

# **ELECTRONIC BANKING AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN UGANDA: A CASE STUDY OF CENTENARY BANK KUMI BRANCH**

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**UGANDA CHRISTIAN  
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## DECLARATION

I, Emuron Boniface, declare that this research report is my original work and has not been submitted or published to any University or Institution of higher learning for any partial fulfillment of any academic award.

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A handwritten signature in blue ink, appearing to read 'Emuron Boniface', with a stylized flourish at the end.

Date: 25/July/2024.

## APPROVAL

This is to certify that this research report was conducted under my supervision and guidance and is ready for submission to the Faculty of Business Administration in partial fulfillment of the requirements for the award of a Bachelor's degree in Business Administration of Uganda Christian University with my approval.

Signature 

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**(SUPERVISOR)**

## **DEDICATION**

I would like to dedicate this research report to my lovely brother Rev. Fr. Frederick Obore and papa Emorut James who always encouraged, guided, motivated and supported me throughout my entire academic career.

## **ACKNOWLEDGMENT**

I thank the Almighty God for His providence and protection throughout my entire academic career.

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## **ABBREVIATIONS AND ACRONYMS**

ATM	Automated Teller Machine
BBA	Bachelor of Business Administration
B.O.U	Bank of Uganda
E-Banking	Electronic Banking
EFT	Electronic Funds Transfer
IDT	Innovation Diffusion Theory
IT	Information Technology
MDIs	Microfinance Deposit Taking Institutions
MUC	Mbale University College
SACCOS	Savings and Credit Cooperative Organization
ICT	Information Communication Technology
TCT	Transaction Cost Theory

## **ABSTRACT**

The main purpose of the study was to determine the effect of electronic banking on the financial performance of commercial banks in Uganda, with a case study of Centenary Bank, Kumi branch. The specific objectives were to determine the extent of internet, mobile, ATM banking adoption and its effect on financial performance. The study covered a period of 4 years and adopted descriptive research design. The data collected was collected from the sample of 34 respondents from that Centenary Bank, Kumi Branch.

The study findings established that internet banking had a strong relationship with financial performance of Centenary Bank and it contributed 33.2% change in financial performance of Centenary Bank. The study findings established that mobile banking had a strong relationship with financial performance of Centenary Bank and it contributed 30.2% change in financial performance of Centenary Bank. The study findings established that ATM banking had a strong relationship with financial performance of Centenary Bank and it contributed 35.9% change in financial performance of Centenary Bank.

The study concluded that e-banking has proven to be a significant driver of financial performance for Centenary Bank, enhancing profitability, operational efficiency, customer experience, leads to greater access to banking and it was recommended, Innovation in Services, sensitization of customers on the use of e-banking products, promoting e-banking workshops and training to customers. The time span should be expanded from 4 years to 8 years. Areas for further research; Comparative Analysis, longitudinal studies, Investigating customer behavior and preferences, Marketing strategies and adoption of e-banking services among customers, EFT and use of non-performing loans as a measure of financial performance.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 Introduction**

This chapter presents the general background to the study, statement of the problem, objectives of the study for both general and specific objectives, research questions of the study, scope of the study, significance of the study and the conceptual framework.

### **1.1 Background to the study**

Electronic banking (e-banking) has transformed the global banking landscape over the past few decades. The integration of information technology into banking operations has facilitated the creation of various e-banking services, including internet banking, mobile banking, automated teller machines (ATMs), and electronic funds transfers (EFTs). These innovations have streamlined banking processes, reduced operational costs, and enhanced customer convenience.

Globally, the adoption of e-banking has been driven by factors such as increased internet penetration, the proliferation of smartphones, and a growing preference for digital transactions. For instance, a study by McKinsey & Company (2020) indicated that digital banking users are expected to reach 3.6 billion by 2024, highlighting the significant shift towards electronic financial services. E-banking has enabled banks to expand their reach, improve service delivery, and maintain competitiveness in an increasingly digital economy.

In Africa, the adoption of e-banking has been a critical driver of financial inclusion, particularly in regions with limited access to traditional banking infrastructure. Mobile banking, in particular, has seen remarkable growth, with services like M-Pesa in Kenya revolutionizing financial transactions and enabling millions to access banking services through their mobile phones. According to the GSMA (2020), mobile money accounts in Africa surpassed 500 million, underscoring the continent's rapid embrace of digital financial solutions.

E-banking in Africa has facilitated not only financial inclusion but also economic development by providing a platform for secure and efficient financial transactions. However, the continent still faces challenges such as inadequate infrastructure, cybersecurity threats, and regulatory hurdles that need to be addressed to fully harness the potential of e-banking.

East Africa has emerged as a leader in e-banking and mobile money services within the African continent. Countries like Kenya, Tanzania, and Rwanda have made significant strides in implementing digital financial services, driven by robust mobile network infrastructure and supportive regulatory environments. The success of mobile money services like M-Pesa in Kenya has set a precedent for other countries in the region to follow.

In East Africa, e-banking has contributed to economic growth by promoting financial inclusion, reducing transaction costs, and enhancing the efficiency of financial services. The region continues to innovate, with banks and fintech companies collaborating to introduce new digital products and services that cater to the needs of both urban and rural populations.

In Uganda, the banking sector has witnessed substantial growth in the adoption of e-banking services over the past decade. The increasing penetration of internet and mobile phone usage has facilitated the expansion of digital banking platforms. According to the Uganda Communications Commission (UCC, 2021), internet penetration in Uganda stood at 52%, providing a solid foundation for the growth of e-banking services.

Centenary Bank, one of the leading commercial banks in Uganda, has been at the forefront of this digital transformation. The bank offers a wide range of e-banking services, including internet banking, mobile banking, ATMs, and electronic funds transfers. These services aim to enhance customer convenience, improve operational efficiency, and boost the bank's financial performance.

### **1.2.1 Historical Perspective**

Electronic banking, also known as e-banking or online banking, emerged in the late 20th century with the advancement of technology and the internet. According to authors Gerun and Zhu (2002), the first online banking services were introduced in the United States in the early 1990s, allowing customers to access and manage their accounts through the internet.

In Africa, electronic banking started to gain popularity in the early 2000s, with the introduction of mobile banking services in countries like Kenya and South Africa. According to a report by Beller et al. (2015), mobile money services like M-Pesa in Kenya revolutionized the banking sector by allowing customers to make transactions and payments using their mobile phones.

In East Africa, countries like Uganda have also embraced electronic banking, with the introduction of online banking platforms by local banks such as Stanbic Bank and Centenary Bank. According to a study by Mukasa et al. (2018), the adoption of electronic banking in Uganda has been driven by factors such as convenience, accessibility, and security.

Overall, electronic banking has become an integral part of the financial sector globally, providing customers with convenient and secure ways to manage their finances. The evolution of electronic banking continues to shape the banking industry, with advancements like mobile banking, internet banking, ATM and digital wallets further transforming the way people access and use financial services.

### **1.2.2 Theoretical perspective**

The theoretical framework for analyzing the relationship between electronic banking (e-banking) and the financial performance of commercial banks, specifically Centenary Bank in Uganda, draws upon several economic, financial, and technological theories. These theories provide a foundation for understanding how e-banking can influence various financial performance metrics.

#### **1.2.2.1. Innovation Diffusion Theory (IDT)**

The innovation diffusion theory explains an individual's intentions to adopt a technology as a modality to perform a traditional activity (Okiro and Ndungu, 2013). This theory was applied by Mattila (2002) when she studied the factors affecting the adoption of mobile banking services. As regards the innovation diffusion theory, Clarke (1995) postulated that diffusion of innovation attempts to explain and describe the mechanisms of how new interventions, in this case Electronic Banking, are adopted and become successful. Not all innovations are adapted, and even if they are good, it may take a long time for an innovation to be adopted. He further states that resistance to change may be a hindrance to diffusion of innovation; and although it might not stop the innovation, it will slow it down. Commercial banks in Uganda have acknowledged the benefits of electronic banking; they have adopted these innovations, due to factors such as the availability of required tools and connectivity by the telecom service providers and software. Adoption of such innovations is faster in financial institutions that have Internet access and information technology departments than in financial institutions without such technologies.

### **1.2.2.2. The Transactions Cost Innovative Theory (TCIT)**

The transactions cost innovative theory was introduced by Hicks and Niehans (1983) who championed and stated that the foremost aspect of financial innovation is to be able to reduce cost of transaction in response to the advancement in technology and which resulted in the reduction of transaction cost. The ability to lower the cost of transaction brings about innovation in financial and upgrading of financial service and the same holds that money related innovations decrease the costs involved in making transactions (Kurgat and Charles (2018). Transactions Cost Innovative Theory is relevant as regards the impact of e-banking on the performance of financial institutions in Kumi District since the use of internet, electronic cards and mobile phones to carry out financial transactions has facilitated improvement in quality and cost of financial transactions for financial institutions in Uganda and Centenary Bank, Kumi branch in particular, especially on the part of financial institutions due to downsizing staff. Customers of Centenary Bank, Kumi branch however, still incur high costs of transaction especially when depositing, withdrawing and sending Cash.

### **1.2.3 Conceptual perspective**

Electronic banking refers to the use of electronic means to conduct banking transactions and services. This includes a range of services like electronic fund transfers, online account management, electronic bill payments, and more. According to Daniel (1999), e-banking provides universal connection from any location worldwide, offering a broad spectrum of banking services and transactions.

Internet banking, a subset of e-banking, specifically involves conducting banking transactions over the internet. It includes online services such as account management, fund transfers, bill payments, and loan applications. Pikkarainen et al. (2004) describe internet banking as an online service that allows customers to perform banking activities from the comfort of their homes or offices.

Mobile banking refers to the use of mobile devices, such as smartphones and tablets, to conduct banking transactions. It includes services like balance inquiries, fund transfers, bill payments, and even mobile check deposits. According to Shaikh and Karjaluo (2015), mobile banking represents the most innovative and dynamic way of banking, offering convenience and real-time access to banking services.

ATM banking involves the use of Automated Teller Machines (ATMs) to conduct banking transactions such as cash withdrawals, deposits, fund transfers, and account inquiries. ATMs provide round-the-clock access to banking services. Joseph and Stone (2003) highlight the convenience of ATMs in providing 24-hour banking services outside traditional banking hours. Financial performance of commercial banks refers to evaluation of a bank's profitability, liquidity, operational efficiency, which are key indicators of financial health and sustainability. Profitability refers to the ability of a bank to generate earnings relative to its expenses and other costs incurred during a specific period. It is often measured using metrics such as return on assets (ROA), return on equity (ROE), and net interest margin (NIM). According to Athanasoglou et al. (2008), profitability is a crucial indicator of a bank's financial health and long-term sustainability.

Liquidity is the ability of a bank to meet its short-term obligations as they come due without incurring unacceptable losses. It is essential for maintaining trust and stability in the banking system. Diamond and Dybvig (1983) suggest that liquidity management is vital for banks to avoid runs and ensure smooth operations.

Operational efficiency refers to the ability of a bank to deliver services in a cost-effective manner while maintaining high service quality. It involves optimizing processes, reducing waste, and leveraging technology. Berger and Mester (1997) indicate that operational efficiency is a significant determinant of a bank's overall performance and competitiveness.

