# KIGALI INDEPENDENT UNIVERSITY ULK

# SCHOOL OF ECONOMICS AND BUSINESS STUDIES

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# ROLE OF ACCOUNTING INFORMATION SYSTEM ON PERFORMANCE OF FINANCIAL INSTITUTIONS IN RWANDA

# A CASE STUDY: BK PLC

# Period: 2020-2023

A Dissertation submitted to the school of economics and Business studies in partial fulfillment of the Academic requirements for the award of Bachelor's Degree in Accounting.

By

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Kigali, September 2024

# DECLARATION

I SHARANGABO Fabrice hereby declare that to the best of my knowledge, this dissertation titled "ROLE OF ACCOUNTING INFORMATION SYSTEM ON PERFORMANCE OF FINANCIAL INSTITUTIONS IN RWANDA, A CASE STUDY: BK PLC, Period: 2020-2023", is my original work and that it has never been presented anywhere else for any other academic qualifications at any University or institutions of higher learning.

Date...../..../.....

Student name: SHARANGABO Fabrice

Students signature.....

# APPROVAL

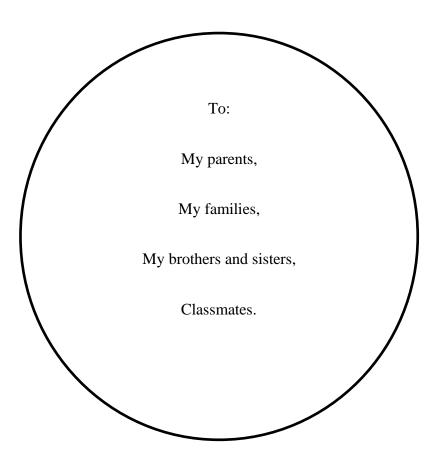
I, KAGOBORA Jackson hereby certify that this dissertation entitled "ROLE OF ACCOUNTING INFORMATION SYSTEM ON PERFORMANCE OF FINANCIAL INSTITUTIONS IN RWANDA, A CASE STUDY: BK PLC, Period: 2020-2023", is under my guidance supervision.

# **KAGOBORA** Jackson

Signature .....

Date:...../..../2024

# DEDICATION



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The success and completion of this project would not have been possible without the help, direction, encouragement and prayers of a number of people.

First and foremost, I would like to thank God Almighty for providing with this unique opportunity, clear direction and success in my project work.

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# **SHARANGABO Fabrice**

# LIST OF ABBREVIATION AND SYMBOL

- % :Percentage
- A2C :Administration-to-consumer
- AIS : Accounting information system
- ATM : Automated Teller Machine
- B2C :Business-to-consumer
- BCR : Bank commercial du Rwanda
- BK : Bank of Kigali
- BPR : Banque populaire du Rwanda
- CFE :Certified fraud examiner
- CFOs :Chief financial officers
- CPU : Control process Unit
- CR : Current ratio
- CSS :Cascading style sheets
- EFT :Electronic funds transfer
- EPS : Payment system
- ERP :Enterprise resource planning
- GDP : Growth domestic product
- ICT : Information communication technology
- ID : Identity
- KCB : Kenya commercial bank

- KPIs : Key Performance Indicators
- MTCN : Money Transfer Control Number
- MTOs :Medium term budgetary objectives
- MYOB :Mind your own business
- NOI :Net operating income
- P2P : Person-to- person
- PIN :Personal identification number
- PLC :Private Limited Company
- PoS :Point-of Sales
- ROA :Return on asset
- ROE :Return on equity
- ROI :Return on investment
- Rwf : Rwanda Francs
- SMS :Short Message Service
- SPSS : Statistical Package for Social Sciences
- SQL :Structured query language
- UK : United Kingdom
- ULK :Université Libre de Kigali
- US : United state
- WWW : World wide web

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#### **CHAPTER I: GENERAL INTRODUCTION**

#### **1.0. Introduction**

This general introduction contains the background of the study, problem statement, hypothesis, objective of the study, scope of the study, significant of the study and ended by organization of the study

#### **1.1. Background of the study**

The new millennium brought with it new possibilities in terms of information access and availability simultaneously, introducing new challenges in protecting sensitive information from intruders while making it available to others. Today's business environment is extremely dynamic and experience rapid changes as a result of technological improvement, increased awareness and demands Banks to serve their customers electronically. Banks have traditionally been in the forefront of adapting technology to improve their products and services (Ahmad, 2003).

The ancient accounting records found the early accounting records were also found in the ruins of ancient Babylon, Assyria and Sumer, which date back more than 7,000 years. The people of that time relied on primitive, in 1934, the U.S. Securities and Exchange Commission came into existence to certify reports by all companies that are publicly traded. In 1973, the financial Accounting. Accounting is one of the key functions of almost any business. It may be handled by a bookkeeper or an accountant at a small firm, or by sizable finance departments with dozens of employees at larger companies. The reports generated by various streams of accounting, such as cost accounting and managerial accounting, are invaluable in helping management make informed business decisions, (Fillis, 2011).

In European, the financial statements that summarize a large company's operations, financial position, and cash flows over a particular period are concise and consolidated reports based on thousands of individual financial transactions. As a result, all professional accounting designations are the culmination of years of study and rigorous examinations combined with a minimum number of years of practical accounting experience By 1880, the modern profession of accounting was fully formed and recognized by the Institute of Chartered Accountants in England and Wales. This institute created many of the systems by which accountants practice today. The formation of the institute occurred in large part due to the

Industrial Revolution. Merchants not only needed to track their records but sought to avoid bankruptcy as well, (Sheth,2020).

The Italian Luca Pacioli, recognized as the father of accounting and bookkeeping was the first person to publish a work on double-entry bookkeeping, and introduced the field in Italy. Accounting as a practice has existed since the earliest times of humanity. The first simple accounting records are found in the writings of Babylonian, Chaldeans, Assyrians and Sumerians in Mesopotamia. The time of theoretical accounting recognition is considered to be the year 1494, when Venetian mathematician Luca Pacioli published a book titled Summary of arithmetic, geometry, proportions and proportionality, (Kotler, Robson. 1992).

In Africa the history of accounting has been around almost as long as money itself. Accounting history dates back to ancient civilizations in Mesopotamia, Egypt, and Babylon. For example, during the Roman Empire, the government had detailed records of its finances. However, modern accounting as a profession has only been around since the early 19th century. Luca Pacioli is considered the father of accounting and Bookkeeping due to his contributions to the development of accounting as a profession. An Italian mathematician and friend of Leonardo da Vinci, Pacioli published a book on the double-entry system of bookkeeping in 1494, (Subin, 2004).

To the Nigerian independence in 1960, there was little professional accounting activity in the country, which was mainly in the multinational enterprises sector under the tutelage of British accounting system. Nigeria, like most of British colonies, inherited accountancy and company law based on the British model. Disclosure requirements and reporting requirement were based on the British system. The Banking industry of the 21st century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Information and Communication Technology (ICT) is at the centre of this global change curve of accounting information system System in Africa today (Stevens 2002).

In Rwanda assert that they have over the time, been using electronic and telecommunication networks for delivering a wide range of value added products and services, Banking industry in Rwanda cannot ignore Accounting Information Systems because they play a critical impact in current Banking system, they point out that the entire cash flow of most fortune Banks are linked to Information, (MINECOFIN, 2016)

#### **1.2. Problem statement**

Traditionally, accounting is purely based on a manual approach. The experience and skillfulness of an individual accountant are critical in accounting processes. Even using the manual approach can be ineffective and inefficient. Accounting information systems resolve many of the above issues. AISs can support the automation of processing a large amounts of data and produce timely and accurate information,(Kerr, Jacob, 2014).

The resulting financial reports can be used internally by management or externally by other interested parties including investors, creditors and tax authorities. Accounting information systems are designed to support all accounting functions and activities including auditing, financial accounting porting, -managerial/ management accounting and tax. The most widely adopted accounting information systems are auditing and financial reporting modules Early accounting information systems were designed for payroll functions in 1970s. Initially, accounting information systems were developed computer-based accounting information systems is that they automate and streamline reporting, develop advanced modelling and support data mining, (Thipwiwatpotjana, S. 2021).

Reporting is major tool for organizations to accurately see summarized, timely information used for decision-making and financial reporting. The accounting information system pulls data from the centralized database, processes and transforms it and ultimately generates a summary of that data as information that can now be easily consumed and analyzed by business analysts, managers or other decision makers. These systems must ensure that the reports are timely so that decision-makers are not acting on old, irrelevant information and, rather, able to act quickly and effectively based on report results. Consolidation is one of the hallmarks of reporting as people do not have to look through an enormous number of transactions. For instance, at the end of the month, a financial accountant consolidates all the paid vouchers by running a report on the system. The system's application layer provides a report with the total amount paid to its vendors for that particular month. With large corporations that generate large volumes of transactional data, running reports with even an AIS can take days or even weeks, (AIS Evolution,2020).

Accounting information systems, including their components, are an essential source for converting data into information. Therefore, it is considered of great importance to all actors in the organization, and in particular to decision-makers. That is what makes it necessary for them to be flexible and able to provide information with acceptable qualitative characteristics. Accordingly, accounting information systems must be able to keep. The Initial cost and setup time one of the possible downsides of implementing accounting software is the initial cost and setup time involved. Technical issues and software limitations list of pros and cons of accounting is its vulnerability to technical issues and software limitations, data security risks, dependency on the software vendor, learning curve and skill requirements, another problem computerized accounting system is staff training but the system is automated, accounting information system depends on technology issues the other dimension should be considered. (Alexander, 2013).

