The respondents received a word document containing the questions. The first portion of the questionnaire covered the universal information, while the other portion included questions about the investigation's goals. The chosen commercial banks under scrutiny thereafter got the surveys. A questionnaire with defined response options was rated on a 5-point Likert scale. Researcher gauged the respondents' attitudes since respondents would declare their degree of agreement or disagreement with a given proposition. Monetary declaration for the five years from 2018 to 2022 was considered to demonstrate the connections associated to banks' financial performance and the AISs. Using a data collecting spreadsheet, secondary data was gathered.

3.7 Pilot Testing Instrument

Conducting a pilot study involved distributing 10 questionnaires to the Gulf African bank, which was excluded from the primary research. Pilot study was aimed at validating and showing the reliability of the questionnaire. Through this process, researcher assessed the clarity and uniformity of the questions to ensure that all respondents interpreted them consistently. Additionally, the pilot study provided an approximate indication of the time respondents needed to complete the survey. Also, the questionnaire's entirety—including the questions' language, flow, structure, and style, as well as their difficulty and instructions—were pre-examined. Before posing the question to responders, it was revised in response to feedback.

3.8 Validity of the Instrument

Collis and Hussey (2013) described how test validity relates to determine if the test is assessing the variable that it is supposed to. There were two categories of validity in the questionnaire employed to collect the information. They had veracity in both content and face. Whether a data collection method is suitable for the task at hand depends on a test of its face validity. This is a common-sense approach where factors like the potential amount of time spent on a questionnaire, its design, and its size are considered. Regarding the questionnaire's face validity, the supervisor offered advice. The questionnaire was changed in accordance with the supervisor's suggestions.

For content validity, the test's position and strength in respect to the variables under research were assessed. The target of this test was to ascertain whether the variables influencing variable relinquishment could be accurately measured by the study's equipment. To establish this kind of authenticity, the supervisor was consulted for guidance. The manager went over the surveys and gave suggestions for how to make the tools better.

3.9 Reliability of the Instrument

All of the elements were taken from prior research, and the questions altered to fit the Kenyan context. Upon adoption, these items were given to supervisors to determine their relevance before being pretested to look for errors. The study used Cronbach's Alpha coefficient. It measures the degree to which results from various objects measuring the same variable may be relied upon. Kothari (2014) claimed that if the instrument's Cronbach Alpha value is less than 0.7, since this suggests inconsistency in the tool, the instrument can be modified by editing or removing items. If the value of Alpha is 0.7 or higher, the instrument is accepted since it is thought to be highly and internally consistent. Otherwise, the tool is changed till it is internally consistent.

3.10 Data collection procedure

Data collection entailed collection of data from various sources. This was done so that one could later analyze the findings and respond to applicable questions. To clarify the study's goals, the researcher arranged a meeting with the university administration. The survey was then printed by the researcher. As a result, participants in the study completed questionnaires on their own. The chosen responders received each questionnaire for final completion. The personnel received surveys with the assistance of study assistants. The various portions of the questionnaires and how to interact with respondents were covered in training for the research assistants. Prior to their final collection for further analysis, the researcher gave the respondents one week to complete the questionnaires.

3.11 Data analysis technique

Statistical program for social sciences (SPSS Ver. 28) was utilized to assess the data and to organize it into tables. Mumba, Brian, Alıcı and Devrim (2021) claimed that SPSS is effective and provides a clear, formal analysis of nearly every potential result. Afterwards, for interpretation, descriptive statistical methods of percentage and frequency were used. In order to establish how the independent variable influences the dependent variable, inferential statistics was utilized to regress variables. After processing, data was presented based on research findings mostly arranged as tables and figures. The responders to the study's topic were described using descriptive statistics. The study used the correlation coefficient to look at how the independent and dependent variables relate to one another. All objectives were determined by using simple regression analysis to determine the direction and the degree to which independent and dependent variables are linked. Pearson correlation was conducted. A multiple regression model was used that is: $\mathbf{Y = \beta_0+\beta_1 X_1+ \beta_2 X_2 + \beta_3 X_3 +\varepsilon}$, where **Y=** financial performance of commercial banks**,** $\mathbf{X_1}$ **=**Internal control systems, $\mathbf{X_2}$ = ICT, $\mathbf{X_3}$= ERP systems. The models for the three objectives are as follows:

First objective: $\mathbf{Y = \beta_0+\beta_1 X_1+ \varepsilon}$

Where; Y = Financial performance, the dependent variable.

$\mathbf{X_1}$ **–** Internal Control systems

$\mathbf{\beta_0}$ – The constant

$\mathbf{\beta_1}$ – The coefficient

$\boldsymbol{\varepsilon}$ – The Error term

Second Objective ; $\mathbf{Y = \beta_0+ \beta_2 X_2 + \varepsilon}$

Y = Financial performance, dependent variable.

$\mathbf{X_2}$ – ICT

β_0 – The constant

β_2 –The coefficient

ε – The Error term

Third Objective; $Y = \beta_0 + \beta_3 X_3 + \varepsilon$

Where; Y= Financial performance, dependent variable.

X_3 – ERP

β_0 – The constant

β_3 –The coefficient

ε – The Error term

3.12 Ethical Consideration

Ethics are approved procedures done by a researcher in the course of their research work (Mugendetal., 2013). Respondents were given the opportunity to provide informed consent without being subjected to threats, rewards, or pressure to answer questions they don't want to. Secrecy was upheld throughout the test. On any ethical problems that the investigator encountered, the managers were consulted. Following rules and guidelines for research was necessary for ethical considerations. Certain ethical guidelines and academic standards served as the foundation for all research. Adherence to ethical standards is the only way to improve a study project's purpose and goals. The study was directed by the moral principles and rules that apply to Mount Kenya University and all of Kenya.

CHAPTER FOUR

RESEARCH FINDINGS, ANALYSIS AND PRESENTATION

4.1 Introduction

This part outlines descriptive statistics, interpretations and discussions. It analyses the data as per the objectives; that is to investigate the effects of internal control system, ICT and ERP systems and the financial health of commercial banks.

4.2 Response rate

A hundred and sixty-seven questionnaires, out of which 163 were successfully filled and returned, were analyzed. Therefore, the response rate of 97% was realized, as summarized in Table 4.1

Table 4.1: Response rate

Stratum	Sample size	Response	Response rate
First community bank	76	74	97%
Dubai Islamic Bank	91	88	97%
Total	**167**	**162**	**97%**

Source: Research Data

The study witnessed a high questionnaire return rate of 97%. A response rate of 70% or more is sufficient as being excellent by Mugenda and Mugenda (2002). Consequently, the overall response rate of 97% enhanced the credibility of the study's findings.

4.3 Reliability results

10 participants participated in the pilot research conducted at Gulf African Bank. The reliability results from the pilot research are indicated in Table 4.2.

Table 4.2: Reliability Results

Variable	Item	Alpha Value	Recommendations
internal control system	5	0.882	Reliable
ICT	5	0.897	Reliable
ERP	5	0.879	Reliable
financial performance	5	0.874	Reliable

Source: Research Data

The Cronbach Alpha Coefficient was calculated for each variable. Coefficient for financial performance was 0.874, internal control system was 0.882, ICT was 0.897 and ERP was 0.879. All the variables had reliability values higher than 0.7, which was considered adequate in the study.

4.3. Validity tests

The study conducted validity tests for the questionnaire. The research's instrument validity was achieved by seeking the university supervisor's professional advice. Upon adequate advice from the supervisors, the questionnaire was examined, revised and accepted. The questionnaire provided data that accurately answered the study's research questions.

4.4 Demographic information

The research aimed at determining the participants' demographic information.

4.4.1 Respondents' gender

Findings are indicated in Table 4.3

Table 4.3: Respondents' gender

Gender	Frequency	Percent
Male	91	56
Female	71	44
Total	**162**	**100**

Source: Research Data

Table 4.3 reveals that 91(56%) of the respondents were male and 71 (44%) were female. Hence, majority of the respondents were male. Therefore, fair distribution of these genders, hence no bias.

4.4.2 Respondents' age

Findings are presented in Table 4.4

Table 4.4: Respondents' age

Age	Frequency	Percent
18-29 years	9	6
30-39 years	63	39
40-49 years	64	40
50-59 years	26	16
Total	**162**	**100**

Source: Research Data

Table 4.4 reveals that 9 (6%) of the respondents were aged 18-29 years, 63 (39%) were aged 30-39 years, 64 (40%) were aged 40-49 years and 26 (16%) were aged 50-59 years. Hence, most of the respondents were aged 40-49 years.