#### **1.2.4 Contextual perspective**

The banking sector in Uganda has undergone significant transformation over the past few decades, driven by advancements in technology and the increasing demand for efficient financial services. Electronic banking (e-banking) has played a pivotal role in this transformation, enabling banks to offer a range of digital services to their customers. These services include internet banking, mobile banking, and ATM banking, which have collectively improved the accessibility, convenience, and efficiency of banking operations.

In Uganda, the adoption of e-banking services has been largely influenced by the need to enhance financial inclusion, reduce transaction costs, and improve service delivery.

According to the Bank of Uganda (2018), the introduction of e-banking services has significantly expanded the reach of banking services to previously underserved rural areas. This expansion has been facilitated by the widespread use of mobile phones and the internet, which have become critical tools for accessing banking services.

The financial performance of commercial banks in Uganda has been positively impacted by the adoption of e-banking services. Banks have reported increased profitability, improved liquidity management, and enhanced operational efficiency due to the integration of digital technologies. For instance, a study by Nabukeera (2016) found that the use of e-banking services in Uganda has led to a reduction in operational costs and an increase in customer satisfaction, which in turn has improved the overall financial performance of banks.

Centenary Bank, one of Uganda's largest commercial banks, has been at the forefront of adopting e-banking services. Established in 1983, Centenary Bank has grown to become a key player in the Ugandan banking sector, with a strong focus on financial inclusion and rural development. The bank's commitment to leveraging technology to enhance service delivery is evident in its extensive range of e-banking services, including internet banking, mobile banking, and a wide network of ATMs.

The Kumi branch of Centenary Bank is a prime example of the bank's efforts to bring modern banking services to rural areas. By offering a variety of e-banking services, the Kumi branch has improved access to financial services for the local population, which primarily consists of smallholder farmers, traders, and low-income earners.

**Internet Banking:** Centenary Bank's internet banking platform allows customers to manage their accounts, transfer funds, pay bills, and access various banking services online. This has reduced the need for physical branch visits, saving time and costs for customers.

**Mobile Banking:** The bank's mobile banking service, known as CenteMobile, enables customers to perform banking transactions using their mobile phones. This service is particularly beneficial for customers in rural areas with limited access to physical bank branches.

**ATM Banking:** With a well-distributed network of ATMs, including those at the Kumi branch, Centenary Bank provides 24/7 access to cash withdrawals, deposits, and account inquiries. This service has enhanced the convenience and accessibility of banking services for customers.

The integration of e-banking services at Centenary Bank Kumi branch has had a significant impact on the financial performance of the bank. The branch has reported increased profitability due to higher transaction volumes and lower operational costs. Improved liquidity management has also been observed, as e-banking services facilitate real-time fund transfers and account monitoring. Furthermore, the operational efficiency of the branch has been enhanced by automating routine tasks and reducing the reliance on manual processes.

### **1.3 Statement of the problem**

Uganda's financial industry has witnessed many changes since the introduction of E-banking. Currently, customers of commercial Banks, SACCOS, and MDIs have efficient, fast and convenient banking services. In the effort of providing quality and acceptable services, most financial institutions in Uganda have resorted to investing huge funds in electronic banking which uses the financial technology (FinTech) tools. Whereas the rapid growth of FinTech has made banking services more efficient and cost effective, investments in various technological infrastructures are taking a larger share of the financial institutions income (Abor, 2004). Apart from staff costs and other operational costs, technology is usually the item in the budget with the highest cost in rural financial institutions, especially in Kumi District, and the fastest growing item; yet we do not know about its impact on the bank's financial performance.

Electronic banking can potentially heighten operational vulnerabilities, arising from failure of systems, internal controls and human error, threatening the provision of financial services and/or stability of the providers. Also, increased use and integration of information systems and digital access may worsen vulnerabilities to cyber attacks, risking customer data confidentiality (Bank of Uganda, 2019). Furthermore, as the provision of electronic banking is increasingly dependent on third parties, such as telecommunication companies, cloud-computing entities, and data providers. A disruption of key third parties' systems could pose far reaching systematic disruption to the financial system and further increase the cost of transactions. According to police crime report (2014), between the months of August and November 2014 only, mobile money frauds caused a loss of over UGX 207 million (80,000 USD) to the users. In Kumi District, customers have reported such cases as well, though most of the cases are undocumented.

Centenary Bank, Kumi Branch has suffered ATM fraud and system network interruptions which may have a negative impact on their operations thus affecting the financial performance of the bank. If these benefits and risks are not clearly established, the continuing use of e-banking may negatively affect the financial performance of financial institutions but limited research literature is available about e-banking in commercial banks and the performance of these financial institutions which the researcher seeks to discover.

## **1.4 Objectives of the Study**

### **1.4.1 General objective of the study**

The general objective of the study is to assess the effect of electronic banking on the financial performance of the commercial banks in Uganda, a case study of Centenary Bank, Kumi branch.

### **1.4.2 Specific objectives**

- To determine the effect of internet banking on the financial performance of commercial banks in Uganda.
- To establish the effect of ATM banking on the financial performance of commercial banks in Uganda.
- To establish the effect of mobile banking on the financial performance of commercial banks in Uganda.

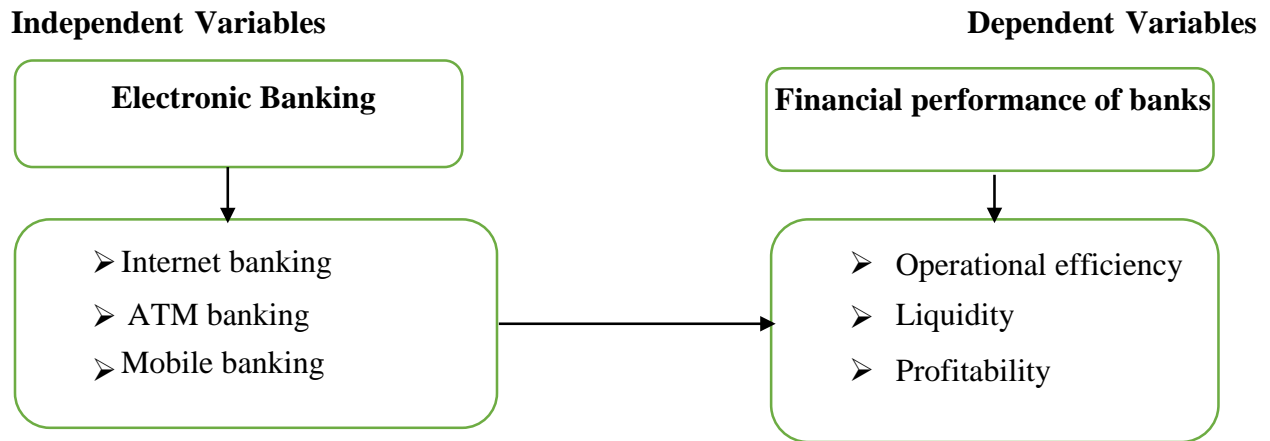
## **1.5 Research questions**

- What is the effect of internet banking on the financial performance of commercial banks in Uganda?
- What is the effect of ATM banking on the financial performance of commercial banks in Uganda?
- What is the effect of mobile banking on the financial performance of commercial banks in Uganda?

## **1.6 Conceptual frame work**

The conceptual framework below shows the hypothetical relationships between the independent variables and the dependent variable.

**Figure 1** Conceptual frame work showing relationship between electronic banking and the financial Performance of commercial banks.



*Source: Developed by the Researcher, 2024.*

From the model in Figure 1, Electronic banking is seen as a multi-dimension construct that affects financial performance of commercial banks. Electronic banking was conceptualized to include three dimensions of;

- Internet banking; comprising of the number of internet banking transactions, number of customers using internet banking, value of fees and commission from internet banking.
- Mobile banking; which included the number of active users of mobile banking, number of mobile banking transactions, capital investment in mobile banking in Uganda shillings.
- ATM banking; comprising of the number of ATMS installed, number of active users of ATM banking and number of ATM transactions.

The financial performance of commercial banks is put in three dimensions of their Operational Efficiency, Liquidity and Profitability which are financial in nature categorized in accounting and market-based accounting measures.

## **1.7 Scope of the study**

The will focus on geographical scope, content scope and time scope.

### **1.7.1 Geographical scope**

The Centenary Bank Kumi Branch is located at Plot 39, Ngora Road, Kumi Town in the Eastern Region of Uganda. This branch serves customers in Kumi district and the surrounding areas, providing a range of banking services including electronic banking facilities.

### **1.7.2 Content Scope**

The study sought to investigate the effect of electronic banking on the financial performance of Centenary Bank Kumi branch.

In this case electronic banking will be focused on ATM banking, Mobile banking and Internet banking. Financial performance is measured in terms of Operational Efficiency, Liquidity and Profitability.

### **1.7.3 Time scope**

The study took a period of four years that is being effective from 2020 to 2023. This period was selected because first of all it was enough for the researcher to carry out a study and this is the time when e-banking become a crucial issue in commercial bank development.

## **1.8 Significance of the Study**

- The findings and recommendations arising from this study may be used by stakeholders namely; the customers, Centenary Bank Management, regulatory authorities and shareholders to make informed decisions, innovation and growth, enhance efficiency and manage risks.
- The study may benefit the customers of Centenary Bank in such a way that it will enhance the overall customer experience. Research in this area can help stakeholders better understand customer preferences, behavior, and satisfactory levels.
- To the academia, the study may contribute to the body of knowledge regarding the effect of electronic banking and the financial performance of commercial banks in Uganda. Thus, the study may serve as a reference point for future scholars, academicians and researchers who are interested in the topic.

## **1.9 Justification of the Study**

The study is important and timely because Centenary Bank is faced with electronic banking challenges like cyber security threats, infrastructure and technology and yet limited study has been commissioned to find out whether electronic banking has any significant effect on financial

performance of the bank. There is therefore need for a study to fill this knowledge gap by coming up with specific findings and recommendations to improve the status quo.

### **1.10 Definition of key terms and concepts**

**Electronic Banking:** Refers to the provision of banking services through electronic channels, such as the internet, mobile phones, ATMs, electronic funds transfers, and point-of-sale terminals.

**Internet Banking:** Also known as online banking, it enables customers to conduct financial transactions over the internet through a bank's website.

**Mobile Banking:** Allows customers to perform banking transactions using their mobile devices, such as smartphones or tablets.

**ATM (Automated Teller Machine):** An electronic banking outlet that allows customers to complete basic transactions without the aid of a human teller.

**EFT (Electronic Funds Transfer):** A system that allows for the electronic transfer of money from one account to another, such as wire transfers and direct deposits.

**Digital Wallet:** A software-based system that securely stores users' payment information and passwords for numerous payment methods and websites.

**Point-of-Sale (POS):** A system used for financial transactions where a customer can swipe, tap, or insert their payment card to pay for goods or services.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

Chapter two provides an overview of electronic banking and the financial performance of commercial banks, discusses e-banking theories, empirical findings by previous researchers on e-banking and the financial performance of commercial banks. The chapter also provides the knowledge gaps and summary of literature review.

#### **2.1 Theoretical review**

Different theories were used in this section to explain electronic banking and the financial performance of commercial banks such as; Transaction Cost Theory and the Innovation Diffusion Theory.