Many factors prevent the process of accounting transformation within organisations, including the lack of the human resource (Mitrofanova et al., 2018), the lack of budgets allocated to these programs limiting their growth fear of information security risks, as a result of the use of technological means, is one of the biggest obstacles, especially if the assets are of high value (Rehm, 2018), and the absence of a regulatory legal framework especially in developing organization and countries, the reason pushed the researchers to conduct this research are the following to analyze how the accounting information system work, managed, used by the user in order to generated the income from the bank. The challenges in using accounting information systems include limitations in understanding and adoption, inconsistent changes in accounting standards, poor timing of information, and lack of knowledge among staff and consumers, It is in that regard the researcher will present the study entitled the role of accounting information system on performance of financial institutions in Rwanda.

# **1.3. Research questions**

i.Do accounting information system effectively applied in BK?

ii.Does accounting information contribute to the financial performance of financial institution in Rwanda?

#### 1.4. Research hypotheses

A hypothesis is a proposition which can be put to test to determine its validity. It may seem contrary to or in accord with common sense. It may prove to be correct or incorrect. In any event however, it leads to an empirical test. Whatever the outcome, the hypothesis is a question put in such a way that an answer of some kind can be appearing, (GRAWITZ, 2009). Hence, our research problem leads us to formulate the following hypothesis:

i.Accounting information system is effective in Bank of Kigali Plcii.Accounting information system contribute to the performance of financial institution in Rwanda.

# **1.5. Research objectives**

The present study will be subdivide into general and specific objectives

# 1.5.1. General objective

The objective of this study is to analyze the role of accounting information system to the performance of financial institution in Rwanda.

#### 1.5.2. Specific objectives

i.To analyze the effectiveness of accounting information system in financial institution in Rwanda. ii.To determine the role of accounting information system to the performance of financial institution in Rwanda.

iii.To assess relationship between accounting information system and performance of financial institution in Rwanda

# 1.6. Significance of the study

The research is significant to different classes of people and organizations in different ways. This research proposal is importance to the researcher, to the BK Plc and to the school.

# 1.6.1. Personal interest

This study act as an opportunity to the researcher to practice knowledge acquired theoretically from studies related to undertaking research project, gaining skills and knowledge in this matter of research and awarded the bachelor's degree in Accounting.

#### 1.6.2. Academic and Scientific and academic interest

This study fundamentally carried out for academic purposes as well as partial requirements for the acquisition of bachelor's degree and contains also a scientific value in the fact that it will serve as reference to the next researchers

# 1.6.3. Social interest

The choice motivate by importance and relevance of topic to the impact of accounting information system to the performance of financial institutions in Rwanda.

# **1.7.** Scope of the study

Scope of the study is a general limitation that the study covered. This research refers to the parameters within which the study was operated. This research limited in space, in time and in domain.

#### 1.7.1. Time scope

This study take into consideration the period of 2020-2023. Year 2023 is taken into consideration because of availability and update information from the financial institutions.

# 1.7.2 Domain scope

This study is in the field of Banking by looking on the role of accounting information system to the performance of financial institutions in Rwanda, data obtained from this study covered the information from bank of Kigali Plc.

# **1.7.3.** Geographical scope

The research limit in Bank of Kigali Plc, Located in Nyarugenge District Kigali City.

# **1.8. Structure of the study**

This study contains by four different chapters, chapter one is general introduction this chapter contains the background of the study, problem of the stud, objective of the study, specific objective, significant of the study and organization of the study ,

- Chapter two is the literature review which includes some key terms and other related literature written to the topic under study that constitute the variables of this study;
- Chapter three is research methodology, it point out the, research design of the study, population of the study, sample size, techniques of data collections and methods of data analysis.
- Chapter four is presentation, analysis and interpretation of data collection, and this chapter verify the first and second hypothesis of this study.

Finally, the research end by the general conclusion which summarizes the study point out the suggestions and references and appendices.

#### **CHAPTER II: LITERATURE REVIEW**

#### 2.0. Introduction

This chapter is compose of what several authors have published on subjects in relation to accounting information system to the performance of banking institution; it gives a true depiction of the banking industry and information technology in banking system compliment traditional banking systems, different accounting information system used in banking and their importance to the bank.

#### 2.1. Conceptual review

#### 2.1.1. Bank

According to Dsmians (2009), "A bank is an institution whose debts are widely accepted in settlement of other people's debts to each other. In this definition Sayers has emphasized the transactions from debts which are raised by a financial institution.

A bank is defined as an institutions possessing limited liability similar to companies, which receives money from clients of the public and keeps it in different types of accounts, including currents from which money may be withdrawn or transferred by means of check. It is a company that receives public funds as deposits or savings. She is depositors' money by distributing the funds and performing various operations. It manages and provides its customers with the means of payment (checks, credit cards, bank transfer). She is also the intermediary between financial markets and issuer's action requirement and investors (Reed W. Eduard and Eduard, 2009).

#### 2.1.2. Accounting information system

An accounting information system (AIS) is a system of collecting, storing and processing financial and accounting data that are used by decision makers. An accounting information system is generally a computer-based method for tracking accounting activity in conjunction with information technology resources. An accounting information system (AIS) is a system of collecting, storing and processing financial and accounting data that are used by decision makers. An accounting information system is generally a computer-based method for tracking accounting activity in conjunction with information technology resources. The resulting financial reports can be used internally by management or externally by other interested parties including investors, creditors and tax authorities. Accounting information systems are designed to support all accounting functions and activities including auditing, financial accounting porting, - managerial/ management accounting and tax. The most widely adopted accounting information systems are auditing and financial reporting modules,(Amor, 2015).

An accounting information system (AIS) is a system that a business uses to collect, store, manage, process, retrieve, and report its financial data. This data can then be used by accountants, consultants, business analysts, managers, chief financial officers (CFOs), auditors, regulators, and tax agencies (Gay K.2015).

#### 2.1.3. Electronic banking

According to Priluck et al (2016), Electronic banking is a form of banking in which funds are transferred through an exchange of electronic signals rather than through an exchange of cash, checks, or other types of paper documents. Transfers of funds occur between financial institutions such as banks and credit unions. Electronic banking is the transfer of money between financial institutions through an exchange of electronic signals over a network.

#### 2.1.4. Performance

According to Hornby, (2000), the word performance is defined by some authors in the following way: It is defined performance as how or badly something worked or is done or how well if functions. The performance is something which is needed in the business. As we know-that the business activities are important activities for the country and for those that carry them out. Some of those engage in business are uneducated and acquire experience without necessarily being professionals, while for others, business is profession.

Many others have been discouraged by continual business losses caused by lack of knowledge about the procedures that a business person should follow his or her rights and obligations and business persons relationship with different partners such as the administration, customer service, and banks,(Littler,2016).

#### **2.1.5. Financial institutions**

According to Silos.Pierre (2010) financial institutions is used for a normal bank to distinguish it from the central bank and investment. It is a bank that mostly deals with deposits and loans from

corporations or large businesses whose primary purpose is to maximize shareholders wealth by accepting deposits in variety of different accounts and invest these funds into loans and other financial instruments.

# 2.2. Theories on accounting information system

Theories is a body of text that aims to review the critical points of current knowledge including substantive findings as well as and methodological contributions to particular topic. Electronic banking consists of the following: mobile banking, internet banking, telephone banking, and electronic card.

# 2.2.1. Types of information technology use in accounting information system

The firm offers banking services such as loans, accounting services, cards, asset finance, forex, trade, and financial services. One of the most significant contributions of ICT to financial management is the ability to generate real-time financial reports. Cloud-based accounting systems and financial software enable businesses to access up-to-the-minute financial data from any location(Joseph, 2016).

# 2.2.1.1. Mobile banking

Mobile banking involves the use of mobile phone for settlement of financial transactions. It supports person to person transfers with immediate availability of funds for the beneficiary. Mobile payments use the card infrastructure for movement of payment instructions as well as secure Short Message Service (SMS) messaging for confirmation of receipt to the beneficiary. Mobile banking is meant for low value transactions where speed of completing the transaction is a key. The services covered under this product include account enquiry, funds transfer, recharge phones, changing of passwords and bill payment which are offered by few institution (Philip,

2009).

These are banking services which a customer of a financial institution can assess using a telephone line as a link to the financial institution's computer center. Services rendered through telephone banking include account balance funds transfer, change of pin, and recharge phones and bills payment (Fahy, 2009).

#### 2.2.1.2. Internet banking

Internet banking invokes conducting banking transactions such as account enquiry printing of statement of account; funds transfer payments for goods and services, on the internet (World Wide Web) using electronic tools such as the computer without visiting the banking hall. Ecommerce is greatly facilitated by internet banking and is mostly used to effect payment. Internet banking also uses the electronic card infrastructure for executing payment instructions and for final settlement of goods and service over the internet between the merchant and the customer, currently the most common internet payments are for consumer bills and purchase of air ticket through the websites of the merchants (Sisodia, 2006).

## 2.2.1.4. Electronic card

An electronic card is a physical plastic card that uniquely identifies the holder and can be used for financial transactions on the internet. For instance Automated Teller Machine (ATM) and Pointof Sales (PoS) terminal are used to authorize payment to the merchant or seller the various types of electronic cards include debt, credit cards: releasable cards require visiting banks for replenishment. Debit cards are linked to local bank accounts and offer immediate confirmation of payment. Credit cards can be used to link a customer to a credit line and can also be used for accessing local and international networks and are widely accepted in most countries. The underlying infrastructure and operational rules are often provided by global trusted schemes (such as visa and master card) in addition to local lines (James. 2009).

#### 2.2.1.5. Electronic payment system

According to (Cobb. 2004), the value of electronic payment goes way beyond the immediate convenience and safely of cards to a greater sphere of contributing to overall economic development. There are several payment markets that can be identified each using specific forms of money." The business-to-consumer (B2C) payment is used in commercial activities where the merchant is paid directly by the consumer for goods and services, (Radu, 2003).

This type of payment is also called retail payment. The direct payment between two persons is called person-to- person (P2P). Administration-to-consumer (A2C) payment addresses the payment of taxes toward the government. Finally, the payment intervening between companies buying and those offering products and services is referred to as Business-to -Business (B2B) This

thesis focuses mainly on B2C payments. In this chapter, we will look at some general features of EPS briefly and then focus on the benefits and challenges (Radu . 2003)..