4.4.3 Respondents' education level

Findings are presented in Table 4.5

Table 4.5: Respondents' education level

Education level	Frequency	Percent
College	6	4
Undergraduate	56	35
Masters	100	62
Total	**162**	**100**

Source: Research Data

Results indicate that 6 (4%) of the respondents had college education, 56 (35%) had undergraduate degrees and 100 (62%) had masters' degrees. Hence, most of the participants had higher level education, and their responses were reliable for the study findings, analyses, conclusions and recommendations.

4.4.4 Respondents' experience

Findings are presented in Table 4.6

Table 4.6: Respondents' experience

Experience	Frequency	Percent
2 years and below	34	21
3-5 years	106	65
6-8 years	21	13
9+ years	1	1
Total	**162**	**100**

Source: Research Data

Results show that 34 (215) had less than two years' experience, 106 (65%) had 3-5 years' experience, 21 (13%) had 6-8 years' experience and 1% had more than 9 years' work experience. Hence, most of the business owners had 3-5 years of experience.

4.5 Descriptive analysis

The analysis is presented as per the study objectives that is: to explore the effects of internal control system, ICT and ERP systems and the financial performance of commercial banks.

4.5.1 Internal control system on financial performance

First objective evaluated the effects of internal control system on financial performance of the identified commercial banks. Respondents were asked five questions regarding the objective. Likert scale was used to present responses.

Table 4.7: Internal control system on financial performance

Statement	**SA** %	**A** %	**UD** %	**D** %	**SD** %
Internal control systems serve a crucial function.	33.3	58.0	8.6	0	0
Internal control systems have a major role in the high performance of sectors like the financial firms.	34.0	59.3	6.8	0	0
Internal controls Via its different organizational functions, systems successfully improve the Institution's financial performance.	44.4	52.5	3.1	0	0
Internal control systems enable many solutions for the accomplishment of financial performance.	45.1	51.9	3.1	0	0
Internal control systems allow the institution to provide accurate and timely financial data.	42.6	53.1	4.3	0	0

Source: Research Data

Table 4.7 reveals that 91.3% agreed that internal control systems serve a crucial function in supporting performance of commercial banks. Moreso, 93.3% agreed that these systems have a major role in the high performance of sectors like the financial institutions. It was agreed that internal controls via its different organizational functions, systems successfully improve the Institution's financial performance (96.9%).It was agreed that Internal control systems enable many solutions for the accomplishment of financial performance. Findings showed that 95.7% agreed that internal control systems allow the institution to provide accurate and timely financial data.

Table 4.8 : Descriptives on internal control system

Statement	N	Mean	Std. Deviation
In the banking industry, internal control systems serve a crucial supporting function.	162	4.25	0.601
Internal control systems have a major role in the high performance of sectors like the financial institutions.	162	4.27	0.579
Internal controls Via its different organizational functions, systems successfully improve the Institution's financial performance.	162	4.41	0.553
Internal control systems enable many solutions for the accomplishment of financial performance.	162	4.42	0.554
Internal control systems allow the institution to provide accurate and timely financial data.	162	4.38	0.570
Aggregate Mean		**4.35**	

Source: Research Data

Respondents agreed that internal control systems serve a crucial function in supporting performance of commercial banks (Mean=4.25; SD=0.601). Moreso, it was agreed that these systems have a major role in the high performance of sectors like financial institutions (Mean=4.27; SD=0.579). It was agreed that internal controls via its different organizational functions, systems successfully improve the Institution's financial performance (Mean=4.41; SD=0.553). It was agreed that internal control systems enable many solutions for the accomplishment of financial performance (Mean=4.42; SD=0.554). Respondents agreed that internal control systems allow the institution to provide accurate and timely financial data (Mean=4.38; SD=0.570).The aggregate mean of 4.35 indicates that participants agreed that internal control systems are critical in enhancing performance. These findings augur with those of Nyakundi, Nyamita and Tinega (2014)**,** who investigated how internal control procedures influenced the financial success and discovered that enterprises' financial success is significantly influenced by these systems**.** In the same breadth, Asiligwa and Rennox (2017), performed research on how internal controls affected Kenyan commercial banks' financial performance and concluded that the banking industry's good financial position is due in part to the implementation and upkeep efficient internal controls.

4.5.2 ICT on financial performance

Second objective evaluated the effects of ICT on financial performance of commercial banks. Participants were asked five questions regarding the objective and responses presented on likert scale.

Table 4.9: ICT on financial performance

Statement	**SA** %	**A** %	**UD** %	**D** %	**SD** %
ICT plays a crucial supporting function in the banking industry.	33.3	62.3	4.3	0	0
Industries like financial institutions, which depend on optimal performance, are greatly influenced by ICT.	38.3	56.8	4.9	0	0
ICT furnishes data regarding interest rates and banking services.	32.7	63.6	3.7	0	0
ICT make it possible to achieve financial performance in various ways.	35.8	59.9	4.3	0	0
Because of the utilization of ICT by the institution, financial data are produced accurately and on time.	40.7	53.1	6.2	0	0

Source: Research Data

Table 4.9 shows that 95.6% agreed that ICT plays a crucial supporting function in the banking industry. Moreso, 95.1% agreed that Industries like financial institutions, which depend on optimal performance, are greatly influenced by ICT. It was agreed that ICT furnishes information regarding interest rates and banking services (96.3%). Respondents agreed ICT make it possible to achieve financial performance in various ways. Findings showed that 93.8% of the respondents agreed that because of the usage of ICT by the institution, financial data are produced accurately and on time.

Table 4.10 : Descriptives on ICT system

Statement	N	Mean	Std. Deviation
ICT plays a crucial supporting function in the banking industry.	162	4.29	0.542
Industries like financial institutions, which depend on optimal performance, are greatly influenced by ICT.	162	4.33	0.568
ICT furnishes information and data regarding interest rates and banking services.	162	4.29	0.531
ICT make it possible to achieve financial performance in different ways.	162	4.31	0.551
Because of the utilization of ICT by the institution, financial data are produced accurately and on time.	162	4.35	0.593
Aggregate Mean		**4.31**	

Source: Research Data

Respondents agreed that agreed that ICT plays a crucial supporting function in the banking industry (Mean=4.29; SD=0.542). Moreso, it was agreed that industries like financial institutions, which depend on optimal performance, are greatly influenced by ICT (Mean=4.33; SD=0.568). It was agreed that ICT furnishes data regarding interest rates and banking services (Mean=4.33; SD=0.568). Respondents agreed ICT make it possible to achieve financial performance in various ways (Mean=4.29; SD=0.531). Respondents agreed that because of the usage of ICT by the institution, financial data are produced accurately and on time(Mean=4.31; SD=0.551). The aggregate mean of 4.31 indicates that participants agreed that ICT is critical in commercial banks' performance. These findings corroborate those of Loktary (2018), who analyzed the effects of technology used in ICT on financial performance and concluded that adoption of ICT activities increases performance. IT boosts production and efficiency in SMEs, enhances processing of transactions quickly and increases customer satisfaction. Likewise, Nkansa and Kofi (2013) indicated that a favorable linear link between the financial performance of banks exists. Binuyo and Aregbeshola (2014) articulated that ICT adoption improves overall financial results, favorably affecting the wealth of the shareholders.

4.5.3 ERP Systems on financial performance

Third objective evaluated the effects of ERP systems on financial performance of commercial banks. Respondents were asked five questions regarding the objective and responses presented on Likert scale.

Table 4.11: ERP on financial performance

Statement	SA %	A %	UD %	D %	SD %
ERP plays a crucial supporting function in businesses and sectors.	50.0	47.5	2.5	0	0
ERP is a major factor in the high performance of sectors like the financial institutions.	34.0	60.5	5.6	0	0
In contemporary enterprises, systems assist a variety of functions, including marketing.	46.9	51.9	1.2	0	0
ERP systems make it possible to realize financial performance in a number of ways.	32.1	61.7	6.2	0	0
Due to ERP, the institution produces accurate and timely financial data.	34.6	56.8	8.6	0	0

Source: Research Data

Table 4.11 indicates that 97.5% agreed that ERP plays a crucial supporting function in businesses and sectors. Moreso, 94.5% agreed that ERP is a major factor in the high performance of sectors like the financial institutions. It was agreed that in contemporary enterprises, systems assist a variety of functions, including marketing functions (98.2%). Respondents agreed ERP systems make it possible to realize financial performance in a number of ways. Due to ERP, the institution produces accurate and timely financial data.