##### **2.1.1 Transaction Cost Theory**

Transaction Cost Theory (TCT), developed by Ronald Coase (1937) and further elaborated by Oliver Williamson (1985), examines the costs associated with economic exchanges and the ways firms can structure themselves to minimize these costs. This literature review investigates the application of TCT to electronic banking (e-banking) and its influence on the financial performance of commercial banks, presenting a critical analysis of relevant studies and their findings.

Transaction Cost Theory suggests that firms organize transactions to minimize the costs of searching for information, negotiating and enforcing contracts. The theory explains why firms exist and how they can gain efficiencies by internalizing transactions rather than relying on the market. E-banking includes various digital financial services such as online banking, mobile banking, ATMs, and electronic fund transfers. It impacts transaction costs by:

Reducing Search and Information Costs: Online platforms provide easy access to banking information and services, lowering Bargaining Costs: Digital transactions streamline negotiation and execution processes, minimizing Policing and Enforcement Costs: Automated systems and enhanced security measures reduce oversight needs.

Numerous studies have examined the relationship between e-banking and financial performance, highlighting the following outcomes: **Cost Efficiency:** Automation and reduced need for physical branches lower operational costs, **revenue Generation:** New digital services attract customers and increase transaction volumes, **customer Satisfaction and Retention:** Convenient and quick services improve customer loyalty.

However, the transition to e-banking also involves challenges such as technological investments, cyber security threats, and regulatory compliance.

**Benefits and Cost Savings:** Hernando and Nieto (2007) found that Spanish banks adopting e-banking services experienced improved cost-efficiency ratios. They concluded that the reduced need for physical infrastructure and personnel significantly lowered operational costs. Malhotra and Singh (2009) reported similar findings for Indian banks, highlighting substantial cost savings due to reduced transaction times and streamlined processes.

**Revenue Enhancement:** DeYoung, Lang, and Nolle (2007) analyzed U.S. banks and observed that those with a strong e-banking presence generated higher fee-based income. The study noted that digital channels facilitated increased transaction volumes and the introduction of new financial products. Acharya, Kagan, and Lingam (2008) supported these findings by showing that online services attracted tech-savvy customers willing to pay for convenience and advanced features.

**Technological and Security Costs:** Pikkarainen, Pikkarainen, Karjaluoto, and Pahnla (2004) emphasized that while e-banking reduces some transaction costs, it also requires significant investments in technology and security. The study highlighted the ongoing need for cyber security measures to protect against fraud and data breaches. Riggins and Mitra (2007) discussed the regulatory and compliance costs associated with e-banking, noting that banks must continuously adapt to new regulations, which can be costly.

**Customer Adaptation and Satisfaction:** Gerrard and Cunningham (2003) explored customer attitudes towards e-banking in Singapore, finding that while many appreciated the convenience, there was resistance among certain demographics. Banks had to invest in customer education and support to enhance adoption rates. Sathye (1999) identified similar challenges in Australia, where the success of e-banking was tied to customer awareness and trust in digital services.

### **2.1.2 Innovation Diffusion Theory (IDT)**

Rogers (1983) discovered the process of technological diffusion is dmobile banking gadgetsated by uncertainty reduction behavior. The theory is useful to the commercial banks, and the Central Bank since it helps them to encounter electronic banking adoption uncertainties by seeking information from their employees and customers. Taylor (1995) observed that relative advantage determines technological diffusion. Commercial banks can use this theory to know that adoption to electronic banking fits customers' practices. This is because they can carry out banking transactions anytime and anywhere without any need to visit the bank premises. Complexity can be encountered by educating the public on how to use electronic banking.

Innovation diffusion theory (IDT), originally developed by Everett Rogers, explains how, why, and at what rate new ideas and technology spread through cultures. In the context of electronic banking and the financial performance of commercial banks, various authors have explored the interplay between the adoption of electronic banking innovations and their impact on the banks' performance. Below are some key insights from the literature:

Rogers identifies five key factors that influence the adoption of an innovation: relative advantage, compatibility, complexity, trialability, and observability. In electronic banking, these factors can help explain why some banks are quicker to adopt new technologies than others, and how this adoption can lead to improved financial performance.

Studies often highlight that electronic banking provides a significant relative advantage over traditional banking methods, leading to improved efficiency, reduced costs, and enhanced customer satisfaction. For example, a study by Dandapani (2017) shows that banks adopting electronic banking solutions tend to have lower transaction costs and improved operational efficiency, which positively affects their financial performance.

The degree to which electronic banking is perceived as consistent with existing values and practices of a bank influences its adoption. Research by Alalwan et al. (2016) suggests that banks that find electronic banking compatible with their operations and customer base are more likely to adopt these technologies, resulting in better financial outcomes.

The perceived difficulty of using electronic banking technologies can hinder their adoption. According to a study by Simpson (2002), banks that perceive electronic banking as less complex and easier to implement tend to adopt these technologies more readily, which in turn enhances their performance.

**Trialability and Observability:** Banks are more likely to adopt electronic banking if they can experiment with it on a limited basis and see tangible results from other adopters. A study by Pikkarainen et al. (2004) supports this, noting that banks that can trial new technologies and observe positive outcomes in the industry are more inclined to adopt these innovations, improving their financial performance.

**Customer Adoption and Network Effects:** The widespread acceptance of electronic banking by customers can create network effects, where the value of the service increases as more people use it. Venkatesh et al. (2003) note that customer adoption can significantly boost the financial performance of banks through increased transaction volumes and enhanced customer loyalty.

Empirical studies, such as those by Hernando and Nieto (2007), provide evidence that banks adopting electronic banking report better financial performance metrics, including higher profitability and reduced costs. These studies highlight the importance of early adoption and continuous innovation in maintaining competitive advantage.

Kariuki (2015), provide detailed insights into how specific banks have successfully implemented electronic banking innovations and the subsequent impact on their financial performance. These case studies often emphasize strategic planning, customer focus, and continual improvement.

## **2.2 Empirical review**

### **2.2.1 Internet banking and the financial performance of commercial banks**

Ahmed et. al., (2001) further had ascertained that instant cash transfer provides a much better level of convenience when undertaking the management of personal funds even when you are in bedroom, banking can take place and this makes the bank working 24hrs and hence improvement in financial performance. Though, it is challenged by level of insecurity and threatened privacy. Literature established that there are no cases of account compromised in Centenary Bank through internet and internet banking is free from security risks. This tells us that the bank has done a lot to away with phishing and cybercrimes that are involved in mobile money transfer. This makes the system attractive to a big number of people. Further, Mattilla

(2002) did a research on factors affecting adoption of internet banking services and applied the innovation diffusions theory. In her study, she asserts that demanding and knowledgeable customers assume that providers of banking service acting in an environment that is technologically driven will continue keeping up with development, apply further technological innovation in service offerings and ease up lives of customers. Internet Banking offers a higher level of convenience for managing one's finances even from one's bedroom (Nath et. al., 2001).

However, it continues to present challenges to the financial security and personal privacy. This study was undertaken to assess whether internet banking as used in Centenary Bank has reduced on congestions involved in banking and whether this has had an effect on financial performance of Centenary Bank.

Ayadi (2003) incongruently believed that access to mobile means of payment and the high number of customers connected to the internet has changed the perception of banks toward market and increased the development of internet Banking. Hutchinson and Warren (2003) argue that internet banking requires a policy of security that is sounding and propounded on effectiveness on the side of users.

Internet banking technology has made remarkable changes in the banking industry, which include: cost reduction due to mobile processing carried out on the Internet. This study was conducted to establish whether internet banking has provided convenience to bankers and how this has turned into improved financial performance of Centenary Bank.

Donner and Tellez (2008) in the study they did in Indian commercial banking, they aimed at establishing the rate of adopting, usage and impact of internet banking on financial performance. it was established that on-line banking offers a chance and best way of lowering costs of transferring money from one user to another at any time and this promotes the financial performance of a commercial bank since transactions means income on the side of the bank. Further, internet banking came with increased usage of mobile payments which innovation is very important is providing account details on spot and avoid compromising the security. Many people have had their account details compromised, as a result of internet banking. However, Aniston (2008) argues that the risks involved in mobile payments which

tend to consist of impersonation. Commercial banks according to Aniston (2008) have a duty to keep clients alert about the risks involved since the higher the risk, the lower the rate of adoption and the lower the risk, the higher the rate of adoption and the higher the improvement in financial performance of commercial banks. This study was conducted to establish whether Internet banking has provided convenience to bankers and how this has turned into improved financial performance of Centenary Bank.

According to Kombe and Wafula (2015), internet banking is the delivery of bank services and products to customers by the use of the internet channel. They identified e-banking as the key to banks success since it catalysis reduction in overhead costs such as staff and rent allowing banks to penetrate financial markets without their physical presence leading to improved performance.

While earlier studies provide evidence that there is a link between internet banking and the financial performance of the commercial banks, most of the studies are based on anecdotal observations and expert opinions. Few studies provide empirical evidence on the actual influence of internet banking whether positive or negative on the financial performance of the commercial banks. This study therefore sought to fill this contextual gap by determining in statistical terms the influence of internet banking on the financial performance of the commercial banks. The study found that internet banking had a positive significant influence on the financial performance of the commercial banks implying that the financial performance of the banking sector improves with better and reliable internet banking.

### **2.2.2 Mobile banking and the financial performance of commercial banks**

Mobile banking offers millions of people a potential solution in emerging markets that have access to a cellATM , yet remain excluded from the financial mainstream. It can make basic financial services more accessible by minimizing time and distance to the nearest retail bank branches (CGAP, 2006) as well as reducing the bank's own overheads and transaction- related costs. Mobile banking presents an opportunity for financial institutions to extend banking services to new customers thereby increasing their market (Lee, Lee and Kim, 2007).

Simpson (2002) suggests that e-banking is driven largely by the prospects of operating costs minimization and operating revenues maximization.

According to Momanyi (2015), mobile banking is the latest development in e-banking that has resulted to increased number of banking service users, due to its convenience to customers with busy lives to do their banking anytime and anywhere. It attracts customers in remote areas and getting banking services to the unbanked which increases the number of customers, transactions and profitability in commercial banks. The research by Mabwai (2016) revealed that, the higher the number of mobile banking transactions, the capital adequacy ratio, the larger the market share and the number of mobile banking customers, the higher the financial performance.

Investigation by Munyoki (2015) it was found that, mobile banking had a very high positive effect on the financial performance of commercial banks in the last five years. In his findings he concluded that, banks that are encouraging the use of mobile banking have increased the number of customers and improved their financial performance. According to Mwangi (2013), mobile banking was identified as a key channel in the global banking financial industry as it offers real time access to products and services, able to reach those in remote areas and the unbanked. The study showed a significant positive relationship between mobile banking and the financial performance of the commercial banks reflecting a direct proportional increase in ROA.

Whereas earlier studies provide evidence that there is a link between mobile banking and the financial performance of commercial banks, most of the studies are based on anecdotal observations and expert opinions. Few studies provide empirical evidence on the actual influence of mobile banking whether positive or negative on the financial performance of commercial banks. This study therefore sought to fill this contextual gap by determining in statistical terms the influence of mobile banking on the financial performance of the commercial banks. The study found that mobile banking had a positive significant influence on the financial performance of the commercial banks implying that the financial performance of the commercial banks improves with better mobile banking platforms.