According to Vassiliou (2004) electronic payment as a form of financial exchange that takes place between the buyer and seller facilitated by means of electronic communication.

According to Asokan et al. (2000) the implementation of electronic payment system (EPS) is dependent on the consumer's payment behavior. Thus, EPS are designed to address consumers with credit, debit or prepaid payment behavior. Commerce always involves a payer and a payee who exchange money for goods or services, and at least one financial institution which links "bits" to "money'\*. In most existing payment systems, the latter role is divided into two parts: an issuer (used by the payer) and an acquirer (used by the payee). Electronic payment from a payer to payee is implemented by a how of real money from the payer via the issuer and acquirer to the payee.

# 2.2.1.6 Credit Cards

In pay-later (credit) payment systems, the payee's bank account is credited the amount of sale before the payer's account is debited (Asokan, et. al. 2000). Credit card systems fall into this category. Credit cards allow customers to make purchases up to a prearranged ceiling. The credit that is granted is either settled in full by the end of a specified period, generally a month, or can be settled in part, with the remaining balance extended as credit (Asokan. et. al. 2000). Credit cards are internationally known to customers and accepted by merchants. They are also easy to use on the internet, as only the credit card details need to be sent to the beneficiary in order to effect a payment (Vassiliou, 2004).

# **Debit Instruments**

In pay-now payment systems, the payer's account is debited at the time of payment. ATM card based systems fall into this category, debit instruments allow the payer to have purchases directly charged (debited) to funds on his/her account at a deposit-taking institution such as a bank. Debit instruments include direct debits, debit cards and cheques(Vassiliou, 2004),.

# **Prepaid Payment Services**

In prepaid payment systems, a certain amount of money is taken away from the payer by debiting that amount from the payer's bank account before purchases are made This amount of money can then be used for payments later. This payment system requires that consumers make the provision of funds before engaging any payment transaction. Smartcard-based electronic purses, electronic cash as well as (certified/guaranteed) bank cheques fall in this category (Asokan. el. Al.2000). E-ZWICT1 payment system also falls into this category (Asokan. et. al., 2000)...

#### **Mobile Phone Payments**

Several initiatives have emerged for initiating e-payments from mobile phones by using short messages (SMS) or phone calls. These have also been referred to as m-payments (Vassiliou, 2004). Indicates that most m-payments initiatives follow a simple model where the customer (payer) first identifies him/herself to the merchant by providing his/her phone number or by calling the merchant. The merchant forwards the payment and customer information to the payment service provider (e.g. through the mobile network). The service provider then presents the payment information to the payer for confirmation and upon confirmation (e.g. with a PIN number) records the transaction. The communication between the customer and the payment provider and/or merchant can take place through phone calls and/or short messages (Vassiliou, 2004).

#### 2.2.2. Automatic Teller Machines (ATMs)

According to Laderman (1990), ATM is a computerized telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller.

Invented by IBM, the first ATM was introduced in December 1972 at Lloyds Bank in the UK. On most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic stripe or a plastic smart card with a chip, which contains a unique card number and some security information such as an expiration date or CVVC (CW). Authentication is provided by the customer entering a personal identification number (PIN).Globally, Automatic Teller Machines (ATMs) have been adopted and are still being adopted by banks. They offer considerable benefits to both banks and their depositors. The machines can enable depositors to withdraw cash at more convenient times and places than during banking hours at branches (Laderman, 1990).

According to Laderman (2000), an ATM is typically made up of the following devices: CPU (to control the user interlace and transaction devices), Magnetic and/or Chip card, reader (to identify the customer). PIN Pad (similar in layout to a Touch lone or Calculator keypad), often manufactured as part of a secure enclosure. Secure crypto processor, generally within a secure enclosure, Display (used by the customer for performing the transaction), Function key buttons (usually close to the display) or a Touch screen (used to select the various aspects of the transaction), Record Printer (to provide the customer with a record of their transaction). Vault (to store the parts of the machinery requiring restricted access) and Housing (for aesthetics and to attach signage to).

According to Anyanwaokoro (1999). There four main types of electronic funds transfer (EFT) representing (he successive steps towards an EFT society. The first was invented by James geek in 1965. It involves transfers of money between banks, to carry out clearing operations.Second, there are transfers between computers of other organizations and the bank computers. A corporation may pay its salaries, for example, by giving tape or transmitting salary information to a bank-clearing center, which distributes money to the appropriate accounts. Third, the general public cash dispensing machines in the street, usually known as automated teller machines(ATMs) or customers at home using a personal computer to access their accounts and transfer money, pay bills and so on. The fourth type of electronic funds transfer is the use of direct debit cards in shops, gas station and so on, which automatically transfer funds between from the buyer to the seller's account. Networks such as this are generally transferred to as electronic funds transfer point of sale.

Patents for ATMS were reportedly filed as early as the 1930s, but the first actual ATM is credited to Barclays bank of London in 1967. By year-end 1984, about 60,000 ATMS had been installed by almost 5,000 depository institutions. To date. ATMs have not been use as much as they were expected to be and have not been profitable for many institutions, because the units are costly to purchase and install. Because of high installation cost, the key to profitability is high transactions volume. Although the use of ATMs is increasing rapidly, volume at many units still does not appear to be sufficient to be profitable. The owing institutions expect that volume will increase further as the cost of teller services increases and the newer "Pacman" generation of younger customers with no fear of computerization grows larger. The more limited the services the ATM is programmed to perform, the smaller has been its transactions volume. (J.RumBaugh, 2012).

# 2.3. Accounting Information Systems (AIS)

An accounting information system tracks all accounting and business activity for a company. It generally consist of six primary components: people, procedures and instructions, data, software, information technology infrastructure, and internal controls. (J.RumBaugh, 2012).

# **2.3.1.People**

The people involved with an AIS are the system users. An AIS helps the different departments within a company work together. Professionals who may need to use an organization's AIS include: Accountants, Consultants, Business analyst, Managers, Chief financial officers, Auditors.

## **Procedures and Instructions**

The procedures and instructions for an AIS relate to the methods it uses to collect, store, retrieve, process, and report data. These methods are both manual and automated. The data can come from internal sources (e.g., employees) and external sources e.g., customers' online request). Procedures and instructions will be coded into the AIS software. However, the procedures and instructions should also be "coded" into employees through documentation and training. The procedures and instructions must be followed consistently in order for the AIS to be effective. (J.RumBaugh, 2012).

#### .Data

An AIS must have a database structure to store information. Structured query language (SQL) is a computer language commonly used for databases. SQL allows the data that's in the AIS to be manipulated and retrieved for reporting purposes. The AIS also needs various input screens for the different types of system users and data entry, as well as different output formats to meet the needs of different users and various types of information. The data contained in an AIS is all of the financial information pertinent to the organization's business practices. In addition, any business data that impacts the company's finances should go into an AIS, (Sayer, 2008)

# Software

The software for an AIS relates to the computer programs used to store, retrieve, process, and analyze the company's financial data. Before there were computers, an AIS was a manual, paper-based system. Today, most companies use computer software as the basis of their AIS. Here are just some of the software packages that a business might choose to use for an AIS (Laderman, 2000).

#### **IT Infrastructure**

Information technology infrastructure is just a fancy name for the hardware used to operate the accounting information system. It can include the following: Computers, Mobile devices, Servers, Printers, Surge protectors, Routers, Storage media, A back-up power supply, In addition to cost, factors to consider in selecting hardware include speed, storage capacity and capability, and whether a device can be expanded and upgraded (Laderman 2000).

#### **Internal Controls**

The internal controls of an AIS are the security measures it maintains to protect sensitive data. These can be as simple as passwords or as complex as biometric identification. Biometric security protocols might include storing human characteristics that don't change over time, such as fingerprints, voice, and facial characteristics. An AIS must have internal controls to limit access to authorized users and to protect against unauthorized access. Authorized users will include individuals inside and outside the company. Internal controls must also prevent unauthorized file access by individuals who are allowed to access certain select parts of the system(Porisch,2016).

# 2.4. Important of accounting information system

A big advantage of computer-based accounting information systems is that they automate and streamline reporting, develop advanced modelling and support data mining.<sup>[1]</sup> Reporting is major tool for organizations to accurately see summarized, timely information used for decision-making and financial reporting. The accounting information system pulls data from the centralized database, processes and transforms it and ultimately generates a summary of that data as information that can now be easily consumed and analyzed by business analysts, managers or other decision makers. These systems must ensure that the reports are timely so that decision-makers

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are not acting on old, irrelevant information and, rather, able to act quickly and effectively based on report results. Consolidation is one of the hallmarks of reporting as people do not have to look through an enormous number of transactions. For instance, at the end of the month, a financial accountant consolidates all the paid vouchers by running a report on the system. The system's application layer provides a report with the total amount paid to its vendors for that particular month. With large corporations that generate large volumes of transactional data, running reports with even an AIS can take days or even weeks (Porisch, 2016).

Traditionally, accounting is purely based on a manual approach. The experience and skillfulness of an individual accountant are critical in accounting processes. Even using the manual approach can be ineffective and inefficient. Accounting information systems resolve many of the above issues. AISs can support the automation of processing a large amounts of data and produce timely and accurate information. Early accounting information systems were designed for payroll functions in 1970s. Initially, accounting information systems were developed in-house as no packaged solutions were available. Such solutions were expensive to develop and difficult to maintain. Therefore, many accounting practitioners preferred the manual approach rather than computer-based. Today, accounting information systems are more commonly sold as prebuilt software packages from large vendors such as Microsoft, Sage Group, SAP and Oracle where it is configured and customized to match the organization's business processes. Small businesses often use accounting lower costs software packages such as Tally.ERP 9, MYOB and Quickbooks. Large organisations would often choose ERP systems. As the need for connectivity and consolidation between other business systems increased, accounting information systems were merged with larger, more centralized systems enterprise resource planning (ERP). Before, with separate applications to manage different business functions, organizations had to develop complex interfaces for the systems to communicate with each other. In ERP, a system such as an accounting information system is built as a module integrated into a suite of applications that can include manufacturing, supply chain, human resources. These modules are integrated together and are able to access the same data and execute complex business processes. Today, Cloud-based accounting information systems are increasingly popular for both SMEs and large organisations for lower costs. With adoption of accounting information systems, many businesses have removed low skills, transactional, and operational accounting roles, example ATMs provide 24 hours, 7 days a week and 365 days a year service, the service is quick and efficient, Privacy in transaction.