Table 4.12 : Descriptives on ERP

Statement	N	Mean	Std. Deviation
ERP plays a crucial supporting function in businesses and sectors.	162	4.48	0.548
ERP is a major factor in the high performance of sectors like the financial institutions.	162	4.28	0.562
In contemporary enterprises, systems assist a variety of functions, including marketing.	162	4.46	0.524
ERP systems make it possible to realize financial performance in a number of ways.	162	4.26	0.563
Due to ERP, the institution produces accurate and timely financial data.	162	4.26	0.606
Aggregate Mean		**4.35**	

Source: Research Data

Respondents agreed that ERP plays a crucial supporting function in businesses and sectors (Mean=4.48; SD=0.548). It was agreed that ERP is a major factor in the high performance of sectors like the financial institutions (Mean=4.28; SD=0.562). It was agreed that in contemporary enterprises, systems assist a variety of functions, including marketing functions (Mean=4.46; SD=0.524). Respondents agreed ERP systems make it possible to realize financial performance in a number of ways (Mean=4.26; SD=0.563). Respondents agreed that due to ERP, the institution produces accurate and timely financial data (Mean=4.26; SD=0.606). The aggregate mean of 4.35 indicates that participants agreed that ERP is critical in performance. This is in line with Nyoro and Paul (2017), who looked into how the implementation of ERP affected performance and noted that ERP systems enhances accountability and timely processing and dissemination of business information. In the same vein Karimi (2017) examined how adopting ERP affected the effectiveness of businesses and found that utilization of ERP systems and the profitability of a firm were correlated. According to Hossein (2014), ERP systems integrate sales, financial and customer data from both internal and external sources into an organization. ERP systems help businesses and sectors in a vital way. ERP significantly contributes to the performance of commercial banking sector.

4.5.4 Financial performance of commercial banks

The research sought to investigate the effects of accounting information systems on the financial performance commercial banks. Respondents were asked five questions regarding the objective and responses presented on Likert scale.

Table 4.13: Financial performance of commercial banks

Statement	SA %	A %	UD %	D %	SD %
The bank has improved ROA.	29.6	66.0	4.3	0	0
There is improved ROI.	37.7	57.4	4.9	0	0
The bank's assets have increased.	33.3	63.6	3.1	0	0
The bank's net income has increased.	35.2	60.5	4.3	0	0
Bank's operating cashflow has increased.	42.6	53.1	4.3	0	0

Source: Research Data

Table 4.13 indicates that 95.7% agreed that banks had improved ROA. Moreso, 95.1% agreed that there was an improved return on investment. It was agreed that bank's assets have increased (96.9%). Respondents indicated that bank's net income has increased (95.7%). Findings showed that 95.7 % of the participants agreed that bank's operating cash flow has increased.

Table 4.14 : Descriptives on financial performance

Statement	N	Mean	Std. Deviation
The bank has improved ROA.	162	4.25	0.526
There is improved ROI.	162	4.33	0.566
The bank's assets have increased.	162	4.30	0.524
The bank's net income has increased.	162	4.31	0.549
Bank's operating cashflow has increased.	162	4.38	0.570
Aggregate Mean		**4.31**	

Source: Research Data

Most of the respondents agreed that banks had improved ROA (Mean=4.25; SD=0.526). Respondents agreed that there was an improved return on investment (Mean=4.33; SD=0.566). It was agreed that bank's assets have increased (Mean=4.30; SD=0.524). Respondents indicated that bank's net income has increased (Mean=4.31; SD=0.549).

Respondents agreed that bank's operating cashflow has increased (Mean=4.38; SD=0.570).

Data was gathered on return on assets from the financial statements of this banks. The ROA was arrived at by dividing the net income by the total assets for the banks for each of the 5 years. Findings are presented in below:

Table 4.15 : Return on assets of commercial banks

Period	ROA
2018	0.000672
2019	0.000636
2020	0.007343
2021	0.017902
2022	0.021979
Average	**0.009706**

Source: Research Data

Results show that the commercial banks had an increasing ROA over the five-year period. The lowest ROA was 0.000636 for the year 2019 while the highest ROA was realised in the year 2022 ,at 0.021979. The average ROA was 0.009706. According to Kurniawan (2021), ROA indicates the level of profitability a company achieves in relation to its total asset investments. Higher ROA indicates a more effective performance by the company, resulting in a greater rate of return. This increased performance makes the company more appealing to investors, leading to a rise in its attractiveness. As a consequence, the company experiences growing demand from investors as it promises to provide higher returns. Ultimately, ROA has a significant impact on the stock returns that investors are willing to accept from the company.

4.6 Inferential analysis

The study conducted correlation analysis and hypothesis testing. These showed the association between the study variables.

4.6.1 Correlation analysis

Pearson correlation analysis was carried out and results illustrated in Table 4.16

Table 4.16 : Pearson correlation analysis

		financial performance	internal controls	ICT	ERP
financial performance	r	1	.836**	.765**	.715**
	p		0.000	0.000	0.000
	N	162	162	162	162
internal controls	r	.836**	1	.776**	.650**
	p	0.000		0.000	0.000
	N	162	162	162	162
ICT	r	.765**	.776**	1	.606**
	p	0.000	0.000		0.000
	N	162	162	162	162
ERP	r	.715**	.650**	.606**	1
	p	0.000	0.000	0.000	
	N	162	162	162	162

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

Source: Research Data

The research findings highlight noteworthy correlations between various factors and the financial performance of the identified banks. The systems exhibited a strong correlation (r=0.836, p=0.000), indicating a significant link between this system and financial performance. Similarly, the research revealed a substantial and positive association between ICT (ICT) and the advancement of commercial banks' financial performance (r=0.765, p=0.000). The application of ERP systems also displayed a favorable and significant correlation with the financial performance (r=0.715, p=0.000). The significance of these correlations is determined by the p-values. In this context, ($p < 0.05$) is regarded substantially significant, while values above 0.05 are regarded as insignificant. Akhter (2022) found that implementing AIS can bring several benefits to organizations. Firstly, AIS helps in safeguarding data, ensuring its protection from unauthorized access or misuse. Secondly, it aids in reducing the misappropriation of assets, thereby promoting better financial control and risk management within the company. Thirdly, the effective use of AIS enables organizations to produce valuable and relevant information, which plays a crucial role in attaining the company's goals and objectives. As a result, the improved utilization of AIS contributes to enhancing overall firm performance. These findings highlight the significance of modern and well-implemented accounting information systems in bolstering a commercial banks performance.

4.6.2 Linear regression model

A regression analysis was done to explore how the independent variables impact the dependent variable. An overview of the linear regression model is shown in Table 4.17.

Table 4.17 : Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.878[a]	0.770	0.766	0.12620	2.049

a. Predictors: (Constant), ERP, ICT, internal controls
b. Dependent Variable: financial performance

Source: Research Data

Results reveal that r square is 0.766 that is, 76.6%. This means that financial performance of commercial banks would vary by 76.6% due to changes in internal control system, ICT and ERP systems, at 95% confidence level. Merely 23.4% of the variations in financial performance of the banks can be ascribed to additional influencing factors. The correlation coefficient, denoted as R, serves as a gauge for assessing the relationship between variables. The outcomes unveiled a substantial and positive correlation between the variables, evident by a correlation coefficient of 0.878. With a Durbin Watson statistic of 2.049, it can be inferred that no autocorrelation exists among the variables. This condition allows for reliable deduction of inferential statistics, facilitating accurate interpretation.

Table 4.18: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.428	3	2.809	176.385	.000[b]
	Residual	2.516	158	0.016		
	Total	10.944	161			

a. Dependent Variable: financial performance

b. Predictors: (Constant), ERP, ICT, internal controls

Source: Research Data

ANOVA results exhibited a level of significance at 0.000, underscoring the substantial nature of the connection between the dependent and independent variables of the research. This finding signifies that there exists a relationship between these variables. Moreover, the calculated F-value was observed to be greater than the critical F-value (176.385 > 2.669). The model employed in the study emerges as robust and dependable. Consequently, the results are considered robust enough to formulate conclusive findings and offer meaningful recommendations.