### **2.2.3 ATM and financial performance of commercial banks**

The impact of Automated Teller Machines (ATMs) on the financial performance of commercial banks, particularly in Uganda, has been the subject of several studies.

Mabrouk and Mamoghli (2010) argue that ATMs reduce the need for physical branches and human tellers, significantly lowering operational costs for banks. In Uganda, this reduction in

costs can translate into higher profitability as banks can serve more customers with fewer resources.

Kateregga (2015) highlights that ATMs enable banks to handle a higher volume of transactions without the limitations of banking hours. This increase in transaction volume directly impacts the financial performance of banks by generating more fee-based income and improving asset utilization.

Baganzi and Lau (2017) note that ATMs provide customers with round-the-clock access to their funds, which enhances customer satisfaction and loyalty. This convenience can lead to increased customer retention and a broader customer base, positively influencing the financial performance of banks.

Nabukeera et al. (2014) provide empirical evidence that the adoption of ATMs by commercial banks in Uganda has a positive impact on their financial performance. The study shows that banks with a higher number of ATMs tend to have better financial metrics, such as higher return on assets (ROA) and return on equity (ROE).

Kansiime (2015) examines specific case studies of Ugandan banks that have implemented extensive ATM networks. The findings suggest that these banks experience increased customer acquisition, higher transaction volumes, and improved profitability compared to banks with limited ATM presence.

Shittu (2010) noted that Electronic Banking brought convenience to bank customers. As Debit card replaced cash, people would carry less cash on them. Shittu (2010) further noted that bank customers who have Debit cards can purchase or make payments from their accounts in person, internet, or by ATM at stores that display the Visa logo. With a Debit card, fund transfer from customers' account is fast; however, a customer must ensure that he or she has sufficient fund in his/her accounts to cover the purchase or payment. Electronic Banking enables direct deposit or withdrawals to and from customers' accounts. Shittu also stated that Electronic Banking enabled electronic cheque processing, which reduced the number of clearing days and improved security.

Wise and Ali (2009) argued that many banks in Tanzania want to invest in ATMs to reduce branch cost since customers prefer to use them instead of a branch to transact business. The financial impact of ATMs is a marginal increase in fee income substantially offset by the cost of significant increases in the number of customer transactions. As at end of June 2017, the banking sector registered a decline in branch network and number of ATMs, mainly on account of the transfer of the assets and liabilities of Crane Bank Limited (now defunct) to DFCU Bank Limited. In addition, other banks are rationalizing their branch and ATM operations, shifting to the more efficient alternative channels such as mobile banking, in order minimize operational costs. As at end-June 2017, the total number of bank branches stood at 546 compared to 566 branches at the end of June 2016. Similarly, the number of ATMs decreased from 862 to 818 in the same period (Bank of Uganda, 2017).

In their research Kamau and Oluoch (2016) discovered that, there was a significant positive relationship between the adoption of ATM and performance of commercial banks, since a unit change in the use of ATM increased commercial banks performance by 0.051. ATMs reduced operational costs which increased the commercial banks' profits and saved the time spend by the customers as they queued waiting to be served. They suggested that commercial banks should be able to improve the ATM system so that it would be able to offer all the banking services to the customers.

According to research by Wachira (2013) it was found that, despite ATM was a very expensive investment in the banking industry, it is a very important investment because of its merits such as: reduced congestion in banking halls, convenient for the customers to access banking services at any time and is user friendly. The mean score of his observation in this section was 3.36 which served as evidence that ATMs play a positive significant role in the financial performance of the commercial banks in Uganda.

He suggested that there was a need for the bank management to be conducting frequent system checks in order to control the breakdown of the ATM machines.

In their research Gichungu and Oloko (2015) discovered that, ATM banking has led to a drop-in customer for brick and motor branches towards their smartATM s which in the long-run will

allow banks to cut costs, reduce staffing giving commercial banks an opportunity to enhance profitability.

There was a steady increase in ATM banking during the period of their study from 2009 to 2013 which corresponded with an increase in the financial performance of commercial banks in Uganda. They suggested in their study that the commercial banks should increase the number of ATM stations in order to reach all the potential clients that would reduce time wasted when customers are served in the banking halls.

While earlier studies provide evidence that there is a link between ATM banking and the financial performance of the commercial banks, most of the studies are based on anecdotal observations and expert opinions. Few studies provide empirical evidence on the actual influence of ATM banking whether positive or negative on the financial performance of the commercial banks. This study therefore sought to fill this contextual gap by determining in statistical terms the influence of ATM banking on the financial performance of the commercial banks. The study found that ATM banking had a positive significant influence on the financial performance of the commercial banks implying that the financial performance of the commercial banks improves with better ATM banking.

### **2.3 Summary of Literature review and gaps**

Internet banking significantly enhances the financial performance of commercial banks by reducing operational costs and improving efficiency. Key studies show that it lowers the need for physical branches (Pikkarainen et al., 2004; DeYoung et al., 2007) and enhances customer relationship management (Mishra & Kiranmai, 2009). This results in higher customer retention and increased profitability.

Mobile banking drives financial inclusion and expands customer bases, particularly in developing countries. It reduces transaction costs and improves operational efficiency (Donner & Tellez, 2008; Shaikh & Karjaluo, 2015). Studies in diverse regions (Mas & Radcliffe, 2010; Asongu, 2013) confirm its role in boosting transaction volumes and customer satisfaction, leading to higher bank profitability.

ATMs provide 24/7 access to banking services, reducing the need for physical branches and lowering transaction costs (Batiz-Lazo & Woldesenbet, 2006; Humphrey, 1994). They increase transaction volumes and enhance customer satisfaction (Kumar et al., 2006; Carbo et al., 2003), contributing positively to financial performance.

Need for more research in different economic and regulatory environments to understand the unique challenges and opportunities of digital banking technologies, limited longitudinal data on the long-term impacts of internet, mobile, and ATM banking on financial performance, insufficient understanding of how different customer demographics adopt and use these banking technologies, integration with Other Digital Innovations, exploration needed on how digital banking interacts with technologies like blockchain and artificial intelligence to enhance financial performance, More comprehensive studies required on the impact of security and privacy issues on customer trust and financial performance, further research needed on how these technologies affect non-financial metrics such as customer satisfaction and brand loyalty.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.0 Introduction

This chapter presents the research design that was used, study population, sampling procedures and technique, sample size, data sources, and data collection methods and instruments and methods and limitations of the study.

#### 3.1 Research design

The study followed a cross-sectional research design. This design was used because the study was largely descriptive and comparative basing on the views of respondents backed by secondary data, using both qualitative and quantitative data therefore the researcher will be using the cross-sectional research design to collect information from different participants like the banking officers to provide information relating e-banking and financial performance of the Centenary Bank. The researcher will be using the descriptive design as it's the one required in reviewing different literature written on the topic by different authors and explaining the literature in relation to the current literature.

#### 3.2 Study population

The target population of the study consisted of 37 respondents; these were from drawn from different positions held by the respondents in the bank. It involved 2 branch managers, 5 branch supervisors, 15 personal bankers, 14 banking officers and 1 IT officer.

#### 3.3 Sampling technique

“Sampling technique is a procedure of choosing objects from a population in a way that the sample elements chosen stand for the study population” (Amin, 2005). The research used purposive and simple random sampling. Purposive sampling entailed selection of specific persons or elements in such as managers, supervisors and IT officer with knowledge issues that are researched about. According to Amin (2005), “purposive sampling technique allowed the researcher to use cases that are deemed to have necessary information in respect to the study variables”. “Simple random sampling is a sampling technique that makes sure that every

element of the study population has an equal chance of being selected” (Oso & Onen, 2019). Simple random sampling was employed in choosing personal bankers and banking officers.

### **3.4 Sample size**

A sample according to Odiya (2019) refers to the portion of respondents selected for the study. It is a subset of the population from which a generalization about a population is made. A sample of 34 was selected from the accessible population of 37 in accordance with the Slovin (1960) formula of determining sample size .

$$N=37$$

$$e=0.05$$

The formula is:

$$n=N/1+N.(e)^2$$

$$n=37/1+37\cdot(0.05)^2$$

$$n=37/1+37\cdot0.0025$$

$$n=37/1+0.0925$$

$$n=37/1.0925$$

$$n\approx 33.87$$

**n=34 respondents**

**Table 1. The number of respondents at Centenary Bank Uganda, Kumi branch.**

<b>Categories</b>	<b>Population</b>	<b>Sample size</b>	<b>Sampling technique</b>
Managers	2	2	Purposive
Supervisors	5	5	Purposive
Personal Bankers	15	14	Simple random
Banking officers	14	12	Simple random
IT officer	01	01	Purposive
Total	37	34	

Source: Centenary Bank, Kumi branch records 2023.

### **3.5 Sources of data**

The research data was obtained from two sources namely; primary and secondary data.

#### **3.5.1 Primary source**

Primary data was obtained through personal interviews with respondents, observations and self-administered questionnaires that will be designed.

#### **3.5.2 Secondary source**

Secondary data was obtained through the internet, company brochures, statistical report and bulletins, annuals reports on general observation, textbooks, other student's research work.

### **3. 6 Data collection instruments**

#### **3.6 .1 Questionnaires**

A questionnaire is a research instrument consisting of a series of questions and other prompts for gathering information from respondents. This technique helped to collect primary data through setting a number of questions, which give to a cross section of respondents.

The questions were open ended and closed ended questions with the questionnaire mainly based on predetermined and standardized questions. They focused on the role of electronic banking on financial performance of the commercial banks. Self-administered questionnaires were used by the researcher because they are cheap to distribute and process. They were more flexible and help to save time.

### **3.6.2 Interview guide**

According to Coase, R.H. (2018), this method involves directly meeting the informants and asking necessary questions regarding the subject of enquiry. Usually a set of questions or a questionnaire is carried by him and questions are also asked according to that. The interviewer efficiently collects the data from the informants by cross examining them.

### **3.6.3 Observation**

The researcher used observation, this where he used his eyes to see different types of internet banking Centenary Bank has and how those different types of internet banking are used.

## **3.7 Validity and reliability of data collection Tool**

### **3.7.1 Validity**

“It is a degree to which a tool measures what it is meant to measure” (Carolel et al, 2019). The content validity of the tool was established commendable performing for the pilot test. After creating the questionnaire, the researcher discussed with the supervisors and 3 other experts to get professional judgment on validity of the tool. “The formulae below were used to run the CVI” (Polit,2016).

$$CVI = \frac{\text{Number of items regarded relevant by researcher}}{\text{Total number of items}}$$

### **3.7.2 Reliability of Instruments**

Reliability is a level at which measures are free from mistakes and hence yield steady results. If a measurement procedure constantly gives similar scores with equal values, the tool is considered reliable. “Reliability comprises of consistency of test scores that is., the level at which one expects comparatively constant deviation scores of persons across testing conditions on the same, testing tools” (Ganesh, 2017).

## **3.8 Procedure of Data Collection**

After writing the research proposal to the satisfaction of the supervisor, an introductory letter for seeking permission to proceed for data collection was obtained from Uganda Christian University and this was used to make respondents believe in the researcher. This letter was taken to the branch manager to seek for permission before engaging the population for the study.