Free from errors, on networking card holder can access cash and service at any location regardless of where he maintains an account, wider flexibility in withdrawals, Fund transfer across the banks/ branches and anytime banking facility. Anderson-Porisch, 2006).

Alternative to extend banking hours, Crowding at bank counter considerably reduced. Service is cheaper, if they are sufficient larger numbers of transactions, Alternative to new branches and reduce operating expenses, Cash transportation and cash handling is avoided. Relieves bank employees to focus on more analytical and innovative work and increased market penetration. as many as 80 per cent of Rwanda's population neither has nor operate a bank account, although the majority of the "un-banked" are economically active in either the formal or informal sectors of the economy. This is the case for most African and developing nations. The term unbanked means the person does not have a checking or savings account, (Ackorlie, 2009),

A research work by (Anderson-Porisch, 2006) mentions the following as some of the reasons for the unbanked in the United States of America: Lack of understanding of the banking system and expectations for having a bank account, past negative banking experience, Lack of appropriate identification and/or documentation needed to open a bank account, Unstable living situation and Cultural conflict including bank practices that varies with personal beliefs

#### 2.3. Relationship between e-banking and e-payment

According to Anderson-Porisch (2006), the emergence of credit, debit and prepaid card systems gives the unbanked an important option for bringing cash into the formal economy. "Prepaid cards are particularly interesting, because the funds are actually on deposit at a regulated financial institution, but the process of establishing and managing accounts is much more cost effective and less risky that traditional debit accounts for smaller levels of deposit" (Commonwealth Business Council & Visa, 2004). Anderson argued that technology provides the opportunities to transition the unbanked population into a banking relationship. According to her paper, "the Debt Collection Improvement Act of 1996 required that recurring federal benefit payments be made electronically through electronic funds transfer (EFT) as a low-cost account for those who cannot qualify for or afford a checking account. As a result, there has been an increase in people using this option for receiving federal benefits.

The Commonwealth Business Council also argues that payroll, pension and benefit cards can be effective entry-level instruments for banking and subsequent mainstream financial services- and they allow a greater proportion of funds to remain within the banking system until they are spent. Teenagers and young adults are often ineligible to open a bank account. But because of employment, stipends or transfers from their parents or guardians, they may possess a sizeable amount of money. "Prepaid card products for young people can teach them vital money skills, while keeping their funds in the banking system. One such solution is a re-loadable prepaid card that features financial literacy tools and allows parents or guardians to monitor transactions online This has been used in the US. Brazil, Mexico, Puerto Rico, Indonesia and Jordan" (Commonwealth Business Council & Visa, 2004).

In banking the unbanked, financial institutions that are part of an international payment system can issue prepaid cards to customers, including those who currently do not have a banking relationship, enabling them to receive funds safely and conveniently. Depending on the type of card, recipients can withdraw cash at an ATM or buy goods and services at merchants (Commonwealth Business Council & Visa, 2004). In developing countries, remittances represent the primary source of foreign exchange and generate a significant engine for consumer spending. Ghana being a developing country is no exception. For example, foreign remittances to Nicaragua are estimated to total nearly 30% of GDP (Inter-American Development bank. 2004). However a chunk of these remittances are held in cash and circulate within the informal economy and therefore being kept outside the banking system. These remittances do not contribute as strongly to formal economic growth as they could. Prepaid cards described above can help resolve this issue.

# 2.5. Electronic Fund Transfers (EFTs)

Transfers are sent from the branch and instantly recorded to the recipient's account. The only drawback is that the use of these services is restricted to clients of the banks, which as we've shown tend to be middle-to-high income salaried workers and formal businesses. Unlike intra-bank transfers, CSS Ntuma permits the use of the service by non-members. Money transfer services in Rwanda have until recently been limited to account transfers within bank or MF1 networks as well as the services of global money transfer operators (MTOs) such as Western Union and Money Gram. Transfers within bank networks are common and relatively cheap. For instance, to transfer RwF 10, 000 within the BPR network will cost the sender only RwF 500. Similarly, Zigama CSS

offers a money transfer service known as CSS Ntuma with costs ranging from RwF400 for a minimum transfer of RwF5, 000 to RwF7, 000 for a maximum transfer of RwF 100, 000. Other banks such as 13K and Access Bank allow free transfers(MINICOM, 2016).

#### 2.5.1. Western Union

According to Western Union (2009) Western union allows users to send and receive funds to others, pay bills, or purchase gift cards, it operates through 50 branches in Kigali. Cyangugu, Butare, Rwamagana, Gitarama, Ruhengeri and Gisenyi through BCR, BK, Ecobank.BPR.KCB and microfinance institution CFE Agaseke. Western Union also operates through two post offices in Kigali and a few stand-alone branches.

#### Sending and receiving funds using Western Union

In order to send funds, a sender goes to a Western Union office and presents funds (plus fees) for Next Day or Money in Minutes service. A sender provides his or her name and address, the recipient's name, and a designated payment destination. Western Union then provides the sender a 10-digit Money Transfer Control Number (MTCN) that must be transmitted separately by the sender to the recipient. The recipient then proceeds to a Western Union agent office in the designated payment location, presents the 10-digit MTCN, and a photo ID. Money is then paid out to the recipient. If a recipient lacks identification documents, the sender and receiver can chose to set up a pre-arranged password. Funds are paid out in cash, although if payment exceeds a local maximum or cash on hand, a check is issued. Alternatively, a sender may forward funds online to a recipient by using Western Union's online site,(Radu,2013).

#### 2.6. Indicators of performance on financial institutions

According to Bernard M, (2012), Key Performance Indicators (KPIs) are the vital navigation instruments used by managers to understand whether their business is on a successful voyage or whether it is veering off the prosperous path. The following are profitability indicators.

#### **Deposits**

A customer deposit could be an amount paid by a customer to bank prior to the bank providing it with goods or services. In other words, the bank receives the money prior to earning it. The bank receiving the money has an obligation to provide the goods or services to the customer or to return the money(Bowman, 2011).

# Loan

Loan is the extension of money from one party to another with the agreement that the money will be repaid. Nearly all loans (except for some informal ones) are made at interest, meaning borrowers pay a certain percentage of the principal amount to the lender as compensation for borrowing. Most loans also have a maturity date, by which lime the borrower must have repaid it A loan may be guaranteed by collateral, meaning that the lender either keeps an asset belonging to the borrower until the loan is repaid or has the right to seize such an asset in the event of default (ArkdynLibman, 2013).

# Turnover

According to V.Carcello, (2008).In business, revenue or turnover is income that bank receives from its normal business activities, usually from the sale of goods and services to customers. Revenue may refer to business income in general, or it may refer to the amount, in a monetary unit, received during a period of time.

# Net profit

Bank exists to make money. Net profit is basically a measure of how much money is left after deducting all costs and expenses. The profit gives you more detail on how profitable the business has been over the last year.

# **Liquidity Ratio**

This ratio expresses the relationship between current assets and current liabilities of the business concern during a particular period.Common liquidity ratio includes: Current ratio, Quick (acid) test, Current cash debt coverage ratio Net working capital (Matan Feldman and ArkdynLibman, 2007).

# Current ratio (CR)

 $Current ratio = \frac{Current assets}{Current liabilities}$ 

Current assets mean assets that will either be used up or converted into cash within a year time or during the normal operating cycle of the business. Current liabilities mean liabilities payable a year or during the operating cycle, whichever is longer, out of current assets or creation of current liabilities. As per BNR the current ratio is an index of the concern's financial stability since it shows the standard of 100% of all bank in Rwanda. A lower current ratio would indicate inadequate employment of any bank.

#### **Quick ratio**

This is similar to die current ratio, with the only exception of netting out inventories from current assets. Inventories are excluded as they sometimes can be illiquid, that is hard to convert into cash.

Quick ratio =  $\frac{Currentassets - inventories}{Currentliabilities}$ 

#### Current cash debt coverage ratio

Comparing cash from operating activities to current liabilities, the current cash debt coverage ratio measures bank ability to pay off its current liabilities with cash from operations. If the current ratio and quick test are low, this ratio indicates if bank can rely on its cash from operating activities to cover any shortfall when paying off its current liabilities.

 $Current \ cash \ debt \ coverage \ ratio = \frac{Cashfrom operating activities}{average current liabilities}$ 

#### **Profitability ratio**

Profitability is a relative term. It is hard to say what percentage of profits represents a profitable firm as the profits will depend on the product life cycle, competitive conditions in the market, borrowing costs, expenses management. Analysts will be interested in the set of ratios here include some of the traditional earning based performance measures. For a better understanding of growth rate. For example, it is quite possible that the sales growth rate figures are impressive due to inflation (PhillRusseil, 2003).

The following are ratios selected to analyze profitability and sales:

Gross profit margin.

Profit margin,

Return on assets.

Return on equity,

Return on investment.

Return on capital employed.

Earnings per share and

Dividend per share

The gross profit margin is a measure of how efficiently bank converts its cost of goods sold into sales.

# **Profit margin on sales**

Profit margin on sales measures bank efficiently in converting sales into net income.