Table 4.19: Coefficients

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.	VIF
1	(Constant)	0.261	0.177		1.473	0.143	
	internal controls	0.492	0.065	0.493	7.613	0.000	2.887
	ICT	0.210	0.057	0.226	3.656	0.000	2.634
	ERP	0.232	0.046	0.257	5.014	0.000	1.811

a. Dependent Variable: financial performance

Source: Research Data

Table 17 shows the model equation to be:

$Y = 0.261 + 0.493 X_1 + 0.226 X_2 + 0.257 X_3 + \varepsilon$

Assuming that the values of the internal control system, ICT, and ERP systems remain fixed at zero, the financial performance would remain consistently at 0.261. Variance Inflation Factors (VIF) for the three variables - 2.887, 2.634, and 1.811 - all fall below the threshold of 10. This outcome is deemed satisfactory. VIF indicates the extent to which the variance of the weight coefficient is inflated due to multi-collinearity. In simpler terms, it gauges the degree of correlation between each weight and the other predictors within the model. The low VIF values here suggest that the weights have limited correlation with the predictors in the model, signifying that multicollinearity is not a major concern. Furthermore, it's noted that the internal control system emerges as statistically significant in explaining financial performance ($\beta = 0.493$, $p < 0.05$).

This results support that of Ayagre (2014) explored the efficiency of bank internal control systems in Ghana and found that banks' internal control systems, which include strong controls on the control environment and monitoring activities significantly influence performance. In a similar vein Ndiwa and Kwasira (2014) undertook a study whose outcomes shed light on a crucial observation: the presence of a well-structured and effective system bears a positive influence on the overall performance of a company. Ndiwaetal. (2014) study lies in its alignment with the broader understanding of the importance of internal controls in enhancing financial performance. Their findings resonate with the growing consensus that a robust internal control framework contributes to better financial outcomes by minimizing risks, ensuring compliance, and optimizing operational efficiency. This echoes the notion that sound internal controls are pivotal for organizations to achieve their financial objectives and maintain sustainable growth.

Well-implemented internal controls streamline processes and eliminate inefficiencies. By promoting accountability and responsibility, these controls enable smooth operations, reducing wastage. Internal controls help identify and prevent fraudulent activities within the organization. By setting up checks and balances, companies can reduce the risk of misappropriation of assets, unauthorized transactions, and other fraudulent practices, thereby protecting the company's financial resources. Consequently, when these internal controls are well-designed and effectively functioning, they play a crucial role in supporting a firm's financial performance.

Results indicate a positive association between ICT and financial performance of commercial banks ($\beta = 0.226$, $p < 0.05$). A unit increase in ICT leads to 0.226 unit increase in financial performance. This aligns with the research carried out by Mwangi (2016), which concentrated on investigating the effect of adopting ICT on company performance. Mwangi discovered several factors that hindered the successful adoption of ICT and subsequently affected firm performance. Some of these barriers included insufficient data transfer, inadequate ICT infrastructure, user resistance to technology implementation, lack of support from senior management and challenges in integrating ICT. Likewise, Basweti, Masese and Onsiro (2013) investigated the effects and difficulties of implementing technology in the banks and noted the development and widespread use of information and communication technologies have transformed the way organizations operate on a global scale. ICT plays key role in enabling knowledge-sharing, increasing productivity and enhancing competitiveness in the global market. Companies that effectively harness ICT have the opportunity to revolutionize their business processes and stay at the forefront of commercial innovation. Malungu (2019) noted that firms should increase investment in ICT infrastructure, educate customers about the use of online banking products and lower taxes on ICT equipment. In order to clear the way for commercial and policy decisions, it is essential to evaluate individual technologies, the effects of adopting other individual technologies, profitability and performance challenges.

ERP system is statistically significant in describing financial performance ($\beta = 0.257$, $p < 0.05$). Hence, a unit increase in ERP systems leads to 0.257 unit increase in financial performance. These findings concur with those of Mjomba and Kavale (2015), who investigated how ERP affect firm performance. Findings indicated that firm with elaborate ERP systems had increased managerial efficiency, cut operational costs, increased profitability and acquired a competitive advantage. Similarly, Wanyoike (2017), evaluated the outcomes of firms' adoption of an ERP system. Results indicated that ERP systems had enhanced firms’ financial performance. Similarly, Al-Nimer, Omush and Almasarwah (2017) conducted a study to evaluate the implementation of ERP systems in commercial banks and its implications on performance. Their findings indicated that the adoption of ERP systems does indeed have a significant effect on the overall performance. Proper training and upskilling of employees are essential to ensure they can effectively utilize the

ERP system to its full potential. Inadequate or insufficient training may lead to challenges in integrating the system into daily operations and utilizing its functionalities optimally.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter encapsulates a concise overview of the research findings concerning the impacts of the internal control system, ICT, and ERP systems on the financial performance of commercial banks. Moreover, within this chapter, conclusions derived from these research findings are delineated, offering a comprehensive understanding of the implications. Additionally, the recommendations stemming from the study's outcomes are expounded upon, providing actionable insights for practitioners, researchers, and stakeholders in the field.

5.2 Summary of the result findings

This section of research findings is presented in line with the objectives of the research.

5.2.1 Effect of internal control system on financial performance

The study's first objective was to evaluate the effects of internal control system on financial performance of commercial banks. The results indicated that there was a significant positive effect of internal control system on financial performance. Internal control systems served as a key function in supporting performance of commercial banks. Moreso, these systems had a major role in the high performance of sectors like the financial institutions. Internal controls systems improved the institution's financial performance and internal control systems enabled many solutions for the accomplishment of financial performance. Internal control systems allowed the institution to provide accurate and timely financial data.

5.2.2 Effect of ICT on commercial banks' financial performance

The study's second objective was to explore the effect of ICT on financial performance of commercial banks. There was a significant and positive effect of ICT on the financial performance. In banking industry, ICT assumed a pivotal supportive role. It was indicated that financial institutions, which rely on peak efficiency, are affected greatly by ICT. Information on interest rates and banking services were provided by ICT, which competed with banks. ICT made it possible to achieve financial performance in a number of ways. Due to usage of ICT by the institution, financial data were produced accurately and on time.

5.2.3 Effect of ERP systems on commercial banks' financial performance

The study's third objective was to determine a link between ERP systems and financial performance of commercial banks. The findings showed significant and positive effect of these ERP systems on the financial performance. ERP systems emerged as integral components providing essential support within businesses and various sectors. ERP was a major factor in the high performance of sectors like the financial institutions. In contemporary enterprises, systems assist a variety of functions, including marketing functions. ERP systems made it possible to realize financial performance. ERP enhanced the commercial banks to produce accurate and timely financial data.

5.3 Conclusions

This study affirms the presence of a substantial and favorable influence resulting from the implementation of an internal control system on the financial performance of commercial banks. These systems play key and supportive role in bolstering the operational performance of these banks. It's noteworthy that such systems assume a critical responsibility in contributing to the heightened performance observed within sectors of significant importance, such as financial institutions. Internal controls systems improve financial performance and enable many solutions for the accomplishment of financial performance. Internal control systems allow commercial banks to provide accurate and timely financial data.

There exists a significant impact of ICT on the financial performance of commercial banks. Within the banking sector, ICT occupies a pivotal position by substantially shaping its landscape. The performance trajectory of financial institutions is substantially molded by the pervasive influence of ICT. This technology framework is instrumental in providing essential information concerning interest rates and banking services, setting it in direct competition with traditional banking practices. The influence of ICT extends beyond mere competition; it encompasses a multifaceted approach to achieving enhanced financial performance. This technology enables accurate and timely generation of financial data, thereby ensuring precision and dependability in financial reporting. The role of ICT in facilitating streamlined operations, real-time data management, and efficient customer service contributes significantly to the overall financial performance.

There is favorable correlation between the implementation of ERP systems and the financial performance of these banks. ERP systems assume a pivotal role in providing vital support within business operations. ERP is the main factor in the high performance of financial institutions. In contemporary enterprises, systems assist a variety of functions, including marketing functions. ERP systems make it possible to realize financial performance. ERP enables commercial banks to produce accurate and timely financial data.

5.4 Recommendations for practice

Proactive steps should be taken in establishing robust internal control systems that have the capacity to greatly enhance accountability within their operational frameworks. The adoption and enforcement of such internal control systems are positioned as a fundamental pillar for enhancing not only the transparency and reliability of their operations but also for bolstering the overall performance of these banks. In light of these far-reaching benefits, prioritizing the implementation of these systems becomes imperative. The significance of these internal control systems becomes even more pronounced when considering sectors characterized by their intricate financial operations, such as the domain of financial institutions. In this context, these systems hold a unique and critical role in influencing the degree of success and efficiency achieved by these institutions. Given the intricate and often complex nature of financial transactions and risk management within such sectors, the proper functioning of internal control systems emerges as a linchpin for ensuring the elevated performance levels that financial institutions aspire to attain. One of the primary outcomes derived from the establishment of this internal control systems is the empowerment of banks to consistently deliver financial information that is not only accurate but also punctual. By putting into place these structured mechanisms for control, banks can ensure that their financial reporting is both reliable and timely, instilling greater confidence among stakeholders, clients, and regulatory bodies. This precision in financial data can further translate into informed decision-making, which has cascading positive effects on the overall strategic direction and operational efficiency of the bank.