### **3.9 Data Analysis and presentation**

Data collected was analyzed by using both descriptive and inferential statistics procedures. Descriptive statistics such as mean score, frequencies and percentages for each variable were calculated and tabulated using frequency distribution tables. In order to test the relationship between the variables, inferential test including the Pearson product moment correlation and regression analysis was used. Questionnaires were edited to ensure that the data is consistent with the study. Then data was coded, that is assigning dummy names to each study variable which in turn was assigned numerical value that could be recognized and analyzed by a computer. Data entry was the next step and then analysis using Statistical Package for Social Sciences to get the desired output.

### **3.10 Ethical consideration**

Privacy was safeguarded by informing the participants in advance that their names were required and therefore the information they give remained anonymous, and if the participants felt uncomfortable to answer certain questions, they had a right to leave them out and were not coerced (Mugenda & Mugenda, 2003).

To safeguard confidentiality, the participants were told early enough that the information they give was for only academic use and that any information obtained on private matters were preserved in confidence (Amin, 2005).

To ensure that there was no plagiarism in this study, all work used in this book was cited for and referenced. Further, voluntary participation was observed where by respondents were not forced to participate in the study without their will.

### **3.11 Limitations of the study and solutions.**

The study faced a challenge of getting some detailed data because of confidentiality reasons which made the data collection very difficult since the bank could not provide critical information that was required because of fear that the competitors could use that information for their own gains but the researcher managed to convince the loan officers to provide the necessary data required since it was only meant for academic purposes only.

Another challenge to the study was time as this was academic work which had to be completed within a limited period of time; this made the research work difficult. The researcher was able to address this challenge by multitasking and ensuring that he utilized the little time available.

Accessing historical data was also a challenge due to poor records coupled with retirement of old banking systems in place of new versatile systems but this issue was addressed by retrieving the bank records which were available in the store through the guidance of the office attendant and other staff in the bank.

Bias from the respondents, some respondents were very busy with busy schedules however; the researcher assured them about the relevance of this research towards their institution and development and he managed to convince them and they provided information to researcher.

## **CHAPTER FOUR: DATA PRESENTATION, INTERPRETATION AND ANALYSIS**

### **4.0 Introduction**

The chapter presents a detailed data analysis on electronic banking and financial performance of commercial banks in Uganda. The findings were presented in form of tables. The chapter utilized the use of the study objectives in analyzing the collected data. The objectives include; influence of internet banking, contribution of mobile banking, influence of ATM banking on the financial performance of commercial banks in Uganda, a case of Centenary Bank, Kumi Branch.

### **4.1 Response Rate**

The study targeted a sample of 34 respondents and all of them were supplied with questionnaires. A total of 34 questionnaires were disseminated to the different targeted participants. The participation rate is indicated in Table 2 below.

**Table 2: Response Rate**

	<b>Frequency</b>	<b>Valid percentage</b>
Number of questionnaires distributed	34	100%
Number of questionnaires returned	34	100%

*Source: Primary data (2024).*

As indicated in table 2, the study achieved a 100% response rate which enabled the researcher to obtain all the necessary data he required to obtain the study findings. This higher response rate could be clarified because the researcher employed the help of two research assistants who helped in distributing and gathering the questionnaires from the respondents.

### **4.2 Background Information about the Respondents**

The first section of the questionnaire was meant to help the researcher gather background information about the respondents in the study. Such information was considered relevant in understanding the composition of the respondents as regard the study and its variables. Participants were requested to give their age group, gender, and highest level of education attained, marital status, the length of work at Centenary Bank. The results on these background variables are presented below:

#### 4.2.1 Respondents by gender

The researcher endeavored to establish the gender of participants used in the collection of data. This was meant to determine the gender category with big percentage number. Results are given in table 3 below.

**Table 3: Gender Category of the Participants**

Gender	Frequency	Percentage
Male	22	64.7%
Female	12	35.3%
Total	34	100%

*Source: Primary data, (2024)*

The table 3 indicates that “64.7% of participants were males and only 35.3% of them were females”. Although the Electronic banking options are not dependent of gender in particular, the above statistics reveal that there were more male respondents than their female counterparts. One of the possible reasons for this could be that statistically, Centenary Bank, Kumi branch employs more males in the branch than females.

#### 4.2.2 Respondents by their age bracket

The participants were also tasked to give the age bracket in which they belong. Table 4 is a summary of the respondents by their age ranges.

**Table 4: Age Category of the respondents**

Age Bracket	Frequency	Valid Percentage
(30-40)	19	55.9%
(40-50)	12	35.3%
50+	3	8.8%
Total	34	100%

*Source: Primary data, (2024)*

The table 4 shows that over half of the participants, 55.9% were between (30-40) year’s age brackets, 35.3% of the respondents were between (40-50) years and 8.8% of them were above 50 years. The high percentage of 55.9 % being 30-40 years could be justified by the presence of a vibrant age group which has rather established themselves in the banking sector and thus were even accessible to receive the

tolls for data collection. The researcher realized that the employees with people over 50 years had an experience of having worked in the bank for long and thus they were willing to share their knowledge regarding their experiences in relation to electronic banking and financial performance of Centenary Bank, Kumi branch.

**4.2.3 Respondents by the highest level of education attained**

Participants were also requested to reveal their highest level of education attained and results are showed in table 5 below:

**Table 5: Participants by the level of Education**

<b>Education Level</b>	<b>Frequency</b>	<b>Percentage</b>
Certificate	1	2.94%
Diploma	3	8.82%
Degree	23	67.64%
Masters	5	14.7%
Professional course	2	5.9%
Total	34	100%

*Source: Primary data, (2024)*

Illustrated in the table 5 is the categorization of respondents according to their level of education. The study shows that 67.64% of the respondents had achieved a bachelor’s degree, 18.82% had attained diploma, 14.7% of the respondents had attained at least a master’s degree, 5.9% had attained professional level and only 2.94% of the respondents had acquired at least a certificate qualification. The researcher notes that these respondents are expected to have the knowledge sought after by the researcher through the instruments used to obtain the data. Since most of them have attained higher level of education, it implies that these individuals know a lot about the various data that were being gathered in the study.

**4.2.4 Respondents according to their Marital Status**

The Participants were requested to give their marital on if they were married or not. Results are summarized in table 6 below.

**Table 6: Marital Status of the Respondents**

Marital status	Frequency	Percentage
Married	29	85.3%
Single	5	14.7%
Divorced	0	0.0%
Widowed	0	0.0%
Total	34	100%

Source: Primary data, 2024

Table 6 above shows that 85.3% of Participants were married whereas only 14.7% were single, this meant that the number of married respondents was higher than any other category. There were no respondents who were either divorced or widowed.

This shows that a majority of the respondents in the bank were married and responsible people who gave the information which the researcher required in his study.

#### **4.2.5 Respondents according to the duration of employment at the banking industry**

The participants were requested to indicate their respective periods which they have been employed at the bank. It is summarized below in table 7.

**Table 7: Employment duration at the banking industry**

Duration	Frequency	Percentage
Less than one year	5	14.7%
Between one to two years	4	11.8%
Between two to three years	10	29.4%
More than 4 years	15	44.1%
Total	34	100%

*Source: Primary data, (2024)*

From the table above, a majority of the respondents had worked for more than 4 years in the banking industry which shows the highest percentage of 44.1%, followed by 29.4% representing those who had spent between two to three years, then those who had been employed in the industry for one or two years represented 11.8% and lastly those who had worked in the industry for less than one year were only five of them representing 14.7% of the population. The higher number of those who had

spent more than four years was important for the researcher to acquire the information required since they had a lot of experience in the industry and provided the adequate information.

#### **4.2.6 Position of the respondents at the bank**

Here the respondents were made to indicate the position which each one of them holds in the bank, it is summarized in the table below.

**Table 8: Showing the positions held by the participants**

<b>Position</b>	<b>Frequency</b>	<b>Percentage</b>
Branch Manager	2	5.9%
Supervisor	5	14.7%
Personal Banker	14	41.2%
Banking Officer	12	35.3%
IT Officer	1	2.9%
Total	34	100%

*Source: Primary data (2024)*

From the above table, it clearly shows that the highest number of the respondents were the personal bankers representing a percentage of 41.2%, followed by the banking officers with 35.3%, then supervisors represented a percentage of 14.7%, the branch managers covered a percentage of 5.9% of the respondents then lastly there was one IT officer representing a percentage of 2.9% of the respondents. All these respondents provided the adequate information needed by the researcher to fulfill his task.

#### **4.3. Findings on the financial performance of Centenary Bank, Kumi Branch.**

Key financial metrics and performance indicators over a specified period such as profitability, liquidity and operational efficiency were examined.

Table 9 below shows descriptive statistics on the financial performance of Centenary Bank, Kumi Branch.

**Table 9: Descriptive Statistics on financial performance of Centenary Bank**

	Percentage responses (%)					Mean
	SD	D	N	A	SA	
Our bank has enough cash to meet its obligations effectively (as and when they fall due)	3.9%	3.9%	7.8%	39.4%	44.7%	3.50
All our loans are paid in time	3.9%	2.6%	6.5%	53.9%	34.2%	3.54
The Default level in our bank has reduced for the past three years	5.2%	11.8%	5.2%	87%	35.5%	3.73
Our Return on Equity has increased for the past three years	2.6%	3.9%	7.8%	59%	26.3%	4.00
Every year increases shareholder's equity	1.3%	1.3%	31.5%	61.8%	3.9%	4.02
Our net income supersedes our operating costs for the last 3years	1.3%	1.3%	3.9%	71.8%	21.5%	4.07
All bank loans are dully collected	0%	0%	17.8%	50%	87.2%	4.11
The bank 's asset base has greatly increased over time	0%	0%	2.6%	50%	47.3%	4.37
The bank's income increases every year	0%	0%	21.5%	37%	41.3%	4.43
The percentage of non-performing loans in our bank has been reducing consistently	14.4%	9.2%	36.8%	28.9%	7.8%	4.44

**Source: primary data (2024)**

The responses in relation to whether centenary bank had enough cash to meet its obligations effectively. The study established that 44.7% strongly agreed, 33.9% agreed, 7.8% were not sure, 3.9% disagreed and 3.9% strongly disagreed. The study generally established that 78.6% of the respondents generally agreed that centenary bank had enough cash to meet obligations effectively. One of loan officers during an interview also agreed that centenary bank has sufficient funds to the obligations. He said *“our bank has sufficient funds to effectively meet our obligations. The time when the bank was started we used to experience such problems.* On whether all loans are paid in time. The study established that 53.9% agreed, 34.2% strongly agreed, 6.5% were not sure, 2.6% disagreed and 3.9% strongly disagreed. The study

generally established that 88.2% of the respondents generally agreed that all our loans are paid in time.