 $ROA = \frac{Netprofitaftertaxes}{averagetotalassets} \ge 100$ 

# **Return on assets**

The profitability is measured in terms of total relationship between net profit and assets. The return on assets may also be called profit to assets. It is computed as follow:

Profit margin on sales  $=\frac{Netsales}{Netincome}$ 

**Return on equity** 

It examines the profitability from the perspective of the equity investors by relating profits available for the equity shareholders with the book value of the equity investments.

$$ROE = \frac{Netprofitaftertaxes}{totalequity} X \ 100$$

It influence the market price of equity share, it indicates to how the funds of the owners have been used by the equity firm and by it also examines whether has able to earn satisfactory return of the owner or not.

# **Return on investment**

These ratios are computed by related the profits of a firm to its investments. Such ratios are popularly termed as return on investments

It indicates the percentage of return on the capital employed in business. It calculated on the basic of the following formula:

$$ROI = \frac{operating \ profit}{totalassets} \ge 100$$

The return on capital invested is a concept that measures profit which a firm earns on investing unit of capital.

# **Return on capital employed**

It is second types of ROI which is similar to the ROA except in one respect? Here the profits are related to the total capital employed. The term capital in employed refers to long term funds supplied by Creditors and owners of the firm. This is an important ratio as it relates profit to the capital invested in business.

$$ROCE = \frac{net \ profit \ after \ taxes}{equityshareholdersfunds} X100$$

# Earnings per share

It is computed as follow:

 $EPS = \frac{net \ profit \ after \ taxes}{number of equity shares}$ 

# **Activities ratio**

It is also called as revenue ratio. This ratio measures the efficiency of the current assets and current liabilities in the business concern during a particular period. This ratio is helpful to understand the performance of the business concern. Some of the activity ratios are given below (Matan Feldman and ArkdynLibman, 2007):

Receivables revenue, Inventory revenue and Asset revenue

The receivables revenue ratio measures bank efficiency in managing and collecting its accounts receivable.

Receivables revenue= $\frac{net \ sales}{averageaccountsreceivables}$ 

# 2.7. Relationship between accounting information systems and performance of financial institutions

AIS growing faster in Rwanda. AIS provides number of services via new and advanced electronic channels. It is difficult to measure the extent of such services, but an effort has been made by classifying these services into AIS. AIS provides a number of services at the doorstep of customers which is otherwise not possible. These services are provided through bank websites (Clive, W, 2007).

The numbers of AIS services are offered to the customers in the form of internet banking services, mobile banking and ATM services. Internet banking services are provided to a large extent by all the banks. The most common services among internet banking are balance inquiry and transaction (Al-Gahiani, 2001). All the banks are offering these services. Apart from these, AIS services from the bank are also offered by all the banks. These include 24 hours access to cash, transfer fund

between accounts, view account balances, print mini statement and PIN change option. Banks plays an important role in the payment and settlement system of financial transactions. The introduction of liberalization measures in the banking sector and foreign equipped with latest technology, led to an increase in competition in the banking sector. Customers are increasingly moving away from the confines of traditional branch-banking and are seeking the convenience of remote electronic banking services. In addition to it, shared ATM networks. Electronic Fund Transfer on Smart Cards. Stored-Value Cards, Phone - banking, Internet and Intranet banking are growing smoothly. The salient feature of these services is the overwhelming reliance on information technology and the absence of physical bank branches to deliver these services to the customer, (Edet, 2008).

#### **2.8.Empirical review**

The study by Lazarova (2019) concludes that the accounting information of digital transformation is not only within higher administrative levels, but includes all levels and functions of institutions, including accounting and finance. The study of Oncioiu et al. (2019) allows identifying digital transformation within management accounting systems, and the topic is addressed by presenting theoretical concepts on the subject. In general, this paper presents how electronic accounting has developed within enterprises, in addition to understanding digital transformation processes through the exchange of knowledge and the respective effects on the leaders who supervise management accounting. The study by Begum (2019) was based on the deductive approach. The questionnaire, used as a tool for the study, was distributed to a sample of 40 respondents. The questionnaire included various digital technologies in accounting, and the weakness of the digital capabilities of institutions was assessed.

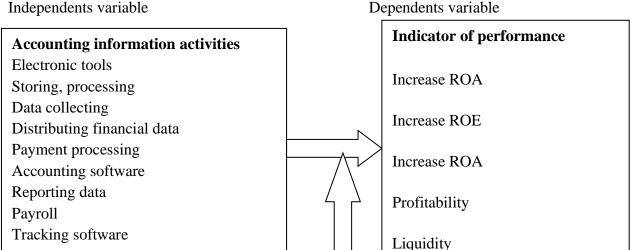
Rehm (2017) highlighted how to prepare accounting information systems for digital transformation, and the topic was addressed by presenting the most important steps to be followed through a general description of the administrative documentation process, preparing a guide for the process of accounting documents, defining principles and directions measures to be taken in exceptional cases, documentation of operating procedures. Finally, Demiröz and Heupel (2017) have found that there is a lack of awareness among business organisations of the overall benefits of digital transformation, as many of these organisations are still in the first steps of digital transformation due to internal obstacles.

Many researchers have addressed the issue of the relationship between digital transformation and accounting information systems from different perspectives, with different research tools, and within a distinct study community. Nguyen et al. (2021) concluded that digital transformation processes will allow managers to take advantage of the effort related to accounting work and the attendant errors to search for customers and focus on improving product quality and increasing the organisation's competitiveness. In the study of Othman and AL-Dweikat (2021), it has been found that there is a tangible impact of managing the risks of digital transformation in making appropriate information that serves the makers and users of accounting data.

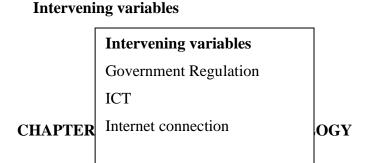
The study of Thipwiwatpotjana (2021) concludes that the determinants of digital transformation ability are executive leaders, business model, organisational structure, the possibility of access to external resources, and support. In addition, the study by Phornlaphatrachakorn and NaKalasindhu (2021) shows that digital accounting is of great importance in influencing accounting information and the quality of financial reports, thus increasing the effectiveness of strategic decisions.

The study of Saed (2020) concludes that there are two important dimensions to the subject, namely, accounting maturity and the need and readiness for digital transformation. The study of Timchev (2020) sheds light on the analysis of the accounting business of companies within the conditions of competition and digital transformation, which includes the strategic and operational levels. The study of Parlak (2020) shows that digital transformation has a tangible impact on accounting information systems and the accounting profession, from memorising, classifying, and summarising to analysing and discussing financial statements, establishing the system, and ensuring the effective continuity of the system. It is, therefore, necessary for members of the accounting profession to use the developed systems to adapt to this transformation process effectively.

#### 2.8. Conceptual framework



Dependents variable



## **3.1. Introduction**

Methodology deals with the methods and principles of research process that are used in the study together with information or data analyzing ad interpreting it. In order to avoid the pitfall inherent in one specific way of collecting data, Research methodology includes the planning, structuring and execution of a research, with the emphasis on the actual research process. Research methodology refers to a set of methods and techniques that are used when studying a particular subject or doing a particular thing of work. (Saunders et al, 2015).

## 3.2. Study design

Moser, (2015).argued that research design is a framework that is used by researchers to collect and analyze data. This research used descriptive; explanatory and exploratory research design. Researcher used descriptive to describe variables and determine frequency with which something occurs or relationship between the variables of this study.

#### **3.3.** Population of the study

Population of a research is defined as the people whom appeal to the interest of the researchers in generalizing the outcomes of the research, population my be also defined as the total number of units (individuals, organizations, events, objects, or items) from which samples are selected for measurement, Population is as a totality of persons or objects which the research is targeting

(Grinnel and Williams 2000). The researcher will focus on finance, accounting, IT, credit policy and administration of Bank of Kigali Plc. The population of the study will be 30 employees of Bank of Kigali from different department.

## 3.4. Source of data

Data sources can include data that are already collected secondary archival data and data that collected during the study, data Sources can be used to describe different data collection methods and tools.

## 3.4.1. Types of data

In this area researcher present the types of data use such as primary data and secondary data.

## 3.4.2. Primary data

Primary data is the data that is collected for the first time through personal experiences or evidence, particularly for research. It is also described as raw data or first-hand information, primary data is the information originated by the researcher for the purpose of the investigation at hand. Simply, primary data are data that the researcher gathered directly from the field (Brown, 2018).

## 3.4.3. Secondary data

Secondary data using existing data generated by large government Institutions, healthcare facilities etc. as part of organizational record keeping. The data is then extracted from more varied data files, secondary data includes both raw data and published summaries, for the current study, Secondary data was used for the purpose of this study and this data delivered from the bank financial statements.

## **3.5.** Techniques of data collections

A technique is defined as a set of means and procedures that help a researcher to gather data and information about his research topic (Mugenda, 2009).

In scientific methods, researcher used many methods for make sure that the research methodology is well done, techniques are defined as procedure which allows the researcher to collect the data and information in relation to the research subject (Martin, 2005). For this research, different

techniques such as: documentary, questionnaire, interview and sampling techniques used in data and information collection.

## **3.5.1 Documentation Technique**

Documentation is called by some authors «The literature review» is used in any research in order to collect data and any relevant information of written source, documentary technique is defined as carefully reading, understanding and analysis of any written materials that contain the information about the phenomena we wish to study, (Grawitz, 2004).

According to Pinto (2002), the documentary technique is oriented toward a systemic research of all that is written with a link to research field. This type of technique helped researcher to collect data from library files, this technique help the researcher to exploit many written documents such as legal texts, books, report, dissertations and internet websites and annual reports Bank of Kigali Plc.

## 3.5.2 Interview techniques

William (2017), define an interview as a social encounter where speakers collaborate in producing retrospective and prospective accounts or versions of their past or future actions, experiences, feelings and thoughts, interviews use in this study, namely focus interviews and structured interviews. According to Selman (2007). Research interview is a data collection method whose main purpose is to obtain information.