This study recommends the augmentation of ICT infrastructure within commercial banks as a means to propel their performance to new heights. Commercial banks should not only acknowledge the importance of ICT but to actively prioritize substantial investments in cutting-edge ICT systems. The rationale behind these investments lies in the significant potential they hold to revolutionize the operational landscape of banks and contribute to the elevation of their overall efficiency and effectiveness. The act of embracing up-to-date ICT systems presents itself as a strategic move that can yield multifaceted benefits for commercial banks. One of the most evident advantages lies in the potential for boosting operational efficiency across various departments and processes. Modern ICT systems are designed to streamline workflows, automate repetitive tasks, and facilitate seamless communication between different branches and sections within a bank. By doing so, these systems effectively reduce manual intervention, minimize errors, and optimize resource allocation, ultimately leading to smoother operations and enhanced customer service. A particularly noteworthy aspect of leveraging ICT is its transformative impact on the generation and management of financial data. Traditional methods of data handling and reporting often carried inherent risks of inaccuracies, delays, and complexities. However, with the integration of advanced ICT systems, banks gain the capability to generate, process, and disseminate financial data with an unparalleled degree of accuracy and efficiency. The automation of data collection and analysis minimizes the chances of errors, while real-time reporting mechanisms ensure that timely and up-to-date financial information is readily available for decision-makers and stakeholders.

This study recommends that commercial banks integrate robust ERP systems into their operational framework to attain and keep on with optimal performance levels. The concept of ERP systems is positioned as a pivotal contributor to the seamless functioning of various business operations within commercial banks, thereby representing a critical piece of the performance enhancement puzzle. ERP systems, characterized by their ability to integrate and centralize diverse business processes and data streams, stand as a testament to the modern approach to managing complex and multifaceted operations. In the context of commercial banks, where a myriad of functions ranging from customer relationship management to financial analysis and reporting coalesce, the significance of these systems becomes particularly pronounced. ERP systems provide a comprehensive platform that bridges the gaps between different departments, streamlining interactions and workflows, and minimizing redundancies. This orchestration of functions not only boosts internal efficiency but also leads to a more holistic understanding of the bank's overall performance, enabling effective strategic decision-making. Within the dynamic realm of the financial sector, ERP systems assume an elevated stature as they directly underpin the operations of high-performance institutions. These systems emerge as the bedrock upon which the intricate machinery of financial transactions, regulatory compliance, risk management, and data analysis are anchored. The implementation of robust ERP systems is a testament to a bank's commitment to achieving operational excellence and staying at the forefront of industry innovation. As a result, financial institutions that effectively harness the capabilities of ERP systems are poised to not only withstand the complexities of the industry but also to thrive and succeed in the face of evolving challenges.

5.5 Recommendations for further research

The study was limited to two specific banks. However, there exists an opportunity for broader exploration within the entire banking sector. Conducting similar studies across the entirety of the banking industry could significantly enrich the findings of this research, thereby granting it a more extensive and comprehensive scope. By incorporating a wider array of banks, further holistic understanding on the subject matter could be attained. The results gotten from analysis reveal an R-squared value of 0.766, equivalent to 76.6%. This statistical data indicates that around 76.6% of the variability observed in the financial performance these banks can be attributed to changes in their internal control systems, ICT infrastructure, and ERP systems. This correlation is statistically significant at a 95% confidence level. It implies that changes in these three factors have a substantial effect on financial performance. However, it is important to note that there are other factors, accounting for 23.4% of the variance, that influence the financial performance of commercial banks but were not involved in this research. These aspects warrant further investigation and exploration to better comprehend their contribution to financial performance dynamics within the banking industry. The methodology employed in this study involved the utilization of mixed techniques for gathering data and analysis. This approach integrated qualitative and quantitative techniques, allowing for a more detailed exploration of the subject matter. As a suggestion for future research, adopting a similar mixed methods approach could prove beneficial. This could provide a more nuanced and well-rounded understanding of the intricate relationship between AIS and financial outcomes.

References

Manktelow & Julian Birkinshaw. (2018). Mind Tools for Managers - 100 Ways to be A Better Boss. ,*Wiley India Pvt. Ltd., New Delhi*.

Abdallah A.J. (2013). The Impact of Using Accounting Information Systems on the Quality of Financial Statements Submitted to the Income and Sales Tax Department in Jordan. European Scientific Journal, Special edition 1, 41-48.

Abdikarim, H. K. (2021). The effect of Computerized Accounting System on financial reporting Quality among firms listed at the Nairobi Securities Exchange. *Unpublished MBA Report of the University of Nairobi.*

Abiola, I., & Oyewole, A. T. (2013). Internal control system on fraud detection: Nigeria.

Abugabah, A. &. (n.d.). ERP systems (ERP) and user performance.

Aburub, F. (2015). *Impact of ERP systems usage on organizational agility: An empirical investigation in the banking sector.* Information Technology & People.

ACCA. (2012). The role of accountancy in economic development. *the association of chartered certified accountants: united kingdom* .

Akanbi T. A., F. H. (2017). Owners' Perception on Accounting Information System Adoption: A Case of Small and Medium Enterprises in Nigeria. *European Journal of Accounting, Auditing and Finance Research Vol.5, No.11, pp.1-9,.*

Akhter, A. (2022). Impact of Accounting Information System on Organizational Performance: Private Commercial Banks of Bangladesh. *International Journal of Scientific and Research Publications (IJSRP)*, *12*(4), 307. https://doi.org/10.29322/ijsrp.12.04.2022.p12443

Alamin, Adel; Yeoh, William; Warren, Matthew; Salzman, Scott (2015). An empirical study of factors influencing accounting information systems adoption. Deakin University. Conference contribution. https://hdl.handle.net/10536/DRO/DU:30073613

Al-Nimer, M., Omush, A., & Almasarwah, A. (2017). ERP implementation in banks: Success factors & impact on financial performance. *Banks and Bank Systems*, *12*(4), 17–30. https://doi.org/10.21511/bbs.12(4).2017.02

Ali, Basel & Abu-AlSondos, I. (2020). Operational Efficiency and The Adoption of Accounting Information System (AIS): A Comprehensive Review of The Banking Sectors. *INTERNATIONAL JOURNAL OF MANAGEMENT*.

Alkhazaleh, A. M. & Almsafir, M. (2014). Bank Specific Determinants of Profitability in Jordan. *Journal of Advanced Social Research, 4(10)*, , 01-20.

Al-Tameemi, K., & Alshawi, M. (2014). The Impact of Organisational Culture and Leadership on Performance Improvement in Iraq. *The Built & Human Environment Review*, *7*, 23–45.

Altamony, H., Al-Salti, Z., Gharaibeh, A., & Elyas, T. (2016). The relationship between change management strategy and successful ERP (ERP)implementations: A theoretical perspective. . *International Journal of Business Management and Economic Research, 7(4)*, 690–703.

Al-waeli, A. &. (2020). Impact of Accounting Information System on Financial Performance with the Moderating Role of Internal Control in Iraqi Industrial company. *journal of Advanced*, 257.

Anyota, R. K. (2015). the Relationship between ERP and Financial Performance Of Commercial State Corporations In Kenya. . *University of Nairobi*.

Apulu, I., & Latham, A. (2011). An Evaluation of the Impact of Information and Communication Technologies: Two Case Study Examples. *International Business Research*, pp. 4,3.

Asiligwa, Mr & Rennox, G. (2017). The Effect of Internal Controls on the Financial Performance of Commercial Banks in Kenya. *IOSR Journal of Economics and Finance.*

Augustine. M, M. K. (2014). Impact of Accounting Information Systems on Profitability of Small Scale Businesses: A Case of Kampala City in Uganda. . *International Journal of Academic Research in Management (IJARM) Vol. 3, No. 2, 2014*.

Ayagre, et al . (2014). The Effectiveness of Internal Control Systems of Banks. The Case of Ghanaian Banks. *International Journal of Accounting and Financial Reporting.*

Barney, J., Wright, M., & Ketchen, D. J., Jr. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, *27*(6), 625–641. https://doi.org/10.1177/014920630102700601

Basweti, O. K., Masese, C. B., & Onsiro, M. R. (2013). Impact and Challenges of ICT Adoption in the Tanzanian Banking Sector. . *International Journal of Academic Research in Business and Social Sciences, 3, 323.*

Binuyo, A & Aregbeshola, R. A. (2014). The impact of ICT(ICT) on commercial bank performance: Evidence from South Africa. *Problems and Perspectives in Management. 12. 59-68.*

Brammer, S., & Millington, A. (2008). Does It Pay to Be Different? An Analysis of the Relationship between Corporate Social and Financial Performance. *Strategic Management Journal, 29, 1325-1343.*

Bryman, A. and Bell, E. (2011). Business Research Methods. 3rd Edition, Oxford University Press, Oxford.