This was contrary to what one of the loan officers said, *“We still have some issues with some of our customers...we always endeavor to understand when they explain but it is not true that all our loans are paid in time.”*

The responses in relation to whether the Default level in our bank has reduced for the past three years. The study established that 47% agreed, 35.5% strongly agreed, 5.2% were not sure, 11.8% disagreed and 5.2% strongly disagreed. The study generally established that 82.5% of the respondents generally agreed that the Default level in centenary bank has reduced for the past three years. One of loan officers during an interview also agreed that the bank has had its default level reducing. He said *“one of the reasons why centenary bank has been growing and growing...it is that most of our clients have been compliant.”*

Further, to establish whether centenary bank’s Return on Equity has increased for the past three years. The study established that 59% agreed, 26.3% strongly agreed, 7.8% were not sure, 3.9 % disagreed and 2.6% strongly disagreed. The study generally established that 85.3% of the respondents generally agreed that the centenary bank’s Return on Equity has increased for the past three years. Findings from key informants were also supportive to this statement. One of them was quoted saying *“Our bank so far one of the highest return on equity in Uganda and I think it is the underlying reason why we are voted the best bank of the year 2016. ”*

On whether every year Centenary Bank increases shareholder’s equity, the study established that 61.8% agreed, 3.9% strongly agreed, 31.5% were not sure, 1.3% disagreed and 1.3 % strongly disagreed. The study generally established that 65.2% of the respondents generally agreed that the every year the bank increases shareholder’s equity. Findings from key informants were also supportive to this statement. A manager said *“as earlier informed you, our progress is measured on what external and internal reports released every year and I am sure all such reports have been too positive as far as shareholder equity.”*

To further ascertain whether Centenary Bank’s net income supersedes our operating costs for the last 3years. The study established that 71.8% agreed, 21.5% strongly agreed, 3.9% were not sure, 1.3% disagreed and 1.3 % strongly disagreed. The study generally established that 93.3% of the respondents generally agreed that the bank’s net income supersedes our operating costs for the last 3years. Findings from key informants were also supportive to this statement. A manager said *“In*

*the first place it hard to operate when the net incomes does not supersede operating costs. so it is very true that we are operating financially fine. ”*

To further ascertain whether all bank loans are dully collected. The study established that 50% agreed, 37.2% strongly agreed, 7.8.9% were not sure. The study generally established that 93.3% of the respondents generally agreed that centenary bank loans are dully collected.

This is a true measure of improved financial performance. Findings from key informants did not exactly concur with what was found out from questionnaires. They seemed to indicate that the bank some outstanding bad loans. This threatens the financial performance of the bank.

The responses on whether the bank’s asset base has greatly increased over time. The study established that 50% agreed, 47.3% strongly agreed, 2.6% were not sure. The study generally established that 97.3% of the respondents generally agreed that the bank’s asset base has greatly increased over time. Findings from key informants were also supportive to this statement. A manager said *“This is very tangible to all people...on the first place it hard to operate when the net incomes does not supersede operating costs...so it is very true that we are operating financially fine.”*

On the last responses, it was established that the percentage of non-performing loans in our bank has been reducing consistently. The study established that 7.8% strongly agreed, 28.9% agreed, 36.8% were not sure, 9.2% disagreed and 14.4% strongly disagreed. The study generally established that 35.8% of the respondents generally agreed that the percentage of non-performing loans in our bank has been reducing consistently. This was contrary to what one of the loan officers said, *“The problem of non-performing loans is not a done deal here, we are still solving it. ”*

These thus mean that Centenary Bank has enough liquidity, low non-performing loans, increased on its assets and profitability is perceived as increasing. These are indicators of prevailing good financial performance in Centenary Bank.

#### **4.4 Findings on adoption of internet banking services in Centenary Bank**

To understand whether Centenary Bank had adopted internet banking services, Table 10 has more details.

**Table 10: Descriptive Statistics on adoption of internet banking services in Centenary Bank**

Items	1	2	3	4	5	mean
Our credit card services are free from security risks	22.3%	22.3%	31.5%	10.5%	13%	3.47
The bank’s website is operational 24hrs a day	13%	15.7%	3.9%	39.4%	19.7%	3.54
Prepaid card services are secure in centenary bank	9.2%	10.5%	11.8%	43.4%	25%	3.57
I have heard no account compromised in Centenary Bank through internet	21%	13%	6.5%	38%	21%	3.70
Centenary Bank also allows to download account transactions using your email	6.5%	6.5%	7.8%	50%	28.9%	4.01
There are no problems in networks regarding internet banking	3.9%	3.9%	7.8%	52.6%	31.5%	4.12
The bank provides information update about the bank through email alerts to its customers	2.6%	2.6%	6.5%	53.9%	34.2%	4.14
Customer can now print their account statement internet	0%	3.9%	5.2%	40.7%	50%	4.59

*Source: primary data (2024)*

The responses on whether credit card services are free from security risks. The study established that majority of the respondents were not sure 31.5% agreed, 22.3% disagreed and strongly disagreed respectively, whilst 13% strongly agreed and 10.5% agreed. The study generally established that 44.6% of the respondents disagreed that credit card services are free from security risks. The responses from quantitative data were synonymous with what was reported by qualitative data. One Manager said *“I admit we still have problem with our credit card system because fraudsters are still many and operate on a global level...”*

Further, the responses on whether the bank’s website is operational 24hrs a day. The study established that majority of the respondents agreed 39.4%; 19.7% strongly agreed, 3.9% were not sure, 15.7% agreed and 13% strongly disagreed. The study generally established that 69.1% of the respondents agreed that the bank’s website is operational 24hrs a day. The responses from quantitative data were synonymous with what was reported by qualitative data. One Manager said *“It is very true our website is always operational and up-to-date...”*

Further, the responses on whether prepaid card services are secure in Centenary bank. The study established that majority of the respondents agreed 43.4%; 25% strongly agreed, 11.8% were not sure, 10.5% agreed and 9.2% strongly disagreed. The study generally established that 68.4% of the respondents agreed that prepaid card services are secure in Centenary bank. The responses from quantitative data were synonymous with what was reported by qualitative data. A manager said *“Prepaid cards are secure only that few people have learnt to utilize them...”* To further ascertain whether customers have heard no account compromised in Centenary Bank through internet. The study established that majority of the respondents agreed 38%; 21% strongly agreed, 6.5% were not sure, 13% disagreed and 21% strongly disagreed. The study generally established that 59% of the respondents agreed that customers have heard no account compromised in Centenary Bank through internet. The responses from quantitative data did not directly concur with what loan officers said. He said *“Internet makes life easy but it is curtailed by fraudsters. Cases of compromising customer accounts has ever been heard in our bank as it can be found in any bank in Uganda.”*

On whether Centenary Bank also allows downloading account transactions using your email, the study established that majority of the respondents agreed 50%; 28.9% strongly agreed, 7.8% were not sure, 6.5% disagreed and strongly disagreed. The study generally established that 78.9% of the respondents agreed that Centenary Bank also allows downloading account transactions using your email. This was highly supported by loan officers in the bank.

On whether there are no problems in networks regarding internet banking. The study established that majority of the respondents agreed 52.6%; and strongly agreed by 31.5% agreed, 7.8% were not sure, 3.9% disagreed and strongly disagreed each. The study generally established that 84.1% of the respondents agreed that there are no problems in networks regarding internet banking. This was highly supported by loan officers in the bank.

This implied that Centenary Bank does not provide enough information update about the bank through email alerts to its customers and this is an indication of less utilization of internet banking that is presumed to have a negative effect on its financial performance. This thus implies that Centenary Bank has an active website operating 24hrs a day which has reduced on default levels in Centenary Bank; The bank provides information update about the bank through email alerts to its customers and this has stimulated a lot of trust people have in Centenary Bank; Customer can now print their account statement internet which has improved

on bank efficiency; I have heard no account compromised in Centenary Bank through internet; Our internet banking is free from security risks and this reduces on fraud involved in banking services; Centenary Bank Allows intra-Banks Account to Account Transfer using internet and this has increased on bank cash and Centenary Bank also allows to download account transactions using your email. All these signify a positive relationship between internet banking and financial performance.

The views from the interviewees seemed to tally with what the documents reviewed indicated. They showed that internet banking is still a new thing in less developed countries including Uganda and its commercial banks and has not had so much improvement on financial performance. New Vision (2011) shows that the need to understand how and why technology has or has not been adopted for knowledge work in less-developed countries is important for loan officers/service providers and customers alike.

agreed, 6.5% were not sure, 13% disagreed and 21% strongly disagreed. The study generally established that 59% of the respondents agreed that customers have heard no account compromised in Centenary Bank through internet. The responses from quantitative data did not directly concur with what loan officers said. He said *“Internet makes life easy but it is curtailed by fraudsters. Cases of compromising customer accounts has ever been heard in our bank as it can be found in any bank in Uganda.”*

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active website operating 24hrs a day which has reduced on default levels in Centenary Bank; The bank provides information update about the bank through email alerts to its customers and this has stimulated a lot of trust people have in Centenary Bank; Customer can now print their account statement internet which has improved on bank efficiency; I have heard no account compromised in Centenary Bank through internet; Our internet banking is free from security risks and this reduces on fraud involved in banking services; Centenary Bank Allows intra-Banks Account to Account Transfer using internet and this has increased on bank cash and Centenary Bank also allows to download account transactions using your email. All these signify a positive relationship between internet banking and financial performance.

The views from the interviewees seemed to tally with what the documents reviewed indicated. They showed that internet banking is still a new thing in less developed countries including Uganda and its commercial banks and has not had so much improvement on financial performance. New Vision (2021) shows that the need to understand how and why technology has or has not been adopted for knowledge work in less-developed countries is important for loan officers/service providers and customers alike.

**4.4.1 Regression results for internet banking and the financial performance of Centenary Bank.**

**Table 11: Model summary showing regression results for internet banking and the financial performance of Centenary Bank.**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.576 <sup>a</sup>	.332	.328	1.107

Pred (Constant), internet banking

*Source: primary source (2024)*

The study findings established that internet banking had a strong relationship with financial performance of Centenary Bank. Going by adjusted R Square, it is clear that internet banking contributed 33.2% change in financial performance of Centenary Bank.

#### 4.5 Findings on adoption of ATM banking system in Centenary Bank

To understand whether Centenary Bank adopted ATM banking,

**Table 12: Descriptive Statistics on ATM banking system in Centenary Bank**

Items	1	2	3	4	5	Mean
I can now transact using an ATM machine in centenary bank	13%	7.8%	13%	38%	27.6%	3.55
A customer can now easily transfer money from his/her bank account to another using his/her ATM	7.8%	22.3%	2.6%	57%	25%	3.75
Centenary Bank has ATM cards systems in place	15.7%	10.5%	0%	51.3%	22.3%	4.05
With Centenary Bank, a customer can now bank his/her money using an ATM machine	5.2%	21%	3.9%	35.5%	26.3%	3.58
A customer can now withdraw his/her/finances using an ATM from the bank	14.4%	6.5%	11.8%	34.2%	30.2%	3.64
A customer can easily check his/her account balance using an ATM in centenary bank	7.8%	14.4%	9.2%	28.9%	36.8%	4.58

*Source: primary data (2024)*

The responses on whether customers can now use ATM banking system in centenary bank. The study established that 38% agreed, 27.6% strongly agreed, 13% were not sure, 7.8% disagreed and 13% strongly disagreed. The study generally established that 65.2% of the respondents agreed that customers can now transact using the ATM machine in centenary bank. One of loan officers during an interview did not fully believe this statement. One of them said “*This is now a reality...people can transact using ATM machine in making deposits and withdrawals.*”

The responses on whether customers can now easily transfer money from his/her/ bank account to another using his/her ATM. The study established that 57% agreed, 25% strongly agreed, 2.6% were not sure, 22.3% disagreed and 7.8% strongly disagreed. The study generally established that 82% of the respondents agreed that customers can now easily transfer money from his/her/ bank account to another using his/her/ ATM. Loan officers were supportive of this claim

To establish whether a customer can now bank his/her money using a cell-phone at home, the study established that 35.5% agreed, 26.3% strongly agreed, 3.9% were not sure, 21% disagreed and 5.2% strongly disagreed. The study generally established that 61.9% of the respondents agreed that a customer can now bank his/her money using an ATM machine.