## 3.5.3. Observation technique

Is a social research technique that involves the direct observation of phenomena in their natural setting. Observation has been derived from two Latin words "ob" meaning before and serve which means keeping. Combining both we get observe which gives the meaning a process through which a thing or situation is kept before to see and watch carefully, (Drisko, J,2016).

#### 3.6. Validity and reliability

According to Drost (2011), reliability refers to random error in measurement. Reliability indicates the accuracy or precision of the measuring instrument. This enabled the researcher to address errors or irregularities that would appear during the research exercise.

Data validation means checking the accuracy and quality of source data before using, importing or otherwise processing data, different types of validation can be performed depending on destination constraints or objectives, data validation is a form of data cleansing. Mugenda (2000) defines validity of results as a degree to which results obtained from the analysis actually represent the variables of study. Thus, validity refers to whether the findings accurately reflect the situation and will be support by evidence.

#### **3.7.** Data processing

Bailey (2001) explains that, not all data can be presented in entirely, the variables to be presented are those found to be most central to the objective of the study, the data once edited and coded are put together in some other forms of tables and may also undergo some other forms of statistical analysis quantitative and qualitative analysis. Therefore, enough are doing to process it before proper analysis could be made. On this note, editing, coding and tabulation of data were done in order to be able to handle it easily through Excel where computers is use and this is more reliable and fast as compared to manual data processing. Normally, data collected from respondents were in a row form, which were easy to interpret and analyze for conclusions. Data processing use to transform the respondent's views into meaningful test.

#### **3.7.1. Editing**

Kakooza(2008), defined editing as the process whereby errors in completed interview, schedule and the mail questions are identified whenever possible for some unclear responses.

#### **3.7.2.** Coding

According to Mbaaga (2002) coding refers to the assigning of symbol or a number to a response for identification purpose. This use to summarize data by classifying different responses, and categories the data for easy interpretation and analysis.

#### 3.7.3 Tabulation

Frequency distribution tables are use after editing and coding of data. Tables are constructing according to the main themes to summarize all the findings of the study.

#### 3.8. Methods of data analysis

The process used to collect information and data for the purpose of making business decisions. The methodology may include publication research, interviews, surveys and other research techniques, and could include both present and historical information. Research methods are the principles and empirical process of discovery and demonstration, characteristics of necessary scientific in investigation (Mutty, 2013).

Methods are tools or instruments which used to analyze information and data for the research. A research method is a research with conclusions that apply to solve social problems of immediate concern (William, 2014).) The method will use in this study are the following.

#### **3.8.1** Comparative method

Comparative method is a technique for studying the development of languages by performing a feature-by-feature comparison of two or more languages with common descent from a shared ancestor and then extrapolating backwards to infer the properties of that ancestor. The comparative method may be contrasted with the method of internal reconstruction in which the internal development of a single language is inferred by the analysis of features within that language, ordinarily, both methods are used together to reconstruct prehistoric phases of languages; to fill in gaps in the historical record of a language; to discover the development of phonological, morphological and other linguistic systems and to confirm or to refute hypotheses relationships between languages. This method looks for similarities and differences and establishes an analogy between the phenomena observed, Landsheere G.2010).

A comparative method helps a good analysis of data and provides differences and some similarities of data were collected during the research. In this study, this method used to compare data gather from various documents consult such as income statement of Bank of Kigali Plc.

#### 3.8.2 Analytical method

An analytical technique analytical method is a procedure or a method for the analysis of some problem, status or a fact. It is a method used to systematically analyze all data and information collected. Analytical methods are defined as the set of techniques that allow the researchers to know qualitatively and/or quantitatively the composition of any state in which it is located. Specific analytic procedures involved in data analysis are closely related to editing, coding and tabulating. It is through data processing that the frequencies of responses to particular question were done hence easy analysis and interpretation on the collect data, (Robinson. 2018).

#### 3.8.3. Statistical methods

Statistical method is a set of mathematical method which, from the collection and analysis of real data, can develop probabilistic models allowing predictions. The statistical method offers the opportunity to measure and quantify the results of research, (MeretMuriu, 2019).

Statistical method is defined as a set of means used to quantify the result of research. This method helped the researchers to present quantified results informs of percentages or in numerical characters into tables in order to allow the reader to have a synthetic idea of the research (Stephen, 2017).

The statistical method offer to the researcher opportunity to measure and quantify the result of the study; it may involve table's chants, histogram or scatter diagram. The statistical package for social sciences (SPSS) tool which use to organize and tabulate the data collect in this research. Also this tool use to analyze and interpret the data collect in this research. This method will use when presenting the numerical data into tables and frequencies used in the interpretation and also facilitate the researcher in quantifying and numbering the result of the research and presenting information on the graphs, charts and tables.

#### 3.8.4. Historical method

Historical method comprises the techniques and guidelines by which historians use primary sources and other evidence, including the evidence of archeology, to research and then to write histories in the form of accounts of the past, (Walter, 2001). This method helped in collecting and

interpreting the past facts in order to understand the present ones and proposes how they will be in the future.

## **3.9. Ethical considerations**

This study is conduct academically by sticking to the objectives of the study, the study avoid bias in developing the methodology of data collection, data analysis, data and interpretation. This study not be disclose to any unauthorized person at expense of financial interests that may affect research. The study conduct while observing honestly in reporting the data, results, methods and procedures, and publication status, the study did not fabricate, falsify or misrepresent data.

## CHAPTER FOUR:PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

## 4.0. Introduction

This chapter is data analysis and interpretation, it present the information collected, contains the analysis of secondary data from the field in related to the role of accounting information system on performance of financial institutions in Rwanda.

## 4.1. Historical background of Bank of Kigali Plc

Bank of Kigali Plc was incorporated in the Republic of Rwanda on December 22nd 1966 as a joint venture between the Government of Rwanda and Belgolaise, the subsidiary of Fortis Bank. The public private partnership involved the ownership of 50% of the ordinary share capital. The bank commenced its operations in 1967, serving as one of the then market leader in banking sector.

Following Fortis Bank strategy of withdrawing its operations in Africa in 2005, the Government of Rwanda acquired the Belgolaise share in 2007, thus increasing its direct and indirect shareholding in the Bank to 100%.

In 2011, the Bank changed its name under the new law relating to companies from Bank of Kigali S.A to Kigali limited.

The Bank is represented in all provinces and all major economic districts in Rwanda. As of 31 December 2015, the Bank had the second largest branch network in the country with 79 branches.

In compliance with revised laws relating to private companies in Rwanda, in 2011 the Bank changed its name from Bank of Kigali PLCS. A to BANK OF KIGALI PLC Limited and to Bank of Kigali PLC in 2017 with 3 subsidiary companies namely BK General Insurance, Bank of Kigali TecHouse and Bank of Kigali Capital.

## 4.1.1. Mission of BK

Our mission is to be the leader in creating value for our stakeholders by providing the best financial services to businesses and individual customers, through motivated and professional staff.

## 4.1.2. Vision of BK

Bank of Kigali aspires to be the leading provider of most innovative financial solutions in the region.

## 4.1.3. Values of BK

Customer focus, integrity, quality, excellence

## 4.1.4. Objectives of Bank of Kigali Plc

To take active interest in the creation and development of enterprises that can contribute to the economic development of the country, by way of direct or indirect participation to the capital.

To search for and study investment opportunities useful to the development of national economy.

To promote key enterprises that arises from national development plants. to render technical assistance to existing enterprises and those being formed ,with regard to searching for solutions to all sorts of problems relating to their organization, operation and management

## 4.1.5. Bank of Kigali's Strategy

Management's objective is to maximize shareholder value by further developing the Bank into the leading universal bank in Rwanda and increasing its market share in all relevant sectors of the Rwandan financial services industry.

**Table4.1. Gender of respondents** 

Gender	of respondents	Frequency	Percent	Valid Percent	Cumulative Percent
	Female	15	50.0	50.0	50.0
Valid	Male	15	50.0	50.0	100.0
	Total	30	100.0	100.0	

Source: Primary data, 2024

Table 4.1 contains the information related to the gender of respondents, 50.0% of respondents answered female, and the 50.0% of respondents answered male. The respondents were in two different gender this means that male and female participate for answer questionnaire distribute by researcher in bank of Kigali Plc.

Education level of respondents		Frequency	Percent	Valid Percent	Cumulative Percent
	Bachelor	15	50.0	50.0	50.0
Valid	ACCA/CPA	10	34.5	34.5	84.5
	Certificate and Diploma	5	15.5	15.5	100.0
	Total	30	100.0	100.0	

Table 4.2.Education level of respondents

Source: Primary data, 2024

The table 4.2 present the Education level of respondents of this study, 50% of respondents confirmed Bachelors, 34.5% of respondents answered that there confirmed ACCA/CPA, and the 15.5% of respondents confirmed certificate and diploma. With data collected from respondents the researcher confirmed that the respondents were educated and offer the real information to the researcher in related to the role of accounting information system on performance of bank of Kigali Plc.

Table 4.3. Distribution of information related to experience of using accounting information	n
system in Bank of Kigali Plc	

How long did you use accounting information system services?	Frequency	Percent	Valid Percent	Cumulative Percent
1-5years	14	48.3	48.3	48.3
5 years and above	16	51.7	51.7	100.0
Total	30	100.0	100.0	

Source primary data, 2024

Table 4.3 present the information on experience of the respondents for using accounting information system in bank of Kigali Plc, 48.3% confirmed 15 years of experienced, and 51.7% of respondent confirmed that they had the experienced of 5 and above of using accounting information system services in commercial bank especially bank of Kigali **Plc**.