Caraiman Adrian-Cosmin, (2015), ACCOUNTING INFORMATION SYSTEM - QUALITATIVE CHARACTERISTICS AND THE IMPORTANCE OF ACCOUNTING INFORMATION AT TRADE ENTITIES, Annals - Economy Series, 1II, 168-174

CBK. (2015). Performance and developments in the Kenyan banking sector for the quarter ended 30th June 2015.

CBK. (2017). Central Bank Of Kenya Bank Supervision Annual Report . *CENTRAL BANK OF KENYA* .

Chege, E. W. (2016, November). EFFECTS OF ICT. *University of Nairobi.*

Chen, Y. S. & Huang, I. C. (2017). Financial Performance of Audit Firms in Different Life Cycle Stages: Evidence from Taiwan. . *The International Journal of Business and Finance Research*, pp. 7(4), 43-62.

Claggett, Brian & Zhao, Lihui. (2013). Effectively Selecting a Target Population for a Future Comparative Study. *Journal of the American Statistical Association.*

Collis, J., & Hussey, R. (2013). Business Research: A Practical Guide for Undergraduate and Postgraduate Students. *London: Palgrave Macmillan.*

COSO. (2013). The Committee of Sponsoring Organizations of the Treadway Commission (COSO) released its updated Internal Control – Integrated Framework .

Cragg, Paul & Caldeira, Mário. (2011). . Organizational information systems competences in small and medium-sized enterprises. *Information & Management. 48. 353-363. 10.1016/j.im.2011.08.003.* .

Dandago,K. I.& Rufai, A. S. (2014). Information Technology and Accounting Information System in the Nigerian Banking Industry. *Asian Economic and Financial Review, 4(5),*.

Deng, S. A; Rono L; & Sang J. (2020, November). Credit Risk Management and the Performance of Financial Institutions in South Sudan. *Modern Economy, Vol.11 No.11,*.

Donald R. Cooper, P. S. (2014). Business Research Methods. *McGraw-Hill, 2014*.

Farah, N., Farrukh, I. & Faizan, N. (2016). Financial Performance of Firms: Evidence from Pakistan Cement Industry. *Journal of Teaching and Education,,* pp. 5, 81-94.

Feidler, F. F. (1965). A Contingency Model of Leadership Effectiveness. *In, L. Berkowistz (Ed). Advances in Experimental Social Psychology Volume 1, 1965,* .

FLSTAP. (2011) A Report on the emerging trends in commercial and financial law, capital law, capital markets law and corporate governance. Nairobi: Financial and legal sector Technical Assistance project- Ministry of Finance.

Gordon, L.A.& Miller, D. (1976). A contingency framework for the design of accounting information systems. *In: Emmanuel, C., Otley, D., Merchant, K. (eds) Readings in Accounting for Management Control. Springer, Boston, MA.*

Gwangwava, E., Faitaira, J. & Mabvure, J. (2012). . Evaluation of factors influencing adoption of accounting information system m by SMEs in Chinhoyi.

Hammour, H., Househ, M.S., & Razzak, H.A. (2017). Accounting Information Systems in healthcare: A Accounting Information Systems in healthcare:. *A Review of the Literature. Studies in health technology and informatics*.

Hayali, A. D. (2012). Importance of Internal Control Systems in the Banking Sector: Evidence from Turkey. Thesis.

Hossein, M. (2014). 'ERP implementation critical success factors,. *The role and impact of business process management. ICMIT, 2: 122-127*.

Huy, P. Q. & Phuc, V. K. (2020). The Impact of Public Sector Scorecard Adoption on the Effectiveness of Accounting Information Systems Towards the Sustainable Performance in Public Sector. *Cogent Business & Management 7*.

Jensen, Michael C. and Meckling, William H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. Journal of Financial Economics (JFE), Vol. 3, No. 4, 1976.

Kanakriyah, R.M. (2017). The Impact of Accounting Information Systems on the Banks Success: Evidence from Jordan. *Research Journal of Finance and Accounting, 8,* 1-14.

Kangogo, J. J. (2019). Effects of ERP on financial performance of financial institutions in Kenya. . *University of Nairobi*.

Karimi, J. (2017). Effects of ERP Implementation on Organizational Performance in the Transport Industry in Kenya . *(Doctoral dissertation, United States International University Africa).*

Kenton, W. (2022). Internal Controls: Definition, Types, and Importance. *BUSINESS ESSENTIALS*.

Khan, A. (2017). Impact of Accounting Information System on The Organizational Performance: A Case Study of Procter and Gamble. . *Star Research Journal, Vol. 5, Issue 12* .

Khan, A. (2017). Impact of Accounting Information System on The Organizational Performance: A Case Study of Procter and Gamble. . *Star Research Journal, Vol. 5, Issue 12* .

Kombo, P & Tromp, S. (2006). Business Research Methods (4th ed) U.S.A New York. *McGraw*.

Kothari, C. R. (2014). Research methodology; methods and techniques. *(3rd Ed.). New Delhi: New Age International Publishers*.

Kurniawan, A. (2021). Analysis Of The Effect Of Return On Asset, Debt To Equity Ratio, And Total Asset Turnover On Share Return. *Journal Of Industrial Engineering & Management Research*, 2(1), 2722–8878. Retrieved from http://www.jiemar.org

Kwakwa, O. (2014). Determinants of Performance of Commercial Banks in Ghana. Master's Thesis, Department of Mathematics Institute of Distance Learning, Kwame Nkrumah University of Science and Technology, Kabwe.

Loktary, Y. P. (2018). ICTusage and financial performance of small and medium sized enterprises in west pokot county. *Kenyatta University*.

Macharia, E. (2013). The effects of global financial crisis on the financial performance of commercial banks offering mortgage finance in Kenya. . *International journal of economics and finance*, pp. 1(2), 2013.

Malungu, E. K. (2019). influences of information communication technologies on performance of education in kakamega county, Kenya. *University of Nairobi*.

Mati, M. k. (2022). Effect of internal control practices on financial performance of commercial state corporations in Kenya. *University of Nairobi*.

Meshack, Kerongo & Nyamute, Mrs. (2017). The Effect Of Monetary Policy On Financial Performance Of The Commercial Banks Listed On The Nairobi Securities Exchange. *American Journal of Finance.* , p. 1. 74. 10.47672/ajf.181. .

Michael C. Jensen, William H. Meckling,. (1976,). Theory of the firm: Managerial behavior, agency costs and ownership structure,. *Journal of Financial Economics,*, pp. Pages 305-360,.

Ministry of Information and Communications Technology,Uganda. (2009).

Mitchell,T.R., Biglan,A., Oncken,G. R. & Fiedler,F. E. (1970). . The contingency model: Criticism and .suggestions. *Academy of Management Journal, 253-267.*

Mjomba, M. M & Kavale, K. (2015). Effects Of Erp On Organisational Performance On Kenya Power And Lighting Company: A Case Study Of Kenya Power And Lighting Company Voi Branch. *International Journal of Advanced Research in Management and Social Sciences*.

Mugenda, A. G. & Mugenda, O. M. (2013). Research methods dictionary. Nairobi.

Muhindo A., Mzuza, M.K. & Zhou, J. (2014). Impact of Accounting Information Systems on Profitability of Small Scale Businesses: A Case of Kampala City in Uganda. International Journal of Academic Research in Management (IJARM) Vol. 3, No. 2, 2014, Page: 185- 192.

Mulwa, G. K. (2015). The effect of monetary policy on the financial performance of commercial banks in Kenya.

Mumba, Brian & Alıcı, Devrim. (2021). Quantitative Versus Qualitative Research Dichotomies: A Discussion from Educational Measurement and Evaluation Perspective. . *Research Journal of Humanities and Social Sciences. 11. 1-10. 10.7176/RHSS/11-24-01.*

Mumtaz, Rauf, Bashir and Noreen. (2013). Capital structure and financial performance: Evidence from Pakistan (Kse 100 Index). *Journal of Basic and Applied Scientific Research, 3(4),*, 111-119.