The responses on whether a customer can now withdraw his/her/her finances using ATM machine. The study established that 34.2% agreed, 30.2 strongly agreed, 11.8% were not sure, 14.4% strongly disagreed and 6.5% disagreed. The study generally established that 64.4% of the respondents agreed that a customer can now withdraw his/her/her finances using his/her/her ATM from the bank. This was supported by key informants while agreeing that a customer can now withdraw his/her/her finances using ATM from the bank. One of them said *“It is now the order of the day in centenary bank...in fact over 30% of most withdrawal transactions done in centenary bank are done using a an ATM card”*

The responses on whether a customer can easily check his/her account balance using an ATM card in centenary bank. The study established that 36.8% strongly agreed, 28.9% strongly agreed, 9.2% were not sure, 14.4% disagreed and 7.8% strongly disagreed. The study generally established that 74.6% of the respondents agreed that a customer can easily check his/her account balance using myATM in centenary bank. This was supported by key informants while agreeing that a customer can now withdraw his/her/her finances using his/her/herATM from the bank. One of them said *“It is now the order of the day in centenary bank...in fact over 30% of most withdrawal, deposit or check their accounts in centenary bank are done using an ATM machine...”*

The above responses thus means that Centenary Bank has adopted mobile banking for distant and busy customers; the bank has introduced Tele-banking in Centenary Bank which allows customers to pay all their monthly bills using ATM ; Centenary Bank installed on with a computers information system that help the tellers in their work; With Centenary Bank, there is less adoption of customers banking money using a cell-phone at home which has impacted on the bank’s liquidity in one way or another; Centenary Bank has smart card systems in place which has expanded the bank’s assets. Add on the reportage that; A customer can now withdraw his/her finances using ATM from the bank and

this has increased on bank’s net interest margin; A customer can easily know every kind of information he/she needs by merely calling in the bank especially if he/she has the bank codes; The bank provides information update about the bank through SMS and this has stimulated more savings and a customer can now easily check his/her bank account using ATM which has increased on bank safety. These are all indicators of prevalence of ATM banking system in Centenary Bank.

The above views from the both questionnaires and interviewees seemed incongruent with what had been indicated in Documents reviewed. For instance, ADB Report (2010) indicated that most of commercial banks in Uganda lack advanced and string network to sustain ATM banking, add on the fact that even the customers seem to not readily adopt this kind of banking. This has affected on the financial performance of Centenary Bank since it has to put in a lot without getting much more in turn.

#### 4.5 Regression results for ATM banking system and the financial performance

**Table 13: Model summary showing regression results for ATM banking and financial performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.599 <sup>a</sup>	.359	.348	1.157

a. Pred: (Constant), ATM banking system

*Source: primary data (2024)*

The study findings established that ATM banking had a strong relationship with financial performance of Centenary Bank. Going by adjusted R Square, it is clear that ATM banking contributed 35.9% change in financial performance of Centenary Bank.

#### 4.6 Findings on adoption of Mobile banking system in Centenary Bank

To understand whether Centenary Bank adopted Mobile banking, Table 14 presents the data below.

**Table 14: Descriptive Statistics on prevalence of mobile banking in Centenary Bank**

Items	1	2	3	4	5	Mean
Customers have competence to use mobile banking gadgets	7.8%	22.3%	2.6%	47%	25%	3.55
Online costs to access our banking system is affordable	15.7%	10.5%	0%	51.3%	22.3%	3.55
Cases of bank fraud have reduced as a result of ATM	5.2%	21%	3.9%	35.5%	26.3%	3.58
There is a 24hour mobile banking in centenary banking	14.4%	6.5%	11.8%	34.2%	30.2%	3.64
Centenary Bank has credit card system for its clients	7.8%	14.4%	28.9%	36.8%	9.2%	3.78
Centenary Bank has e-cheque services	3.9%	5.2%	0%	50%	40.7%	4.18

*Source: primary data (2024)*

The responses in relation to whether customers have competence to use mobile banking gadgets. The study established that 47% agreed, 25% strongly agreed, 2.6% were not sure, 22.3% disagreed and 7.8% strongly disagreed. The study generally established that 72% of the respondents generally agreed that customers have competence to use mobile banking gadgets. One of loan officers during an interview also agreed that the customers have competence to use mobile banking gadgets. He said *“The biggest numbers of our customers have been advancing rapidly and they can ably use mobile banking gadgets or can have next of kin to help them our especially in rural areas.”*

On whether online costs to access our banking system is affordable. The study established that 51.3% agreed, 22.3% strongly agreed, 2.6% were not sure, 22.3% disagreed and 7.8% strongly disagreed. The study generally established that 72% of the respondents generally agreed that online costs to access our banking system is affordable. One of loan officers during an interview also agreed that online costs to access our banking system is affordable. He said *“These days internet people use it for entertainment...this makes it cheaper to use even in banking services.”*

The responses on whether cases of bank fraud have reduced as a result of ATM. The study established that 35.5% agreed, 26.3% strongly agreed, 3.9% were not sure, 21% disagreed and 5.2% strongly disagreed. The study generally established that 72% of the respondents generally agreed that cases of bank fraud have reduced as a result of ATM. One of loan officers during an interview did not fully believe this statement. One of them said *“Our system is not yet totally free from fraud we still register some cases but these have been reducing tremendously. ”*

The responses on whether there is a 24hour mobile banking in centenary banking. The study established that 34.2% agreed, 30.2% strongly agreed, 11.2% were not sure, 6.5% disagreed and 14.4% strongly disagreed. The study generally established that 64.2% of the respondents generally agreed that there is a 24hour mobile banking in centenary banking. Loan officers during an interview agree that there is a 24hour mobile banking in centenary banking. One of them said, *“Our mobile banking is operational 24hours... ”*

To further establish whether Centenary Bank has credit card system for its clients, the study established that 36.8% agreed, 28.9% remained neutral, 14.4% disagreed, 9.2% strongly agreed and 7.8% strongly agreed. The study generally established that 51.1% of the respondents generally disagreed that Centenary Bank has credit card system for its clients. Loan officers during an interview also disagree that Centenary Bank has credit card system for its clients. One of them said, *“We are still in the process of putting place a good operating credit card system though we have few operating... ”*

The responses in relation to whether Centenary Bank has e-cheque services. The study established that 50% agreed, 40.7% strongly agreed, 5.2% disagreed and 3.9% strongly disagreed. The study generally established that 90.7% of the respondents generally agreed that Centenary Bank has e- cheque services. Findings from key informants were also supportive of the above statement.

The above statements implied that Centenary Bank has credit card system for its clients who have made it easy for a person to borrow and return money in time. The Bank mobile banking operates 24hrs and these have made it easy for the bank to increase on deposits made in the bank; Centenary Bank has an arrangement of swapping money from one account to the other which has increased on cash available in the bank and this is financially called liquidity. Issues to do

with bank fraud were reported to have reduced as a result of ATM; and by adopting the mobile banking, the security of the bank is not compromised but has increased on number of clients. Still, it was found out that by adopting e-cheque services, the bank has increased on its liquidity levels and Centenary Bank has debit cards for its clients which have increased on the number of clients joining Centenary Bank.

The above findings seemed to tally exactly with the documents reviewed, for instance, Bank of Uganda annual report (2013) reports that E-fund money transfer services have changed business environment and banking industry in Uganda. It urged commercial banks to ensure that it is propagated very well since it is a form of advancement but also improves financial performance of a financial institution.

**4.6.1 Regression results for mobile banking and the financial performance of Centenary Bank.**

**Table 15 Model summary showing regression results for mobile banking and the financial performance of Centenary Bank.**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.556 <sup>a</sup>	.302	.308	1.107

Pred (Constant), mobile banking

*Source: primary data 2024*

The study findings established that mobile banking had a strong relationship with financial performance of Centenary Bank. Going by adjusted R Square, it is clear that mobile banking contributed 30.2% change in financial performance of Centenary Bank.

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

The research on the effect of electronic banking on the financial performance of commercial banks, with a specific focus on Centenary Bank, has yielded significant insights into how technological advancements are reshaping the banking landscape. This chapter summarizes the key findings, and offers recommendations for future strategies and research.

#### **5.1 Summary of Findings.**

The study intended to find out on whether electronic banking had some effects on the financial performance of the commercial banks in Uganda. The research was carried out for a period of four years that is from 2020 to 2023. The response rate was at 100% since all the 34 respondents had participated. Descriptive and regression analysis were conducted to find out the reliability and validity of the data.

##### **5.1.1 Internet Banking and financial performance**

The study findings established that internet banking had a strong relationship with financial performance of Centenary Bank. Going by adjusted R Square, it is clear that internet banking contributed 33.2% change in financial performance of Centenary Bank.. The implication of these findings is that internet banking has a positive relationship on the financial performance of Centenary Bank. The positive relationship implied that a change in internet banking can contribute to financial performance of Centenary Bank. The positive nature of the relationship implied that banking officers in Centenary Bank need to ensure that internet banking is fully installed and implemented if financial performance of Centenary Bank is to improve and vice versa.

The respondents strongly agreed that an increase in the number of internet banking transactions resulted to more revenues and profits this was due to the fees and commissions collected during the transactions. It was also realized that the increase in the number of internet transaction reduced congestion in the banking halls due to the reduced number of clients visiting the banks.

Labour costs were also anticipated to fall due to the reduced number of employees hence resulting to increased efficiency and bank performance.

### **5.1.2 Mobile Banking and financial performance**

The study findings established that mobile banking had a strong relationship with financial performance of Centenary Bank. Going by adjusted R Square, it is clear that internet banking contributed 30.2% change in financial performance of Centenary Bank. Thus, the implication of the findings was that mobile banking gadgets infrastructure banking has a positive relationship with financial performance of Centenary Bank. The positive influence implies that a change in mobile banking gadgets infrastructure banking relates to a significant change in financial performance of Centenary Bank.

A survey on the Mobile banking transactions showed a strong agreement from the respondents in that an increase in the number of active users results to increased deposits and increased convenience to the customers since they can access the banking services via their mobile phones at any particular time of the day and hence result to better financial performance for the banks. It also reduces the operational and labour costs since the banks will only require a few staffs to deal with the systems compared to the previous years where they needed many staffs to handle the manual work. Increased capital investment in mobile banking was capital intensive hence promoting efficiency and bank profitability.

### **5.1.3 ATM Banking and financial performance**

The study findings established that ATM banking had a strong relationship with financial performance of Centenary Bank. Going by adjusted R Square, it is clear that ATM banking contributed 35.9% change in financial performance of Centenary Bank. This meant that the hypothesis was tested that “*There is a significant relationship between ATM banking system and financial performance of Centenary Bank*” and accepted. The implication of these findings is that there exists a positive influence between ATM banking system and financial performance of Centenary Bank. The significant influence implied that a change in ATM banking system contributed to a significant change in financial performance of Centenary Bank.