Effectiv system	veness of accounting information	Frequency	Percent	Valid Percent	Cumulative Percent
	Cash withdrawal	15	50.0	50.0	50.0
Valid	Balance enquiry	8	25.9	25.9	75.9
v and	Mini statement services	5	17.2	17.2	93.1
	Other specify, security	2	6.9	6.9	100.0

Total	30 100.0 100.0	
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Source: Primary data, 2024

Table 4.4 present the related to the information related to effectiveness of accounting information system of Bank of Kigali. 50% of respondent answered cash withdrawal, 25.9% of respondents answered balance enquiry, 17.2% of respondents answered mini statement services, and the 6.8% of respondent answered other specify, security. The data collected related to the information technology and with the view of respondents the researchers confirmed that effectiveness of accounting information system help bank of Kigali Plc to offers good services.

# Table4.5.Distribution of information related to satisfaction of accounting information systemin Bank of Kigali Plc

What are satisfaction of respondents on accounting information system services?	Frequency	Percent	Valid Percent	Cumulative Percent
We are satisfied with the service from accounting information system	14	48.3	48.3	48.3
Accounting information system help to achieve the expectation of customers	16	51.7	51.7	100.0
Total	30	100.0	100.0	

Source primary data, 2024

Table 4.5 present the information on satisfaction of respondents on accounting information system services in bank of Kigali Plc, 48.3% confirmed that are satisfied with the service from accounting information system, and 51.7% of respondent confirmed that Accounting information system help to achieve the expectation of customers in commercial bank especially bank of Kigali Plc.

Table 4.6. Distribution	of information on	how accounting inform	ation system facilitate BK
	or mitor mation on	now accounting morn	anon system facilitate Dix

How does accounting information system facilitate better service delivery to you?	Frequency	Percent
Quick of cash withdraw	28	98.0
Avoiding long queue in the banks Location in different areas	30 30	100.0 100.0
Accounting information system is safe and easy portable	30	100.0

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Accounting information system enhances ability to access accounts at any location	30	100.0
Accounting information system facilitates timely service delivery	30	100.0

Source : Primary data 2024

Table 4.6.present the information on how accounting information system facilitate better service delivery to the customers.100% of respondents confirmed that accounting information system avoiding long queue in the banks, 100% of respondents confirmed that accounting information system help for location in different areas, 100% of respondents confirmed that accounting information system is safe and easy portable, 100% of respondents confirmed that accounting information system enhances ability to access accounts at any location, and 100% of respondents confirmed that accounting information system facilitates timely service delivery. With data collected from the field researchers confirmed that accounting information system facilitate bank of Kigali Plc to deliver better service to its customers.

## 4.4. Trend of profitability indicators of Bank of Kigali Plc

The following section present the background of the study, in related to the role of accounting information system on performance of financial institutions in Rwanda.

## 4.4.1.Trend of deposits

The deposit have been started on March 1998, however the bank has never begun at zero. So for that BK transferred a large number of customers and their deposits to BK. Due to the management of BK Plc increase number of customer within accounting information system.

Years	Amount	Variation	Variation in %
2020	790,811,261	-	-
2021	974,494,626	183,683,365	18.84

Table 4.7: Trend of deposit from 2020 to 2023 in (000) RWF

2022	1,075,188,572	100,693,946	9.36
2023	1,374,342,881	299,154,309	27.82

## Source: BK Financial statement from 2020 to 2023

Table 4.7 shows that from 2020 to 2023 there has been an increase of deposits 2020 to 2021 there has increased by 183,683,365 Frw corresponding to 18.84% and from 2021 to 2022 there has been an increase of deposits 100,693,946 Frw corresponding to 9.36%, and in 2020 to 2023 deposit increase 27.82%. the increase of deposits is the results of many factors of accounting information system applied by the bank of Kigali Plc.

## 4.3.2. Trend of customers

Trend of customers is one indicator of performance for BK offering services to these customers. The trend of customers in a bank shows the idea of the greatness of the works for this bank. The BK has known a significant increase every year in its activities by using the role of accounting information system to its performance.

Years	Customers	Variation	Variation in %
2020	34,562	-	-
2021	45,665	11,103	32.1
2022	60,742	15,077	33.0
2023	81,453	20,711	34.1

 Table 4.8: Trend of customers

## Source: Annual reports of BK from 2020 – 20123

Through the data collected to the BK, accounting information system help to increase in number of the clients, because by then the accounting information system helped the customers to access its account, and accounting information system helps to attract more customers in Bank of Kigali Plc.

## 4.3.3. Trend of assets

In the following area the researcher present the trend of assets from bank of Kigali Plc main indicator of performance of bank of Kigali Plc.

Years	Current assets	Evolution	Rate
2020	1,304,004,486	-	-
2021	1,590,372,983	286,368,497	21,9
2022	1,853,994,433	263,621,450	16.5
2023	2,120,116,142	266,121,709	14.3

Table 4.9. Trend of assets of BK 2020-2023 (000, Rwf)

Source: Annual Report of BK, 2020-2023

Table 4.9 present the evolution of assets of BK, the variation of current assets in 2020-2021 were21,9% of variation, in 2021-2022 the variation of current assets were 16.5%, this ratio can produce a positive number as well as a positive evolution rate, in 20203 evolution is 14.3% of variation, this is an indication that a company able to pay its debts and that they have liquidity

## 4.3.4. Trend of current liabilities

Current liabilities is the main pillar of commercial banks to its function, the following table

presented the current liabilities of bank of Kigali Plc.

1,044,660,466 1,304,235,313	246,395,765 260,012,403	30.8 24.8
1,304,235,313	260,012,403	24.8
1,534,265,179	230,245,207	17.6
1,753,758,724	219,493,545	14.3

Table 4.10. Trend of current liabilities of BK 2020-2023 (000, Rwf)

Source: Annual Report of BK, 2020-2023

Table 4.10 present the information on evolution of current liabilities, the variation of current liabilities 24.8% for the period of 2020-2021, and the variation of current liabilities were 17.6%, 14.3% of variation in 2024. With the data collected from respondent the researcher confirmed that the variation of current liabilities is in good position for the period of the study.

## 4.3.5. Trend of net operating income in (000 RWF)

The result after all the assets and liability have balanced out the net result is the main indicator of performance the following table shows the evolution of net operating result of Bank of Kigali Plc during covered period. In business, net operating income that a bank receives from its normal business activities, usually from the sale of goods and services to customers for non- profit organizations, annual net operating income may be referred to as gross receipts. This net operating income includes donations from individuals and corporations.

Years	Net operating income	Variation	Percentage (%)
2020	102,468,483	-616,078	-0.6
2021	140,098,086	37,629,603	26.85
2022	174,248,700	34,150,614	19.59
2023	205,755,425	31,506,725	18.08

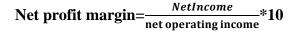
 Table 4.11: Trend of net operating income in (000 RWF)

#### Source: BK Financial statement from 2020 to 2023

Table 4.11 Present the information on net operating income of BK Plc, net operating income had made increment net operating income, net operating income in 2020 has decreased by -0.6%, in 2021 has increased up to 26.85% and in 2022 there was increase of 19.59%, and in 2024 the variation was 18.08% compared to the previous years, there has been the increment even though the increasing the accounting information system in various areas, net operating income increased its net collecting revenues.

#### 4.3.6. Net Profit Margin ratio

Net profit margin can be used to compare a company with its competitors. More efficient firms were usually seeing a higher margin. Also, it provides clues about company's pricing, cost structure and production efficiency. Net profit margin ratio measures the firm's efficiency of operation reflects the relationship of prices, volume and costs. **The formula:** 



Period	2020	2021	2022	2023
Net Profit (1)	38,433,289	51,894,970	59,724,310	74,817,679
Total operating income (2)	102,486,483	140,098,086	174,248,700	205,755,425
Net profit margin ratio =1/2*100	37.5	37.041	34.27	36.3

## Source: BK, Annual reports and financial statements 2020-2023

The table 4.12 indicates that for each Rwandan franc remaining after all cost and expenses have been deducted, BK has earned 37.5% in 2020, 37.041% in 2021 and they earned 34.27% in 2022, in 20203 in the 36.3% of earned. This shows that the bank was able to cover all costs and expenses and was able to make profits from its operations during the period of study.

## 4.3.7. Trend of Loan

A loan is money advanced by the bank to a customer to be repaid over duration of time at a specific interest rate. The following table presents the evolution of loan in bank of Kigali:

Period	2020	2021	2022	2023
Loan	851,099,810	990,267,321	1,134,512,318	1,244,843,264
Variation	-	139167511	144244997	110,330,946
Rate	-	16.35	14.56	9.7

 Table 4.13: Trend of loan (in Rwf 000)

Source: BK, Annual reports and financial statements 2020-2023

Table 4.13.present the Trend of loan in bank of Kigali, in 2020-2021 the variation were 16.35% in 2021-2022 the variation were 14.56% and in 2023 the variation were 9.7%, with data collected from the financial statement of BK the variation of loan is significant which are the indicator of performance of bank of Kigali Plc .

## 4.3.8. Return on Asset

The company needs all assets to generate its profit. It is thus important to measure the profitability which it generates on its investment. The return on asset/Investment is the indicator of the efficiency of management it indicates how the management is able to convert the company's assets into earning computation of Return on assets this ratio is reckoned by comparing the net income with means implemented to know the total assets.

The formula:

Return on Asset (ROA) =  $\frac{\text{NetProfit}}{\text{TotalAsset}} * 100$ 

Period	2020	2021	2022	2023
Net Profit	38,433,289	51,894,970	59,724,310	74,817,679
Total assets	1,304,004,486	1,950,372,983	1,853,994,433	2,120,116,142
Return on assets (ROA)	2.94	2.66	3.22	3.52

 Table 4.14: Return on assets (in Rwf 000)

Source: BK Plc Group, Annual reports and financial statements 2020-2023

BK got a lot of return in the period under the study; the study showed that the return on assets was 2.94% in 2020, 2.66% in 2021 and in 2022 the ROA is 3.22% in 2023 the ROA is 3.52. This means that for 100Rwf invested in assets in BK has generated 3.66 Rwf as profit in 2019; 2.94 Rwf in 2020; 2.66 Rwf was generated as profit in 2021 and in 20222 was 3.22% .On the accounting

information system on return on asset ratio indicated that BK accounting information system has help BK Plc to offer different services to its customers such as loan management, savings, and credit service.