Musabyimana. (2016). Accounting information system and financial performance of selected commercial banks in Kigali Rwanda. *Unpublished MBA Report of Mount Kenya University*.

Mwakio, S. (2017). The Relationship between Accounting Information System and Human Resource Management Among Commercial Banks in Kenya. *Unpublished MBA Report of the University of Nairobi*.

Mwangi, M. (2016). ICT Adoption and Supply Chain Performance of Parastatals in the Kenya's Energy Sector.

Mwere, D. (2021, October). Kenya: Collapsed Banks' Clients Hopeful as Bill Passes Key Test. *AllAfrica*.

Ndiwa Chebungwen & Kwasira.J. (2014, March). An Assessment of Internal Control System on Financial Performance in Tertiary Training Institutions in Kenya: A Case Study of African Institute of Research and Development Studies. *International Journal of Science and Research (IJSR) Volume 3 Issue 3, .*

Neumann, Robert & Graeff, Peter. . (2015). Quantitative approaches to comparative analyses: Data properties and their implications for theory, measurement and modelling. *European Political Science*.

Ngigi, G. (2015, August 17). CBK's tough act on Dubai Bank raises questions. Retrieved October 27, 2015.

Njihia, E. &. (2014). The effects of ERP systems on firm's performance: A survey of commercial banks in Kenya. *International journal of business and commerce, 3(8), 120-129. .*

Nkansa, Eric & Oware, Kofi. (2013). Impact of ICT on the Financial Performance of Rural Banks in Ghana: A Case Study of Selected Rural Banks in Ashanti Region. *Research Journal of Economics and Business Studies. 1. .*

Nkegbe, P. K. & Yazidu, U. . (2015). Banks Performance in Ghana: Trends and Determinants. *Global Journal of Development Studies, 12*, 33-35.

Nkegbe, P. K. & Yazidu, U. (2015). Banks Performance in Ghana: Trends and Determinants. *Global Journal of Development Studies*, 33-52.

Norazlina & Wahab, Wan Zakaria, Wan Zuriati & Ilias,Norlidawahi. (2017). A Survey on the Impact of Accounting Information System on Tasks Efficiency: Evidence from Malaysian Public Sector Agencies. *International Review of Management and Marketing. 7. 183*.

Nyakundi, Nyamita, & Tinega . (2014). Effect of internal control systems on financial performance of small and medium scale business enterprises in Kisumu City, Kenya. *International Journal of Social Sciences and Entrepreneurship, 1 (11), 719-734.*

Nyoro, G. N & Dr. Paul, N. S. (2017). Effect of ERP System Implementation on Performance of Organizations Supply Chain Activities in Kenya (A Case of Coca Cola Company Nairobi). *International Journal of Recent Research in Commerce Economics and Management (IJRRCEM).*

Nzama, L. L. (2015). The effect of ERP systems on the financial statement audit of a higher education institution .

Nzomo, S. (2013). Impact of Accounting Information System on Organizational Effectiveness of auto mobile Companies in Kenya,. *Unpublished MBA Report of the University of Nairobi.*

Odero, A. (2014). Effect of accounting information system quality on financial performance on SMEs in Nairobi County,. *Unpublished MBA Report of the University of Nairobi*.

Onchwari, A. M. (2012). Information Technology and Competitiveness of commercial banks in Kenya, *University of Nairobi*, http://erepository.uonbi.ac.ke:8080/xmlui/handle/123456789/14429, *Faculty of Arts & Social Sciences, Law, Business Mgt (FoA&SS / FoL / FBM)* [24437]

Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International journal of economics and financial issues, 3(1),*, 237-252.

Otiato Guguyu. (2022). First Community in crisis as 'hitch' sparks bank run OCTOBER 2022. *Business daily https://www.businessdailyafrica.com/bd/corporate/companies/first-community-in-crisis-as-hitch-sparks-bank-run-3973058*.

Otuori, O. (2013). Influence of exchange rate determinants on the performance of commercial banks in Kenya. . *European Journal of Management Sciences and Economics,* , pp. 1(2): 86-98.

Patel, F. (2015). Effects of Accounting Information System on Organizational Profitability. *International Journal of Research and Analytical Reviews, 2, 168-174.*

Raed Kanakriyah. (2017). The Impact of Accounting Information Systems on the Banks. Success: Evidence from Jordan. *Research Journal of Finance and Accounting.*

Rotich, E. C. (2017). The Impact Of Accounting Information System On Effectiveness Of Manufacturing Firms In Kenya. . *Unpublished MBA Report of the University of Nairobi.*

Rufus Ishola, A., Patrick Enyi, E., & Oladipo, A. O. (2019). Accounting Information System and Financial Performance of Deposit Money Banks in Nigeria. *THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT*.

Thottoli, M. (2021). Thottoli, M.M. (2021), "Knowledge and use of accounting software: evidence from Oman",. *Journal of Industry-University Collaboration, Vol. 3 No. 1, pp. 2-14, doi: 10.1108/JIUC-04-2020-0005.*

Tilahun, Manchilot. (2019). A Review on Determinants of Accounting Information System Adoption. *Science Journal of Business and Management. 7. 17*.

Topash, N. (2014). Evaluation of Efficiency of Accounting Information Systems: A Study on Mobile Telecommunication Companies in Bangladesh. . *Global Disclosure of Economics and Business 3(1), pp40-55.*

Wanyiri, W. (2019). Effect of Internal Controls on Financial Performance of Commercial Banks in Kenya. *Nairobi Univerity*.

Wanyoike, F. W. (2017). The Influence of ERP System on Organizational Performance: Case Study of Kenyan Engineering Consultancy Firms. *(Doctoral dissertation, United States International University-Africa).*

Ye, Z., & Hu, J. . (2020, February). Internal Control of Enterprise Computer Accounting Information System in the Age of Big Data. *In The International Conference on Cyber Security Intelligence and Analytics (pp. 315-321). Springer, Cham.*

Zakaria R, Wan Yaacob WM, Othman Z, Long I, Ahmad AH, Al-Rahbi B. Lipopolysaccharide-induced memory impairment in rats: a model of Alzheimer's disease. Physiol Res. 2017 Sep 22;66(4):553-565. doi: 10.33549/physiolres.933480. Epub 2017 Apr 12. PMID: 28406691.

Appendix I: Consent form for participation in research

Dear Participant,

I invite you to participate in a research endeavor titled " effects of AIS on the financial performance of Kenya commercial banks : **A CASE OF FIRST COMMUNITY BANK AND DUBAI ISLAMIC BANK**" As a current student pursuing a Master's degree in Business Administration at Mount Kenya University, I am actively engaged in the pursuit of my master's thesis. The objective of this study is to explore the correlation between the utilization of accounting information systems by Kenyan commercial banks and their financial performance.

Your involvement in this research is completely voluntary. You are under no obligation to answer any questions you are uncomfortable with; you may choose to omit responses or leave certain sections blank. The potential risks related with taking part in this research are minimal and no greater than those encountered in daily life. Rest assured, your responses will be handled with confidentiality and anonymized. Data gathered from this study will be maintained in a secure and confidential manner and will only be presented in an aggregated format. There are no direct incentives for taking part in this study. But, your engagement could provide valuable insights into the topics covered, benefiting the industry and potential customers alike. If you decide to participate, I kindly request that you provide your best possible answers to the questionnaire's inquiries. The completion of the questionnaire is estimated to take approximately three minutes. Should you have any inquiries concerning this research project, please do not hesitate to contact Abdoulkarim Ahmed Sormi at 0740398456 or Dr. Martin Onsiro at +254716939832. For any concerns regarding your rights as a research respondent, please direct your queries to the Chairman of the Mount Kenya University Ethical Review Committee, reachable at P.O. Box 342-01000, Thika.

Thank you.

CONSENT

I have read and understood the content presented to me. I have the chance to seek clarifications and ask questions relating to the information provided. I acknowledge that my involvement in this study is completely voluntary. I am aware that I will be provided with a copy of this consent form. With full understanding, I willingly give my consent to participate in this research.

Participant's signature ________________________________ Date __________

Investigator's signature _______________________________ Date __________

Appendix II: Questionnaires

SECTION A: Demographic Information

1. Gender of the respondent

   Male [ ]

   Female [ ]

2. Please tick the highest level of education attained

   a) College Diploma [ ] b) Undergraduate [ ]

   c) Master [ ] d) Others (specify) ……………….