An increase in the number of ATMs installed reduced the number of clients in the banking halls and the number of human tellers hence cutting the labour cost, paper work cost and the operational costs and therefore resulting to better financial performance of the commercial banks. The increase also resulted to increased accuracy levels, banking space and proper time management that lead to the banks increased efficiency and profitability.

## **5.2 Conclusion**

Electronic banking has proven to be a significant driver of financial performance for Centenary Bank, enhancing profitability, operational efficiency, customer experience, and financial inclusion. While challenges exist, strategic investments in technology, cybersecurity, and customer education can mitigate these risks. By continuing to innovate and adapt, Centenary Bank can leverage electronic banking to maintain its competitive edge and achieve sustained growth.

The strong relationship between electronic banking and financial performance is important to the practice of financial institutions. When financial institutions increase the usage of electronic banking and or introduce new electronic banking products on market, the chances of institutions increasing their financial performance to greater height are eminent. Electronic banking leads to greater access to banking even by the previously un bankable populations and the customer needs for flexibility even after official banking hours is fulfilled. This percentage, however, should not blind bankers ignore the other factors that are likely to influence the relationship between electronic banking and financial performance.

## **5.4 Recommendations**

Bank of Uganda which is responsible for financial regulation and the Ministry of finance, Planning and Economic Development should encourage financial institutions to sensitize their customers on the e-banking products as can satisfy customer needs leave alone increasing efficiency in business operations- for example, internet banking and ATM Cards in SACCOS.

Financial institutions should promote electronic banking workshops and training to their customers to make them user-friendly. This will encourage many clients to buy e-banking

products. Some e-banking services like Internet banking, EFTs, e-payments are not user friendly for ICT beginners. This will promote trust in e-banking products and confidence as clients use such services.

Innovation in Services: Centenary Bank should continue to innovate and expand its digital offerings to meet evolving customer needs and preferences.

The time span should be expanded from 4 years to 8 years and above for better analysis and interpretation.

Overall, electronic banking accounts for 74.5% of variations in performance levels in financial institutions. Therefore, financial institutions which have not developed some e-banking tools should introduce them if their performance is to improve.

### **5.5 Areas for further research**

- Comparing the impact of electronic banking on financial performance across different banks and regions.
- Conducting longitudinal studies to assess the long-term impact of electronic banking on financial performance.
- Investigating customer behavior and preferences in more detail to tailor electronic banking services effectively.
- Marketing strategies and adoption of electronic banking services among bank customers in Teso sub-region, Uganda.
- EFT and the use of non-performing loans as a measure of financial performance.

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## Appendix 1: Questionnaire for Centenary Bank, Kumi Branch Staff

### INTRODUCTION

Dear Respondent,

The researcher is Mr. Emuron Boniface a student of Bachelor of Business Administration (BBA) at Uganda Christian University (UCU), Mbale, Uganda. He is undertaking a research to generate data and information on *“The Effect of Electronic Banking on the Financial Performance of Commercial Banks: a case study of Centenary Bank, Kumi Branch”*. You have been selected to participate in this study because the contribution you make to your organization is central to the kind of information required. The information you provide is solely for academic purposes and will be treated with utmost confidentiality. Kindly spare some of your valuable time to answer these questions by giving your views where necessary or ticking one of the alternatives given. Indeed, your name may not be required. Thank you for your time and cooperation.

### SECTION A: BACKGROUND DATA

*Please tick the numbers representing the most appropriate responses for you in respect of the following items:*

1. Gender: A) Male      B) Female
2. Age Bracket in Years: A) 30-39      B) 40-49      C) 50+
3. Level of Education: A) Diploma      B) Bachelor’s Degree      C) Post Graduate Diploma  
D) Master’s Degree      E) Professional Qualification
4. Duration of employment at the banking industry A) Less than 1 Year  
B) Between 1-2 Years      C) Between 2-3 Years      D) More than 4 Years
5. Marital Status: A) Married      B) Single      C) Divorced      D) Widowed
6. What is your current position: A) Branch Manager       B) Operations Manager   
C) Supervisor       D) Personal Banker       E) Banking Officer       F) Others
7. For which period has Centenary Bank adopted to electronic banking?

- A) Less than one-year  B)1 to 3 years  C)4 to 6 years   
 D) More than 9 years

**SECTION B: INTERNET BANKING AND FINANCIAL PERFORMANCE OF CENTENARY BANK, KUMI BRANCH.**

8.Tick (√) where applicable according to your level of agreement beside the statements on internet banking and financial performance of commercial banks. Scale for assessment:

(1= Strongly Disagree, 2= Disagree, 3= Not sure, 4= Agree, 5= Strongly Agree)

No	Statement	1	2	3	4	5
i	Increase in the number of internet banking transactions increases the bank`s financial performance.					
ii	Increase in the number of customers using internet banking allows Customers do most of the work themselves there for the number of staff can be reduced.					
iii	Use of internet banking leads to increased value of fees and commission from internet banking, revenue and profitability					
iv	Reduces congestion in banking halls resulting to increased efficiency and performance.					

9. Please tick (√) where necessary according to your level of agreement statements showing internet banking and Return on Assets.

Scale for assessment (1= Strongly Disagree, 2= Disagree, 3= Not sure, 4= Agree, 5= Strongly Agree)

No	Statement	1	2	3	4	5
i	Increased number of internet banking transactions reduces operation cost leading to a better return on assets					
ii	Customers do most of the work for themselves leading to reduction in number of staff, costs hence increased profit and return on assets					
iii	Increased value of fees and commission from internet banking leads to a better return on assets					
iv	Reduced congestion in banking halls due to increased number of customers using internet banking leads to a better return on assets					

10. Specify any other ways in which internet banking improves financial performance.....

**SECTION C: MOBILE BANKING AND FINANCIAL PERFORMANCE OF CENTENRARY BANK, KUMI BRANCH.**

11. Please tick (√) where necessary according to your level of agreement statements showing mobile banking and profitability.

Scale for assessment (1= Strongly Disagree, 2= Disagree, 3= Not sure, 4= Agree, 5= Strongly agree)

No	Statement	1	2	3	4	5
i	Convenience in use of mobile banking increases number of users of mobile banking and bank profitability					
ii	Increased number of active users enhances self-service reducing labour cost and increasing banks profitability.					
iii	Ease of use of mobile banking has influenced increase in the total deposits and bank profitability.					
iv	Increased capital investment in mobile banking is capital intensive promoting efficiency and bank profitability.					

12. In which other way has mobile banking increased the profitability? .....

13. Please tick (✓) where necessary according to your level of agreement statement showing mobile banking and Liquidity.

Scale for assessment (1= Strongly Disagree, 2= Disagree, 3= Not sure, 4= Agree, 5= Strongly agree)

No	Statement	1	2	3	4	5
i	Increase in number of active users of mobile banking increases profitability and Liquidity.					
ii	Increased number of mobile banking transactions cuts down the bank costs increasing profitability and Liquidity.					
iii	Mobile banking has increased the level of bank deposits increasing profitability and Liquidity.					
iv	Mobile banking promotes efficiency and profitability of the bank hence increasing Liquidity.					

**SECTION D: ATM BANKING AND FINANCIAL PERFORMANCE OF CENTENARY BANK, KUMI BRANCH.**

14. Please tick (√) where necessary according to your level of agreement statements showing ATMs and financial performance.

Scale for assessment (1= Strongly Disagree, 2= Disagree, 3= Not sure, 4= Agree, 5= Strongly agree)

No	Statement	1	2	3	4	5
i	Increased numbers of ATMs installed reduce the number of human teller, labour cost and increase profitability.					
ii	Increased number of ATM users reduce paper work, operation costs, increase efficiency and profitability.					
iii	Increased number of ATM transactions reduce congestion in banking halls, increase accuracy and profitability.					
iv	Use of ATM saves time, space increasing bank`s efficiency and profitability					

15. Please tick (√) where necessary according to your level of agreement statements showing ATMs and Liquidity.

Scale for assessment (1= Strongly Disagree, 2= Disagree, 3= Not Sure, 4= Agree, 5= Strongly Agree)

No	Statement	1	2	3	4	5
i	ATMs reduce labour costs, increase profitability and Liquidity					
ii	ATMs reduce operational cost and increase profitability in the long-run and Liquidity					
iii	ATMs reduce congestion in banking halls, increase number of transactions and Liquidity					
iv	ATMs increase bank productivity, efficiency and Liquidity					

16. Specify in which other way ATMs improve the financial performance.....

**SECTION F: FINANCIAL PERFORMANCE**

17. Does electronic banking promote the performance of the bank in the following ways?

Performance measures	1	2	3	4	5
(i) Reduced cost					
(ii) Increased profit					
(iii) Increased efficiency					
(iv) Larger customer outreach					
(v) Increased Operational Efficiency					
(vi) increased Liquidity					

18. Has electronic banking improved banking performance?

- (a) Strongly agree
- (b) Agree
- (c) Disagree
- (d) Strongly disagree

19. How was the performance of the bank after electronic banking?

(e) Excellent

(f) Very good

(g) Good

(h) Fair

(i) Bad

20. In which other way has electronic banking promoted the financial performance.....

**Thank you for participation.**

## **Appendix 2: Interview Guide**

Dear respondent, I am a Student at UCU undertaking a study on the effect of electronic banking on the financial performance of commercial banks in Uganda: A case study of Centenary Bank, Kumi Branch. The study is in partial fulfilment of the requirements for the award of Bachelor's degree in Business Administration.

I kindly request you to answer the questions sincerely and accurately. The information will only be used for academic purposes and will be treated with maximum confidentiality. Thank you for your kind cooperation

Yours faithfully,  
Emuron Boniface.

**Confidentiality: Responses will be confidential and used solely for research purposes.**

- 1) What are the effects of adopting electronic banking on the financial performance of Centenary Bank?
- 2) How electronic banking has leads to increased capital adequacy in Centenary Bank?
- 3) What are the reasons for adoption of electronic banking by Centenary Bank?
- 4) What are some of the types of electronic banking do Centenary Banks use?
- 5) What is the relationship between electronic banking and financial performance of Centenary Bank?
- 6) Does Centenary Bank offer electronic banking services to its clients?

**THANKS FOR YOUR COOPERATION!**

**Appendix 3: Introductory Letter**



**UGANDA CHRISTIAN UNIVERSITY.**  
A Centre of Excellence in the Heart of Africa  
**MBALE UNIVERSITY COLLEGE.**

**BUSINESS DEPARTMENT**

To THE MANAGER  
CENTENARY BANK, KUMI BRANCH



Dear Sir/Madam,

Re: Academic Research

Christian greetings!

We are honored to introduce to you Mr. Mrs./Miss EMURON BONIFACE  
Of Registration Number; W/22/MUC/BBA/009 pursuing a Masters'  
Degree/Postgraduate Diploma / Bachelor's Degree  
OF BUSINESS ADMINISTRATION

He/ she is required to carry out an academic research on the topic  
ELECTRONIC BANKING AND FINANCIAL PERFORMANCE OF  
COMMERCIAL BANKS

and thereafter produce a well bound hard cover research report (**MAROON**) in color for undergraduate and three (**BLACK**)copies for Postgraduate students as a University requirement for the award of a degree/diploma in the academic discipline that he / she is pursuing.

We shall be grateful for the help you may offer to him or her accordingly.  
Thank you.  
Yours faithfully,

Henry Omache  
Ag. Head of Department Business