#### **4.3.9. Return on equity (ROE)**

ROE measures a firm's efficiency at generating profits every unit of shareholder's equity. ROE indicated how firm or bank uses investment funds to generate earning growth, Return on equity measures the rate of return given to owners of common stock in the bank or any other business company. (Alexander, 2019). It is calculated as follows:

**ROE=**  $\frac{\text{net income}}{\text{equity shereholders fund}} * 100$ 

Years	2020	2021	2022	2023
Net income	112,793,315	136,271,358	137,775,776	74,817,679
Equity shareholders	259,344,020	285,700,114	319,076,357	362,098,071
ROE	43.49	47.69	43.17	20.6

 Table4.15: Return on equity ratio in Equity Bank Rwanda (RWF 000)

**Source**: Income and Balance sheet statement of Bank of Kigali (2020-2023)

Table 4.14 shows the profitability of Bank of Kigali, in terms of return on equity in 2020 was 43.49% caused by the increase of equity shareholders, in 2021 was 47.69%, the ROE was 43.1% in 2023 and in 2023 was 20.6% as resulting in increase of the net income. Return on equity (ROE) measure of bank profitability, in which the denominator, shareholders' equity, is changed to average shareholders' equity. Typically, return on average equity refers to a company's performance over a fiscal year, so the average-equity denominator is usually computed as the sum of the equity value at the beginning and end of the year, divided by two. This average of return of

equity has been influenced by the effectiveness of accounting information system which increase income of bank of Kigali Plc.

## 4.3.10. Gross Profit Margin

The gross profit margin looks at cost of goods sold as a percentage of sales. This ratio looks at how well a company controls the cost of its inventory and the bank of its products and subsequently passes on the costs to its customers. The following table shows the gross profit margin BK during the period of study.

Net Profit Margin = <u>Net profit</u> interest income ×100

Year	2020	2021	2022	2023
Comprehensive Income	37,308,336	38,533,134	51,894,970	59,724,310
Net operating income	103,084,562	102,486,483	140,098,086	174,248,700
Net profit margin	36.19	37.59	37.041	34.27

 Table 4.15: BK Net profit margin from 2020 to 2023(in 000 Rwf)

Source: BK Financial statement from 2020 to 2023

Table 4.15 indicate that from 2020 to 2023, the ratio of gross profit margin is 36.19%, 37.59%, 37.041%, 34.27%, respectively. This means that in 2020 for 100 of interest income in bank has got 3619 Rwf as benefit and in 2021 for 100Rwf of interest income in BK got profit 3759 Rwf of profit and in 2022 for 100rwf interest income in BK got 37041 Rwf of profit and in 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100 Rwf of profit and 202

## 4.4.Solvency ratio

The solvency ratio is aiming to show the ability of Bank of Kigali to meet its long term debts and quantifies the size of Bank of Kigali's before and after tax income where the debt to total assets.

**Debt to total assets** =  $\frac{\text{Total debt}}{\text{Total assets}} *100$ 

Years	2019	2020	2021	2022
Total debts	682,696,283	798,264,700	1,060,696,026	1,314,370, 838
Total assets	1,304,004,486	1,950,372,983	1,853,994,433	2,120,116,142
Debt ratio	77.8	78.33	83.05	84.51%

#### Table4.16: Debt to total assets ratio

Source: Balance sheet of Bank of Kigali BK (2020-2023)

Table 4.19 shows the ratios of 77.8%; of 78.33%; of 83.05%; and then of 84.51% in successive financial period of 2020; of 2020; of 2021; and then of 2023 means that for instance every franc invested in the assets by Bank of Kigali has been provided by external financing.

## 4.5. Relationship between accounting information system and performance of BK Plc

A correlation is single numbers that describe the degree of relationship between two variables. Correlation between accounting information system to the performance of BK Plc the correlations are one of most common and useful statistics, using correlation analysis in order to found out the relationship between with variable under study, the result shown that they are relationship.

		Accounting information system	Performance of Bank of Kigali Plc
Accounting information system services	Pearson Correlation	1	.813**
	Sig. (2-tailed)		.000
	Ν	30	30
Performance of Bank of Kigali Plc	Pearson Correlation	.813**	1
	Sig. (2-tailed)	.000	
	Ν	30	30

 Table 4.17: Relationship between accounting information system and performance of Bank of Kigali Plc

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

The table 4.17 shown the correlation which is 0.813 is their significance level is in the interval between  $0.813 \le r < 1$  Correlation is the statistical measure that expresses the extent to which to variables are linearly related it mean they change together at a constant rate, it make, in the statistics the Pearson coefficient is a correlation coefficient that measures linear correlation between two sets of data, in other word correlation is the relationship or connection of the two or more things, or two variable. In this study the correlation were 0.813 because it greater than 0.5 it is in that regard the researchers found significant relationship between the two variables, this means that the correlation is high level correlation between accounting information system services and Performance of Bank of Kigali Plc, the researcher to confirm that there is significant relationship between the two variables.

the aim of this study is to analyse the role of accounting information system on performance of financial institutions in Rwanda, a case study: BK plc, period: 2020-2023, the objective of the study is to analyze the effectiveness of accounting information system in financial institution in Rwanda, to determine the role of accounting information system to the performance of financial institution in Rwanda, to assess relationship between accounting information system and performance of financial institution in Rwanda. This study will contains by four different chapters, chapter one is general introduction this chapter contains the background of the study, problem of the stud, objective of the study, specific objective, significant of the study and organization of the study. Chapter two is the literature review which includes some key terms and other related literature written to the topic under study that constitute the variables of this study, compose of what several authors have published on subjects in relation to accounting information system to the performance of banking institution; it gives a true depiction of the banking industry and information technology in banking system compliment traditional banking systems, different accounting information system used in banking and their importance to the bank. Chapter three is research methodology, it point out the, research design of the study, population of the study, sample size, techniques of data collections and methods of data analysis. Chapter four is presentation, analysis and interpretation of data collection, and this chapter verify the first and second hypothesis of this study. Finally, the research will end by the general conclusion which summarizes the study point out the suggestions and references and appendices. With data collected from the field table 4.5.present the information on satisfaction of respondents on accounting information system services in bank of Kigali Plc, 48.3% confirmed that are satisfied with the service from accounting information system, and 51.7% of respondent confirmed that Accounting information system help to achieve the expectation of customers in commercial bank especially bank of Kigali Plc.

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Table 4.15 indicate that from 2020 to 2023, the ratio of gross profit margin is 36.19%, 37.59%, 37.041%, 34.27%, respectively. This means that in 2020 for 100 of interest income in bank has got 3619 Rwf as benefit and in 2021 for 100Rwf of interest income in BK got profit 3759 Rwf of profit and in 2022 for 100rwf interest income in BK got 37041 Rwf of profit and in 2023 for 100rwf interest income in BK got 3427 Rwf of profit and 2023 for 100rwf interest income in BK

profit. From these results, BK is profitable many factors are origin of that performance within accounting information system is main cause of the increase of its profitability.

The table 4.17 shown the correlation which is 0.813 is their significance level is in the interval between  $0.813 \le r < 1$ Correlation is the statistical measure that expresses the extent to which to variables are linearly related it mean they change together at a constant rate, it make, in the statistics the Pearson coefficient is a correlation coefficient that measures linear correlation between two sets of data, in other word correlation is the relationship or connection of the two or more things, or two variable. In this study the correlation were 0.813 because it greater than 0.5 it is in that regard the researchers found significant relationship between the two variables, this means that the correlation is high level correlation between accounting information system. After analysis the result from the field researcher confirmed that all objective of this study were achieved and the hypotheses were verified and confirmed.

## SUGGESTIONS

Based on the finding the researcher would suggest that the bank of Kigali could establish the followings issues that help to increase its performance: trained employees in all departments, and bonus depending on performance of employees in related to accounting information system used.

## Suggestion of further researchers:

1. Contribution of accounting information system in profitability of financial institutions .

2. The contribution of accounting information system in performance of commercial bank in Rwanda by comparing two commercial bank in Rwanda.

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APPENDICES

## QUESTIONNAIRE TO THE RESPONDENTS FROM BK PLC

Dear Respondent,

I SHARANGABO Fabrice student at Kigali Independent University department of Accounting. Currently I am carrying out a research on role of accounting information system on performance of financial institutions in Rwanda. You have been selected as a respondent and you are requested to spare few minutes of your time and express your views on the issues raised in this questionnaire. It is purely academic and your views will be treated with utmost confidentiality.

Thank you.

## **Instructions:**

• Tick the appropriate box for the following questions

## **SECTION A: Profile of respondents**

1.Gender	Male Female
2. Education Level	Certificate
	Diploma
	Bachelor
	ACCA/CPA
	PHD
	Less than one year
3.How long did you use accounting	1-5years
information system services?	5-10 years

1. What are the types of accounting information system mostly used by in BK Plc?

# SECTION C: EFFECTIVENESS OF THE USE OF ACCOUNTING INFORMATION SYSTEM

## **1.** What are the accounting information system in BK Plc?

Cash withdrawal	
Balance enquiry	
Mini statement services	
Other specify	

## 2. Choose the appropriate answer to the following statement: 1. strongly agree, 2. Agree,

## 3. Disagree, 4. strongly disagree

Statements		2	3	4
You are satisfied with the service from				
accounting information system				
accounting information system help to				
achieve the expectation of customers				
How does accounting information system f	acilitat	e better	service d	elivery to you?
Answer	1	2	3	4
Quick of cash withdraw				
Avoiding long queue in the banks				
Location in different areas				
Accounting information system is safe and				
easy portable				
Accounting information system enhances				
ability to access accounts at any location				
Accounting information system facilitates				
timely service delivery				

## Thank you for your cooperation!