3. Indicate your period of service in this institution

   2 years ( ) 3 to 5 years ( ) 6 to 8 years ( ) 9 years and above ( )

4. The period the bank has been operating: Less than 5 years [ ] 5-11 years [ ] 12-16 years [ ] 17-20 years [ ] Over 21 years [ ]

SECTION B: Determinants of financial performance

5. Please rate how much you concur with the following statements concerning internal control systems. **Key Use a scale of 1-5, where (0= strongly disagree, 1= disagree, 2= not sure, 3= Agree and 4= strongly Agree)**

Internal control systems	0	1	2	3	4
In the banking industry, internal control systems serve a crucial supporting function.					
Internal control systems play a significant role in driving strong performance within sectors such as financial institutions.					

Internal controls Via its different organizational functions, systems successfully improve the Institution's financial performance.					
Internal control systems enable many solutions for the accomplishment of financial performance.					
Internal control systems allow the institution to provide accurate and timely financial data.					

6.

ICT	0	1	2	3	4
ICT plays a crucial supporting function in the banking industry.					
Industries like financial institutions, which depend on optimal performance, are greatly influenced by ICT.					
Information on banking and interest rates is provided by ICT, which competes with banks.					
ICT make it possible to achieve financial performance in various ways.					
Because of the utilization of ICT by the institution, financial data are produced accurately and on time.					

7.

ERP	0	1	2	3	4
ERP plays a crucial helping function in businesses and sectors.					
ERP is a major factor in the high performance of sectors like the financial institutions.					
In contemporary enterprises, systems assist a variety of functions, including marketing.					
ERP systems make it possible to realize financial performance in a number of ways.					
Due to ERP, the institution produces accurate and timely financial data.					

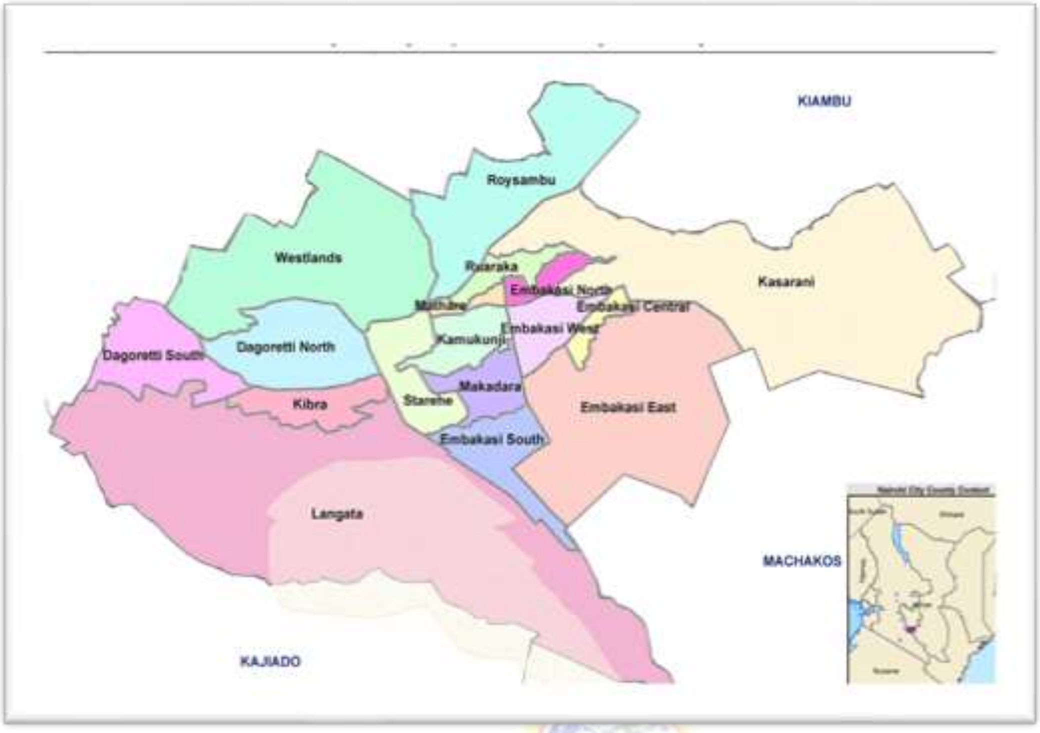
8.

Financial performance	0	1	2	3	4
The bank has improved ROA.					
There is improved ROI.					
The bank's assets have increased.					
The bank's net income has increased.					
Bank's operating cashflow has increased.					

SECTION C: Secondary Data Year 2017,2018, 2019, 2020, 2021

Years	2018	2019	2020	2021	2022
ROA in %					
Total assets value in Ksh. (000)					
Net income in Ksh. (000)					

Appendix III : Map of study area



Appendix IV: ERC Approval

Mount Kenya University

REF: **MKU/ISERC/2872**

Date: 12 July 2023

TO: **ABDOULKARIM AHMED SOIRMI**

REG: **MBA/2021/79220**

Dear Sir/Madam,

RE: ANALYSIS OF ACCOUNTING INFORMATION SYSTEMS ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA: A CASE OF FIRST COMMUNITY BANK AND DUBAI ISLAMIC BANK

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **1916.** The approval period is **12/07/2023 - 11/07/2024.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including informed consents, study instruments, MTA will be used

ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**

iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification

iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours

v. Clearance for export of biological specimens must be obtained from relevant institutions

vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal

vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

Main Campus, General Kago Road, P.O. Box 342-01000 Thika.
Tel: 020-2870 000, Cell: +254 709 153 000

Appendix V: Introductory Letter

Mount Kenya University

DIRECTORATE OF GRADUATE STUDIES

MBA/2021/79220

12th July, 2023

TO WHOM IT MAY CONCERN

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki Way, Upper Kabete,
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,

<u>RE: ABDOULKARIM AHMED SOIRMI - REGISTRATION NO. MBA/2021/79220</u>

The purpose of this letter is to introduce the above named student who is pursuing **Master of Business Administration** in the department of **Accounting and Finance** in the school of **Business and Economics**

The title of the research is **"Analysis of Accounting Information Systems on Financial Performance of Commercial Banks in Kenya: A Case of First Community Bank and Dubai Islamic Bank."** It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **July, 2023 and September, 2023.**

Any assistance accorded to the student will be highly appreciated.

Thank you.

Mount Kenya University
P.O. Box 342 - 01000, THIKA
Office of the Director
Graduate Studies

Dr. Samuel M. Karenga, Ph.D
<u>Director, Graduate Studies</u>
Enc.

Main Campus, General Kago Road, P.O. Box 342-01000 Thika.
Tel: 020-2878 000, Cell: +254 709 153 000
Email: info@mku.ac.ke, Web: www.mku.ac.ke
Chartered and ISO 9001 : 2015 Certified Institution.
Unlocking Infinite Possibilities

Appendix VI: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: **714596** Date of Issue: **25/July/2023**

RESEARCH LICENSE

This is to Certify that Mr.. Abdoulkarim Ahmed Soirmi of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: ANALYSIS OF ACCOUNTING INFORMATION SYSTEMS ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA: A CASE OF FIRST COMMUNITY BANK AND DUBAI ISLAMIC BANK for the period ending : 25/July/2024.

License No: **NACOSTI/P/23/28021**

714596
Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix VII: Turnitin Report

ANALYSIS OF ACCOUNTING INFORMATION SYSTEMS ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA: A CASE OF FIRST COMMUNITY BANK AND DUBAI ISLAMIC BANK

ORIGINALITY REPORT

12%	11%	4%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Mount Kenya University Student Paper	2%
2	erepository.uonbi.ac.ke Internet Source	2%
3	Submitted to KCA University Student Paper	1%
4	ikesra.kra.go.ke Internet Source	<1%
5	ir-library.ku.ac.ke Internet Source	<1%
6	Submitted to Kenyatta University Student Paper	<1%
7	Submitted to Saint Paul University Student Paper	<1%
8	ir.kabarak.ac.ke Internet Source	<1%

9	Submitted to Vietnam Commercial University	Student Paper	<1 %
10	erepository.uonbi.ac.ke:8080	Internet Source	<1 %
11	scholar.mzumbe.ac.tz	Internet Source	<1 %
12	repository.mua.ac.ke	Internet Source	<1 %
13	Submitted to Tanzania Institute of Financial Management	Student Paper	<1 %
14	ir.kiu.ac.ug	Internet Source	<1 %
15	repository.ju.edu.et	Internet Source	<1 %
16	www.binghamuni.edu.ng	Internet Source	<1 %
17	ir-library.mmust.ac.ke	Internet Source	<1 %
18	ir.jkuat.ac.ke	Internet Source	<1 %
19	repository.kemu.ac.ke	Internet Source	<1 %
20	pdfs.semanticscholar.org		

Publication

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	On		